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# Tourist Health, Safety and Wellbeing in the New Normal

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ISBN 978-981-16-5414-5 ISBN 978-981-16-5415-2 (eBook)
https://doi.org/10.1007/978-981-16-5415-2



This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

*This book is dedicated, with the greatest respect, to all the young people who completed their final year of high school contending with the disruptions and disappointments of COVID-19. The Class of 2020 missed many of their rites of passage, including celebrations, sporting and cultural events, and of course, the opportunity to travel. Yet, on all accounts, through this adversity they have developed stronger character and resilience, with a new-found appreciation of nature, friendships and social responsibility which will be reflected in their future travel choices.*

# Foreword

We have lived through an extraordinary 15 months since the World Health Organization declared COVID-19 a pandemic. From early news of the first positive cases, we sped through experiencing travellers quarantined in hotels and cruise ships refused at ports to rapidly expanding border closures, ending with an effective global shutdown of travel.

When ABTA launched our over-optimistically titled *Post-Pandemic Recovery Guide* in June last year, to assist destinations and travel businesses who were preparing for travel to restart in Summer 2020, we could not have imagined that 12 months later, we would still be waiting for a substantive return to business and leisure travel.

This book is therefore a timely addition to the resources available to the travel industry as it continues its preparations for the long-awaited recovery.

ABTA is the largest travel trade association in the UK, with members representing a comprehensive range of travel businesses. For many years, the ABTA destinations team has taken a leading role in promoting traveller health, working with governments and travel providers to improve standards of health and safety in countries that ABTA member businesses operate to, in order to ensure they provide a quality product so customers can travel with confidence. As well as providing guidance and support to ABTA members, travel providers and destination governments, we raise awareness of important health and safety issues to holidaymakers and business travellers through regular communications campaigns.

Since 1999, we have brought together experts in their fields to produce guidance on various aspects of health, safety and security in the form of the *Tourism Accommodation Health & Safety Technical Guide*. In the absence of global safety standards for tourism services, this provides best practice guidance on reasonable and realistic measures which can be taken to protect traveller health. We also run regular industry training and events with expert speakers from the public and private sectors.

Encouraging effective collaboration has always been a key role for ABTA and the pandemic has highlighted the need for focus on traveller health right across the customer journey. From Governments issuing travel advisories and the health authorities who advise them through organisations producing health protocols for

airlines, cruise ships and other travel service providers, the importance of co-operation and clear communication has been demonstrated repeatedly. This is a lesson which must extend beyond COVID-19.

This is an important book due to the breadth and depth of its content, and I commend the editors and contributors for their emphasis on traveller health, safety and wellbeing and customer care, throughout the customer journey. One of the objectives of our *Post-Pandemic Recovery Guide* was to remind readers not to forget the basics of travel health in their bid to combat COVID-19.

This crisis has provided a unique opportunity for governments, tourism organisations and travel businesses to communicate to travellers about health and safety and for travellers to understand their own role in seeking up to date information about potential risks at their destination (and potential mitigations, such as vaccination) and the need to have adequate travel insurance. We should take the opportunity to continue these conversations long after these current difficult days are a distant memory, when travellers are free once again to explore the world.

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June 2021

# Preface

I have great respect for the past. If you don't know where you've come from, you don't know where you're going.

Maya Angelou (American poet, 1928–2014).

Writing about tourists and customer care in the middle of a global pandemic, where international travel has virtually ceased and with hundreds of thousands of tourism workers losing their jobs, may seem illogical. But now is exactly the right time to review the importance of tourist health, safety and wellbeing – where scarcity of customers inflates the value of each – and when the global tourism industry is challenged to reposition and repurpose itself towards more sustainable outcomes. Important lessons learned from the past should inform future directions for the world's largest service sector that will remain crucial for global economic wellbeing.

The health and safety of travellers has long been a concern for the tourism industry. In its 1999 *Global Code of Ethics for Tourism* the United Nations World Tourism Organization (UNWTO) described the obligations of stakeholders as: "[T]ourism professionals, insofar as it depends on them, should show concern, in co-operation with the public authorities, for the security and safety, accident prevention, health protection and food safety of those who seek their services" (Article 6–2).

While health is the clear focus during the COVID-19 pandemic, the re-emerging tourism industry canvases wider consideration. Tourist safety and wellbeing will have continued importance as we move to what has been described as the *new normal*. New ways of operating in the changing global economic context will be driven by industry innovation, opportunities for quality improvement and increasing demands from price conscious customers for value in service and care.

This book is about tourists as visitors, both domestic and international, and their health, safety and wellbeing. The focus is firmly on the tourist, personally and within groups. Philosophically, the editors share the view that travel and tourism provides many positive benefits for visitors and that, fundamentally, their experiences should be safe and enjoyable. The personal benefits are highlighted in the chapters on wellbeing, while the safety-related chapters clearly illustrate how tourists will often experience unanticipated difficulties when participating in unfamiliar activities or through engaging with unfamiliar environments. Yet, exposure to the

unfamiliar is the essence of tourism and the visitor experience, whether this be meeting and socialising with new people, tasting exotic foods, scuba diving in deep oceans, seeking thrills in theme parks or walking tranquilly in a rainforest.

By revisiting what we have learned about tourist health, safety and wellbeing over the years and using this to plot new pathways forward, we hope to assist the tourism industry in the new normal where, more than ever, the focus will be on customer care and quality service.

United Nations World Tourism Organization. (1999). *Global Code of Ethics for Tourism.* https://www.unwto.org/global-code-of-ethics-for-tourism

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# Acknowledgements

The editors wish to extend our collective thanks to Joy Reynolds for her significant contribution to our book as our graphic designer and formatter. Joy brings decades of expertise to creating amazing visualisations and presenting a meticulously produced corpus of work of which we as editors, and all of the contributing authors, can be proud. And she does this with great insight, humour and tolerance. From the editorial team, thank you Joy!

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**Jeff Wilks** is a psychologist and lawyer specialising in travel health, safety and wellbeing. He works as a consultant for law firms, government agencies and the tourism industry. Jeff is lead author on seven safety books. He currently serves as an Adjunct Professor at Griffith and James Cook universities.

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**Peter A. Leggat,** AM, ADC, is a medical practitioner and co-director of the WHO Collaborating Centre for Vector-borne and Neglected Tropical Diseases at James Cook University. He is the author of several books on travel medicine and infectious disease. Peter is also President of the International Society of Travel Medicine.

**Damian Morgan** is a management specialist with research interest in risk management for visitors and businesses servicing visitors. Research partners include AGL, Destination Gippsland, Environment Protection Authority Victoria and Lifesaving Victoria. Damian currently teaches at James Cook University.

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# Abbreviations

| | |
|---|---|
| AAAS | Australian Adventure Activity Standard |
| ABETA | Brazilian Ecotourism and Adventure Travel Trade Association |
| ABS | Australian Bureau of Statistics |
| ABTA | Previously Association of British Travel Agents |
| ACCC | Australian Competition and Consumer Commission |
| ACI | Airports Council International |
| ACL | Australian Consumer Law |
| ACOG | American College of Obstetricians and Gynecologists |
| AEDT | Australian Eastern Daylight Time |
| AEFI | Adverse Events Following Immunisation |
| AFTA | Australian Federation of Travel Agents |
| AG | Acute gastroenteritis |
| AHLA | American Hotel & Lodging Association |
| AI | Artificial intelligence |
| AIDS | Acquired immunodeficiency syndrome |
| AIR | Australian Immunisation Register |
| AME | Aeromedical evacuation |
| ANTOR | Association of National Tourist Offices and Representatives |
| ANZIC | Australian and New Zealand Intensive Care |
| AQIS | Australian Quarantine Inspection Service |
| ART | Anti-retroviral therapy |
| ATAR | Australian Tertiary Admission Rank |
| ATTA | Adventure Travel Trade Association |
| BCD | Buoyancy Control Device |
| BCG | Bacille Calmette-Guérin (vaccine for tuberculosis) |
| BLM | Black Lives Matter |
| CATMAT | Committee to Advise on Tropical Medicine and Travel |
| CATO | Council of Australian Tour Operators |
| CAUTHE | Council for Australasian Tourism and Hospitality Education |
| CBI | Centre for the Promotion of Imports from Developing Countries |
| CDC | United States Centers for Disease Control and Prevention (USA) |

| | |
|---|---|
| CDS | Centre for Disaster Studies |
| CFS | Committee on World Food Security |
| CLIA | Cruise Lines International Association |
| COPS | Community Oriented Policing Services |
| COVID-19 | CO = corona, VI = virus, D = disease 19 = 2019 |
| CSR | Corporate social responsibility |
| DFAT | Department of Foreign Affairs and Trade |
| DM/DRR | Disaster Management/Disaster Risk Reduction |
| DMARDs | Disease-modifying anti-rheumatic drugs |
| DOSPERT | Domain-Specific Risk-Taking scale |
| DRM | Disaster Risk Management |
| DRR | Disaster Risk Reduction |
| DVT | Deep vein thrombosis |
| EMTA | Eastern Mediterranean Tourism Association |
| EPA | Environmental Protection Agency |
| EPIRB | Emergency Position Indicating Radio Beacon |
| ESD | Ecologically Sustainable Development |
| ESOS | Educational Services for Overseas Students |
| EU | European Union |
| EVD | Ebola virus disease |
| eWOM | Electronic word-of-mouth |
| FAO | Food and Agriculture Organization of the United Nations |
| FBD | Foodborne disease |
| FBI | Federal Bureau of Investigation |
| FDA | Food and Drug Administration (USA) |
| FIFA | Federation Internationale de Football Association |
| FMD | Foot-and-mouth disease |
| FOMO | Fear of missing out |
| FTE | Future Travel Experience |
| FTO | Federation of Tour Operators |
| GDP | Gross domestic product |
| GI | Gastrointestinal illnesses |
| GP | General Practitioner |
| GVHD | Graft versus host disease |
| HDI | Human Development Index |
| HEPA | High efficiency particulate air [filter] |
| HIV | Human immunodeficiency virus |
| HSCT | Haematopoietic stem cell transplants |
| IATA | International Air Transport Association |
| IATA | International Air Transport Association |
| ICA | Insurance Council of Australia |
| ICAO | International Civil Aviation Organization |
| ICT | Immunochromatographic test |
| ICU | Intensive care unit |
| IDNDR | International Decade for Natural Disaster Reduction |

| | |
|---|---|
| IFAD | International Fund for Agricultural Development |
| IHME | Institute for Health Metrics and Evaluation |
| IHR | International Health Regulations |
| ILI | Influenza-like illness |
| ILO | International Labour Organization |
| ILS | International Life Saving Federation |
| IMO | International Maritime Organization |
| IoT | Internet of Things |
| IQR | Interquartile range |
| ISDR | UN International Strategy for Disaster Reduction |
| ISTM | International Society of Travel Medicine |
| JAS-ANZ | Joint Accreditation System of Australia and New Zealand |
| JE | Japanese encephalitis |
| LD | Legionnaires' disease |
| LHD | Listed human diseases |
| LUKE | National Resources Institute Finland |
| MPD | Minneapolis Police Department |
| MRSA | Methicillin-resistant Staphylococcus aureus |
| NAMAC | National Arbovirus and Malaria Advisory Committee |
| NBT | Nature-based tourism |
| NFU | Need for uniqueness |
| NOAA | National Oceanic and Atmospheric Administration |
| NPF | National Police Foundation |
| NSW | New South Wales |
| OECD | Organisation for Economic Co-operation and Development |
| OH&S | Occupational Health and Safety |
| OL | Opinion leadership |
| PADI | Professional Association of Diving Instructors |
| PATA | Pacific Asia Travel Association |
| PCR test | Polymerase chain reaction test |
| PE | Past experience |
| PHA | Public health approach |
| PLB | Personal locator beacon |
| PPE | Personal protective equipment |
| PPM | Personal protective measures |
| PWC | Personal watercraft |
| QB | Queen's Bench (law) |
| QC | Queen's Counsel (law) |
| QoL | Quality of Life |
| QR code | Quick Response code |
| QTIC | Queensland Tourism Industry Council |
| QWL | Quality of work life |
| RP | Risk perception |
| SARS | Severe acute respiratory syndrome |
| SCUBA | Self-Contained Underwater Breathing Apparatus |

| | |
|---|---|
| SDGs | Sustainable Development Goals |
| SDT | Self-determination theory |
| SEM | Structural equation modelling |
| SLSA | Surf Life Saving Australia |
| SLSQ | Surf Life Saving Queensland |
| SMS | Short message service |
| SOT | Solid organ transplants |
| SQLR | Systematic, quantitative literature review |
| STD | Sexually transmitted diseases |
| SWB | Subjective wellbeing |
| TAC | Tourism industry after COVID-19 |
| TB | Tuberculosis |
| TD | Travellers' diarrhoea |
| TEQ | Tourism & Events Queensland |
| TGA | Therapeutic Goods Administration |
| TIM | Travel Industry Manual |
| TNF | Tumour necrosis factor |
| TOPs/TOPPs | Tourism Oriented Policing and Protection Services |
| TPC | Tourism pre-COVID-19 |
| TRRR | Thunder River Rapids Ride |
| UK | United Kingdom |
| UN | United Nations |
| UNDRR | United Nations Office for Disaster Risk Reduction |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNISDR | United Nations International Strategy for Destruction Reduction |
| UNWTO | United Nations World Tourism Organization |
| US | United States |
| USA | United States of America |
| USD US$ | United States dollar |
| USLA | United States Lifesaving Association |
| UV | Ultraviolet |
| UVC | Ultraviolet-C (shortest wavelength of three forms of UV) |
| VFR | Visiting friends and relatives |
| VPDs | Vaccine preventable diseases |
| VPN | Virtual Private Network |
| VRE | Vancomycin-resistant Enterococcus |
| VSP | Vessel Sanitation Program |
| VTE | Venous thromboembolism |
| WA | Western Australia |
| WHO | World Health Organization |
| WTTC | World Travel & Tourism Council |

# Issues in Tourist Health, Safety and Wellbeing

**Jeff Wilks, Donna Pendergast, Peter A. Leggat, and Damian Morgan**

**Abstract** At the time of writing the most pressing issue for the tourism industry is to survive economically until vaccines for COVID-19 can be widely distributed, allowing travel to recommence globally. While international travel has been largely suspended in 2020 the industry focus has turned to domestic tourism in most destinations, taking onboard COVID-safe measures to protect travellers. At the same time, the core issues of how to keep tourists safe and healthy more broadly have not changed. This chapter looks at current issues and examines the shift from risk management and prevention in tourism prevalent in the 1990s, where the industry had a very proactive approach to customer health and safety, to a more recent crisis management and recovery framework economically driven in response to significant challenging events. In the *new normal* customer care is in ascendency again with the need to anticipate health and safety issues, develop protocols and emergency plans, train staff and constantly monitor activity to deliver quality services. Tools and strategies that have fallen into disuse in recent years are still available and very relevant to address current issues. The tourism industry and individual tourists must accept that COVID-19 will have lasting impacts on the future of travel and recognise that the world will never completely return to the *old ways* of doing things. In the new

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_1

normal we will need to embrace both new and existing ways of keeping travellers safe.

**Keywords** Tourist · Health · Safety · Wellbeing · Issues · COVID-19

## Introduction

At the end of 2019 tourism was booming. The United Nations World Tourism Organization (UNWTO, 2021a) reported 1460 million international tourist arrivals globally and US$1481 billion in total international tourism receipts, up 3% on the previous year. 2019 was the 10th consecutive year of growth. The tourism industry was one of the largest and fastest-growing economic sectors in the world, generating millions of direct and indirect jobs, with a high share of women and young people employed. By March 2020 most countries had closed their international borders to restrict the spread of the COVID-19 pandemic and the global tourism industry was in economic collapse. The UNWTO described 2020 as the "worst year in tourism history with one billion fewer international arrivals" (UNWTO, 2021b, p. 1).

Throughout this book we use the term *the new normal* to describe tourism as it is changing and adapting due to the COVID-19 pandemic and we draw on research and commentary to speculate about the future landscape of travel and tourism. We try to avoid using the term *post-pandemic* as most scientists currently believe that the novel coronavirus (COVID-19) will become endemic—meaning that it will continue to circulate in pockets of the global population for years to come and like seasonal influenza possibly require yearly vaccinations (Phillips, 2021).

During 2020 and now into 2021 various organisations and individuals have prioritised the key issues facing the tourism industry globally as they see them. Apart from the leading issue of health awareness and COVID-safe measures (World Health Organization [WHO], 2021a; World Travel & Tourism Council [WTTC], 2020) most proposed templates for tourism recovery have largely focused on economics (United Nations [UN], 2020; UNWTO, 2020; Organisation for Economic Co-operation and Development [OECD], 2020a) and sustainability (Lew et al., 2020), with calls to take this time and opportunity to reposition tourism for greater sustainably, such as addressing environmental issues, local impacts on destinations and human rights (ABTA, 2020; WTTC & Oliver Wyman, 2020). The expression *Building Back Better Tourism* has been widely used (The One Planet Network, 2021).

While these concerns are very important and impact tourist wellbeing more broadly, the primary focus of this book and the issues considered in this chapter are firmly on the health, safety and wellbeing of tourists as individuals and in groups rather than on repositioning the industry as a whole. Even though international tourism may have largely halted, the legal and practical aspects of keeping tourists safe, healthy and happy are equally applicable for domestic tourism in all countries (Wilks et al., 2006), especially with the growing interest in adventure tourism and spending time in the outdoors and close to nature (see *Part III Wellbeing: Domestic*

*Nature-Based Tourism and Wellbeing–A Roadmap for the New Normal?*). Concerns for tourist safety and security in all aspects of a journey remain an important issue for the travel and tourism industry in 2021, just as they have for many years (Federation of Tour Operators [FTO], 1999; World Tourism Organization [WTO], 1991, 1996). Indeed, rather than talk about post-COVID-19 or post-pandemic tourism there is now increasing recognition that the world will never completely return to the old ways of doing things (Department for Transport, 2021; OECD, 2020b) and that the new normal will need to embrace both new and existing ways of keeping travellers safe.

## Issues During COVID-19

Governments and industry groups have canvassed a range of issues for tourism since the beginning of the COVID-19 pandemic. There are a number of common themes that have emerged in relation to tourist health, safety and wellbeing.

In an insightful report Deloitte (2020) notes that the pandemic is driving significant changes in consumer behaviour and suggests the following key areas in which to respond to the challenges and seize opportunities:

- Trust will be essential
- Reimagine the customer experience for a COVID-19 world
- Focus on operational agility to navigate uncertainty
- Considerations for employee and customer health and safety, and
- Considerations for effective business recovery

The first key area is developing and maintaining *trust* so that consumers will have confidence in tourism services and suppliers. Trust and confidence involve physical safety, emotional support, digital security, and financial stability. Deloitte (2020, p. 7) also emphasise the importance of communication "[E]very hospitality-sector business will need to actively engage with consumers and communicate the steps they're taking to keep customers and employees safe—and demonstrate how they're living up to those commitments at every point of interaction."

Trust that your physical space is safe involves compliance with public health directives such as physical distancing, hand washing, wearing a mask, self-isolation and COVID-19 testing if available for those not feeling well. The World Travel & Tourism Council (WTTC, 2020) has recently released detailed *Global Protocols for the New Normal* to ensure that people are and feel safe, based on common standards and advice across a range of tourism and hospitality sectors, including:

- Hospitality
- Outdoor Shopping
- Aviation
- Airports
- Tour Operator

- Convention Centres, Meetings and Events
- Attractions
- Short Term Rental
- Car Rental
- Insurance
- Adventure Tourism

For each of these sectors the *Safe Travels Protocol* has four pillars, namely:

(a) Operational and Staff Preparedness,
(b) Ensuring a Safe Experience,
(c) Rebuilding Trust and Confidence and
(d) Implementing Enabling Policies.

The WTTC stresses that these protocols are living documents that are updated as new information about COVID-19 becomes available. A consistent approach across the protocols is again the intention to rebuild trust and confidence with travellers through effective and honest communication, a critical element the tourism industry has learned through dealing with other crises (Beirman, 2003; Pacific Asia Travel Association [PATA], 2003; UNWTO, 2011).

As a key element of its Global Protocols approach the WTTC (2020, p. 1) stresses that:

> It is paramount to have common rules. Ultimately, we envision a future of travel that is safe, secure, seamless and provides an authentic and meaningful experience to the traveller across the journey, one which supports the livelihoods of millions and contributes to sustainable economic growth.

The WTTC also issues a Global Safety Stamp (see Fig. 1) to companies and destinations in recognition of their adoption of the Safe Travels Protocols. While this is an excellent initiative the limitation is the Safe Travels Stamp is based on self-assessment and is not a certification. Without the capacity to independently audit services and facilities, and to enforce standards, there is no guarantee of quality or compliance.

A second aspect of trust identified by Deloitte (2020) is *emotional*—trust that your emotional and social needs are being safeguarded. At a time when tourists are

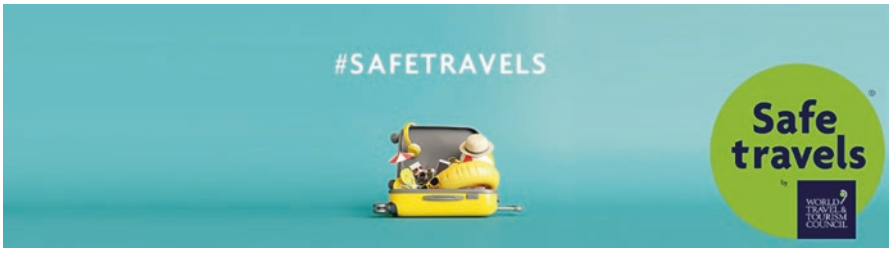


**Fig. 1** WTTC safe travels global protocols and stamp for the new normal. (Source: WTTC (2020), used with permission)

very nervous about travel (Palmer, 2021; *Part III Wellbeing: Health Psychology, Positive Psychology, and the Tourist* and *Part IV Contexts: Understanding how Tourists Perceive and Respond to Risk: A Focus on Health Risk*) the tourism industry must deliver on promises. Interestingly, since the landmark English legal case of *Jarvis v Swans Tours Ltd* (1972) the courts have recognised that claimants have a right to compensation for the disappointment and loss of enjoyment caused by inadequate holidays—where services and facilities promised were of poor quality or not delivered as promised (see also the more recent cases of *Milner and Milner v Carnival PLC,* 2010; *Moore v Scenic Tours Pty Ltd,* 2020). Freedom from danger, risk or doubt is a well-established dimension of quality service (Zeithaml et al., 1990). The delivery of quality service will be a distinguishing feature for tourism in the new normal, where customers are looking for unique experiences and value for money.

Deloitte (2020) also encourages the tourism industry to reimagine the customer experience for a COVID-19 world. This again focuses on a likely permanent transition and acceptance of hygiene behaviours such as regular hand washing, changes to rules on venue capacity and physical distancing, as well as increased customer comfort with digital technologies that have become more regular during the COVID-19 period, such as self-check-ins and check-outs, touchless payments, use of QR codes (abbreviated from Quick Response code) on mobile devices to facilitate contact tracing, temperature scanners and use of a range of app-based services. There are also suggestions that hygiene measures put in place for COVID-19 are already reducing the incidence of other transmittable diseases (WHO, 2021b and see *Part II Safety: Food Safety and Hygiene*) and if maintained will prove to be a major long-term public health benefit. Public notices provided for free by the World Health Organization (WHO) are now widely displayed in toilets and washrooms around the world (Fig. 2).

Finally, Deloitte (2020) prompts some important considerations for employee and customer health and safety involving the use of innovative technology. COVID-19 has produced a range of new health screening solutions, from thermal scanners at airports (Martin, 2020) and hotels (Lennon, 2021) through to contract tracing via QR logins (Wray, 2021) and the use of personal smartphones (Timberg et al., 2020). Disinfectant booths at Hong Kong Airport (Thornber, 2020), baggage scanners and robotic cleaners (Harvey, 2020) have all been trialled. Artificial Intelligence (AI) solutions are also being applied for physical distancing and hazard detection for the safety of beach users (Leichman, 2020; and see *Part IV Contexts: Safety in Coastal and Marine Tourism*). An important aspect of using these new technologies is that they complement and not replace proven methods of keeping tourists safe, such as staff training, customer safety briefings, equipment maintenance and emergency response capability (Wilks et al., 2006).

The key issues identified by Deloitte (2020) have also been highlighted in other major industry reports, for example *To Recovery and Beyond: The Future of Travel & Tourism in the Wake of COVID-19* (WTTC & Oliver Wyman, 2020). In that report four trends are expected to lead the way through recovery and beyond:


**Fig. 2** WHO public hygiene notice. (Source: WHO (2020), used with permission)

- Demand Evolution
- Health and Hygiene
- Innovation and Digitisation
- Sustainability

The four areas are summarised as:

## *Demand Evolution*

Traveller preferences and behaviours have shifted toward the familiar, predictable, and trusted. Domestic and regional vacations and the outdoors will reign in the short term, with tourism businesses and destinations already adapting. It will be vital, however, to ensure early stimulation of the all-important recovery of international travel. Transparent communication will be even more important to travellers in spurring demand.

### *Health and Hygiene*

Health and safety are paramount in this new era. Personal experiences, advice from experts, and concerns for distancing will guide consumer behaviour in the short- to mid-term. Trust, extensive communication and the flow of accurate information will be a leading engine in the recovery of the sector.

### *Innovation and Digitisation*

COVID-19 is proving to be an unexpected catalyst in the Travel and Tourism sector's quest for innovation and the integration of new technologies. Amid stay-at-home orders, digital adoption and consumption are on the rise, with consumers now expecting contactless technologies, including biometrics among others, as a basic prerequisite for a safe and seamless travel experience. Cybersecurity is becoming more important.

### *Sustainability*

From widespread unemployment and anti-racism movements to the restoration of natural habitats and the impact on ecosystems, the world has been re-invigorated to tackle social, environmental, and institutional sustainability. In particular, heightened public awareness of the environment and wildlife markets and poaching has boosted advocacy for wildlife protection as well as ocean preservation.

Table 1 summarises these and other key issues identified for tourist health and safety in 2021.

Trust, confidence and the importance of vaccination are the main messages from Table 1, with pent up demand and growing willingness to travel (Baratti, 2021) placing increasing pressure on governments to open up international borders.

## Opening Up International Travel

Over the course of this book project, beginning in June 2020, there have been many plans and announcements made by governments and industry for reopening international borders and facilitating global travel. With second and third waves of COVID-19 in many destinations these plans have regularly changed but there has been a consistent agreement that real progress will only be made when vaccines are widely distributed and some form of vaccine passport or certificate is available. Immunity passports have been suggested (Edmond, 2020) but the WHO (2020) has

**Table 1** Some key issues identified for tourist health and safety in 2021

| Issue | Comment |
|---|---|
| Trust will be essential | All major tourism organisations agree that earning and maintaining travellers' trust is essential for rebuilding tourism in the new normal: ABTA (2020), Deloitte (2020), WTTC (2020). Surveys suggest that the travelling public, at least in the United Kingdom, may now be more inclined to book their travel through a travel agent so as to gain the expertise of the agent and the protection of industry-based financial support programs (TravelMole, 2020a, b) |
| Communicating actual health and safety activities to customers | The lessons learned by the tourism industry about honest and timely communication with travellers and the general public in times of crisis are equally applicable now and in the new normal (Deloitte, 2020; WTTC & Oliver Wyman, 2020) |
| Reimaging the customer experience for a COVID-19 world | Recognition and acceptance that future travel will not be the same as it was prior to COVID-19. This includes the move to contactless payments, accelerating the shift from cash to digital options (Lee, 2020). Sigala (see *Part V Government and Industry Activity: The Great Reset: Hospitality Redefined*) argues that as customers become more familiar and comfortable with new technologies they will be reluctant to return to the old ways of doing things. |
| Use of technology for health and safety | In addition to the positive initiatives using technology for health and safety there are some areas requiring risk management. One is digital security—recognising the risks around protecting privacy, where concerns have arisen over outsourced COVID Check In platforms owned by companies that collect data and share details with "partners for marketing or promotions". This may expose users to exploitation from cybercriminals (WTTC & Oliver Wyman, 2020). Increasingly, government agencies are taking responsibility for QR platforms (Wray, 2021).<br>Similarly, financial security needs constant attention in an increasingly touchless transaction environment. |
| Availability and wide distribution of vaccines | There appears to be widespread agreement that vaccinations are the key to restarting international tourism (Cheer et al., 2020) with airlines considering a range of incentives to encourage passengers to be vaccinated (Reuters, 2021). There are also concerns about vaccination hesitancy for COVID-19, just as there are fears about vaccination more broadly identified in travel medicine clinics (*Part I Health: Pre- and Post-Travel Medical Consultations*). |
| Availability of appropriate travel insurance | Many companies are now offering insurance that covers COVID-19 treatment and cancellation of travel plans, but few cover border closures and mandatory quarantine. Having comprehensive travel insurance coverage is essential for developing *travel bubbles* between countries and a return to international tourism movement. Surveys suggest that the travelling public may be more inclined to purchase travel insurance now as a result of COVID-19 (Karantzavelou, 2020). |

raised concerns about the effectiveness of antibody-mediated immunity to guarantee the accuracy of an "immunity passport" or "risk-free certificate." Nevertheless, governments are pushing ahead to allow resumption of international travel (Department for Transport, 2021).

On 17 March 2021, the European Commission presented a proposal to create a Digital Green Certificate to facilitate the safe free movement of citizens within the EU during the COVID-19 pandemic. On 21 May the European Parliament officially green-lighted an agreement for an EU-wide vaccine passport scheme, which will be supported by €100 million to fund affordable COVID-19 testing. The European Commission (2021) said the certificate is set to be rolled out by 1 July 2021.

A Digital Green Certificate is a digital proof that a person has either

- been vaccinated against COVID-19
- received a negative test result or
- recovered from COVID-19

Other destinations, such as Australia, are also pursuing vaccine certificates (Skyscanner, 2021), while cruise lines are announcing the resumption of sailing in the middle of 2021 (TravelMole, 2021). So, with an imminent return to some international travel during 2021 it is timely to re-examine the full range of tourist health and safety topics in the context of the new normal. A useful starting point is an examination of the shift from risk management and prevention in tourism prevalent in the 1990s, where the industry had a very proactive approach to customer health and safety, to the more recent crisis management and recovery framework economically driven in response to significant challenging events such as COVID-19.

## Risk Management and Prevention

In 1999 the Federation of Tour Operators (FTO), a UK travel trade association representing major travel companies, published their *Health and Safety Handbook* (FTO, 1999) which was then the most detailed and valuable resource available for improving health and safety standards for holiday makers. FTO Chairman Martin Brackenbury (FTO, 1999) introduced the handbook by observing "Safety is a journey; we have come a long way on that journey. Hopefully this handbook will enable us to travel further for the benefit of our customers. Without them we would have no business" (p.iii).

The importance of customers has been overwhelmingly reinforced by COVID-19 and the same issues of tourist health and safety outlined in the FTO handbook are equally relevant today. The original topics were: fire safety, swimming pool safety, gas safety, children's clubs and illness. Over the next eight years the FTO worked with members, suppliers and governments to produce an expanded suite of standards with accompanying audit tools. The publication of the *Preferred Code of Practice—Health and Safety 2007* (FTO, 2007) represented the very best expert advice to assist hoteliers and other associated suppliers to identify the main safety standards:

- Fire safety
- Food hygiene

- Pool safety
- General safety
- Beach safety
- Children's clubs
- Villa safety
- Gullet safety
- Incident investigation
- Hurricane safety
- Legionnaires' disease

Using detailed checklists for the above areas, representatives of FTO companies audited hotels and resorts, ensuring that safety standards were maintained. A more recent safety handbook produced by ABTA (2017), the *Tourism Accommodation Health & Safety Technical Guide*, continues this customer focus and adds in current topics such as fuel and energy, pest control management, transportation and natural disasters. An industry review of this Technical Guide concluded that it is "the current international benchmark on industry standards and should be an essential reference work in the offices of legal advisors, tourism authorities and accommodation managers" (Wilks, 2017a, p. 92).

While ABTA and the FTO were developing applied industry standards the UNWTO was also active in the area of tourist safety in broader policy areas, beginning with the *Recommended Measures for Tourism Safety*, which was a resolution adopted by the General Assembly in 1991. The Recommended Measures called on Member States to adopt a range of preventive measures to protect tourists, including the identification of risks in travel, adopting safety standards and practices, providing adequate protection by law enforcement bodies and ensuring that staff members of tourism establishments and tourism-oriented services were adequately trained in matters of tourism safety (WTO, 1991, pp. 5–7).

In recent years this on-the-ground approach to tourist health and safety, with independent physical audits of hotels and resorts, training and certification of staff, regular emergency drills and personalised customer care has shifted in favour of voluntary codes of practice, self-auditing, online training and a heavier reliance on insurance to cover mishaps. The cost of face-to-face training and holding junior staff legally accountable for technical property audits (the case where Thomas Cook tourism junior staff members were charged with manslaughter over a gas leak that killed two English children on holiday in Corfu [Davies, 2010]) has seen a shift to online and remote monitoring, and a more crisis management and recovery approach to tourist health and safety. Given the importance of gaining customer trust and guaranteeing physical safety that has become critical during COVID-19 (Deloitte, 2020; WTTC, 2020) we would argue that a return to the proactive and hands-on approach to tourist health and safety is warranted, using the tools and strategies successfully employed during the 1990s.

As tourism begins to recover in 2021 with borders reopening, development of COVID-19 vaccination certificates, digital passenger cards, pre-departure checks and in-flight health monitoring set to become normal practice (International Air

Transport Association [IATA], 2021) the four broad sources of health, safety and security risk in tourism identified by the WTO (1996) and further developed by Wilks (2002, 2006) are again very relevant and a useful framework for the global recovery process. The areas are:

- The human and institutional environment outside the tourism sector,
- The tourism sector and related commercial sectors,
- Individual travellers (personal risks), and
- Physical or environmental risks (natural, climatic and epidemic).

Figure 3 reminds us that risk for tourists can come from a variety of sources and while the global focus has been on COVID-19 during 2020–2021 other risks have still been present. For example, although less visible with fewer people travelling internationally terrorism has not ceased (Breeden, 2021) and remains a concern for the travelling public (Smith, 2021). Similarly, social unrest continues to disrupt communities (see *Part II Safety: Tourism Security in a Post-COVID-19 World: Issues of Tourism Policing and Civil Unrest*) and severe weather events impact domestic tourism around the world (*Part II Safety: Travelling Safely in an Unsafe World–A Shared Responsibility*). With this in mind, it is worth revisiting the UNWTO risk framework (Wilks, 2006).


**Fig. 3** Challenges for the Tourism Industry. (Source: Developed by Dr Jeff Wilks)

## The Human and Institutional Environment

The risks from the human and institutional environment exist when visitors fall victim to:

- Common delinquency (e.g., theft, pick-pocketing, assault, burglary, fraud, deception),
- Indiscriminate and targeted violence (e.g., rape) and harassment,
- Organised crime (e.g., extortion, slave trade, coercion),
- Terrorism and unlawful interference (e.g., attacks against state institutions and the vital interests of the state), hijacking and hostage-taking,
- Wars, social conflicts and political and religious unrest, and
- A lack of public and institutional protection services.

Protection of tourists at this level is the responsibility of national governments and contributes to whether a destination is perceived to be safe. Government travel advisories (Beirman, 2006; *Part V Government and Industry Activity: Government Travel Advisories*) are an important source of information and support to keep travellers safe, as are initiatives like tourism-oriented policing (Tarlow, 2018; *Part II Safety: Tourism Security in a Post-COVID-19 World: Issues of Tourism Policing and Civil Unrest*) where law enforcement officers receive special training in how to assist tourists.

## Tourism and Related Sectors

Through defective operation, tourism and sectors related to tourism such as transport, sports and retail trade can endanger visitors' personal security, physical integrity and economic interests through:

- Poor safety standards in tourism establishments (e.g., fire, construction errors, lack of anti-seismic protection),
- Poor sanitation and disrespect for the environment's sustainability,
- The absence of protection against unlawful interference, crime and delinquency at tourism facilities,
- Fraud in commercial transactions,
- Non-compliance with contracts, and
- Strikes by staff.

As noted by Wilks (2006) problems in this area are not necessarily the "fault" of the tourism industry, but can have a dramatic and negative effect on a destination's image. During the COVID-19 pandemic the most frequent complaints made about tourism were in relation to refunds for travel cancellations (ACCC, 2020), further highlighting the benefits of booking through licensed travel agents who are members of industry financial protection schemes (ABTA, 2021). As hotels and resorts

begin to open again in 2021 detailed physical audits of fire safety, venue security, food hygiene, pool and beach safety (ABTA, 2017) must be undertaken, combined with more recent innovations in health and safety employed by the hospitality sector (see *Part V Government and Industry Activity: The Great Reset: Hospitality Redefined*).

## Individual Travellers (Personal Risks)

Travellers or visitors can endanger their own safety and security, and those of their hosts by:

- Practising dangerous sports and leisure activities, dangerous driving and consuming unsafe food and drink,
- Travelling when in poor health, which may deteriorate during the trip,
- Causing conflict and friction with local residents, through inappropriate behaviour towards local communities or by breaking local laws,
- Carrying out illicit or criminal activities (e.g., trafficking in illicit drugs),
- Visiting dangerous areas, and
- Losing personal effects, documents and money through carelessness.

It is now well-established that many problems experienced by tourists, both international and domestic, are as a result of being in an unfamiliar environment and/or participating in unfamiliar activities (Wilks, 2006, 2008) and that the duty of care responsibilities of tourism operators must take into account that what might be "obvious" to a local resident at a destination may not be obvious or known to a visitor (McMurdo, 2008; Wilks, 2017b). For example, motor vehicle crashes remain the leading cause of international tourist deaths worldwide, with factors including driving on the opposite side of the road (and opposite side of the car) to what is familiar, long-distance driving causing fatigue and disorientation contributing to head-on crashes and overturning vehicles (Leggat & Wilks, 2013). The Australian Water Safety Council (2020) also recently noted the increasing need to respond to cardiac and other emergency events in coastal settings, finding a pre-existing medical condition was present in 36% of drowning deaths (see *Part IV Contexts: Safety in Coastal and Marine Tourism*). As observed by Tarlow (2006) tourists behave differently when away from home, often doing things in a state of disorientation or *anomie*. While tourists need to take some responsibility for their own behaviour, the tourism industry must also go beyond a minimum duty of care to understand, anticipate and prevent reasonably foreseeable incidents from occurring in the first place. This was the industry ethos (practices and values) of tourism health and safety during the 1990s reflected in the UNWTO *Global Code of Ethics for Tourism*, especially Article 6 covering obligations of stakeholders in tourism development (UNWTO, 1999).

## Physical and Environmental Risks

Finally, physical and environmental damage can occur if travellers:

- Are unaware of the natural characteristics of the destination, in particular the flora and fauna,
- Are not medically prepared for the trip (vaccinations, prophylaxis),
- Do not take the necessary precautions when consuming food or drink or for their hygiene, and
- Are exposed to dangerous situations arising from the physical environment (e.g., natural disasters and epidemics).

COVID-19 is the best example of an environmental risk for tourists but another recent example of a dangerous situation arising from the physical environment is the volcanic eruption on New Zealand's White Island in December 2019 where 22 visitors were killed. WorkSafe New Zealand has filed charges, saying operators that brought tourists to see the country's most active volcano failed to follow health and safety rules (Chappell, 2020).

The UNWTO framework described here provides a risk management and prevention (as opposed to a crisis management and recovery) approach to tourist health and safety (Wilks & Moore, 2004; Wilks et al., 2006) which we believe is in keeping with earning the trust and confidence of tourists in the new normal. As a result of COVID-19 tourist health and safety is again in ascendency. This is demonstrated by recent actions such as the UNWTO developing an *International Code for the Protection of Tourists* (UNWTO, 2021c) which will grant greater consumer protections and support tourists impacted by emergency situations globally and the UK Government releasing the *Passenger COVID-19 Charter*, which again focuses on consumer rights and responsibilities as part of a framework for a safe and sustainable return to non-essential international travel when the time is right (Department for Transport, 2021).

## Background to This Book

When approaching writers to contribute to this book the editors were very clear about what we wanted to achieve. First, there was to be a very specific focus on tourists as visitors, customers and consumers. The book was to be about their health, safety and wellbeing drawing on current scholarship, as well as government and industry reports and initiatives.

The second important point was for contributors to take the opportunity to offer more than a standard summary of their topic areas; instead to explore the challenges posed by the current pandemic and what could be the enduring benefits from a new focus on customer care and responsibility. This may also assist in tourism avoiding

a snapback or attempting to return to the old ways of doing business—old ways that are perhaps unsustainable in the new normal.

Finally, the tone of the book was intended to be positive throughout. While it might be necessary to report on injuries and illness affecting tourists, the tone of the book was not to be one of doom and gloom. This follows from the view held by the editors that travel is a valuable human experience and that tourism will recover from the current pandemic, albeit in a changed format for many aspects of the industry. We were also keen to report on innovations from government and industry to promote tourist health, safety and wellbeing.

In keeping with this approach we adopted an innovative theme for the book and a corresponding acronym, being *WHAT'S PAR for the course?* (See Fig. 4)

*Par* derives from a golf term that has come to mean what is normal or expected in any given circumstance—an average or normal amount; just what one might expect (Dictionary.com, 2021). It also has the connotation that you might not be pleased with the situation but it is what you expected to happen. For example, long hours are par for the course.

That just about sums up what many people feel about the direction of tourism as a result of COVID-19, a resigned acceptance that things will never again be the way they were.

So, pivoting, turning in another direction; adapting to changing circumstances; and checking and adjusting standards are all critical factors in moving forward in the care of tourists.

We believe this acronym captures the resilience and creativity needed for a strong future of customer and visitor care post-pandemic and what should be adopted as part of the new normal for tourism. Chapter writers were asked to address questions around WHAT'S PAR for the course? in their work as a prompt to explore issues of resilience and creativity.


**Fig. 4** WHAT'S PAR for the course?

## Overview of the Book

*Part I Health* explores the field of travel medicine, especially the growing importance of pre-departure health preparation, monitoring post-travel, and health considerations for vulnerable groups. This section also places COVID-19 in historical and medical context within the field of infectious diseases and travel.

While the world's focus has been mainly on the pandemic during 2020 and 2021, other concerns for tourism still remain. *Part II Safety* provides a timely analysis of challenges from crime, terrorism, civil disorder and natural disasters such as bushfires, floods and extreme weather that have impacted many countries. A key chapter is on tourist injuries given that so-called "accidents" are traditionally responsible for more tourist hospital admissions than infectious disease. COVID-19 has also focused our attention on food safety and hygiene, which has been a long-standing issue in tourism and hospitality and perhaps provides a positive space for reconstituting the new normal around food safety.

In *Part III* the book examines *Wellbeing*. Prior to the pandemic researchers were investigating wellbeing as a tourism product resource and the contribution of vacations to quality-of-life. This section draws the literature together with the benefit of the pandemic lens to explore implications for safety and customer care. In keeping with the ethos of the book the chapter on positive psychology and the tourist presents some unique insights into wellbeing benefits of travel. The increased interest and appetite for nature-based tourism is a particular focus of this wellbeing section. Also, expanding on contemporary generational theory the chapter on Gen Z travellers examines personal capability, resilience and self-efficacy as protective measures for youth in a changing travel landscape.

*Part IV Contexts* considers some key settings for tourist health, safety and wellbeing beginning with a risk model that summarises current knowledge and suggests where and how customer care should be directed in the future. One of the anticipated trends in COVID-normal will be a surge in remote travelling as a response to mandatory confinement and a desire to be away from crowds. Previous research shows that tourists are particularly vulnerable in unfamiliar environments and while participating in unfamiliar activities. Examining risk in adventure tourism and recreational activities in outdoor settings such as scuba diving, surfing, visiting national parks and travelling in remote locations follows from both the current literature and the anticipated trends post-pandemic.

Finally, in *Part V Government and Industry Activity* the book examines the important role of individual governments looking after their citizens through travel advisories and consular services. Legal responsibilities are a theme throughout the book and are highlighted in the chapter on *Safe Travel—The Legal Duty of Care to Keep Tourists Safe*. *Part V* also looks at three key industry sectors: aviation, hospitality, and cruise ships, all of which have made significant changes to their operations to protect the health of customers during the pandemic.

## *Visual Representation*

A powerful way we can capture the essence of the book is through the use of tools that enable visualisation of the text. We believe this provides a useful snapshot that confirms what the book set out to achieve is evident in the text provided. To create a visualisation, we utilised the tool Voyant, and created two visual summaries, with the images presented in Figs. 5 and 6. Voyant is a free, web-based text reading and analysis tool used by scholars and researchers for the digital scholarship of text mining since its first version was released in 2003 (Miller, 2018).

The word cloud displays the terms scaled in size according to the frequency of appearance in the text. The top ten words used in the book in descending order are: travel, tourism, health, risk, COVID, safety, international, industry, research, and pandemic. In terms of the links between the major concepts in the book, Fig. 6 illustrates the most frequent textual connections, highlighting the strong connections in the book between: tourism and health; health and medicine; health and advice; health, travel and risk; health, travel and safety; tourism and industry; tourism and research; tourism and organisation; and tourism and management.

Through this data-mining exercise that provides visual representation of the text, it is clear that the book will make an important contribution to the field as it is reconstructed during the recovery and renewal of the industry.


**Fig. 5** Word cloud frequency in the book. (Source: Developed by Professor Donna Pendergast)

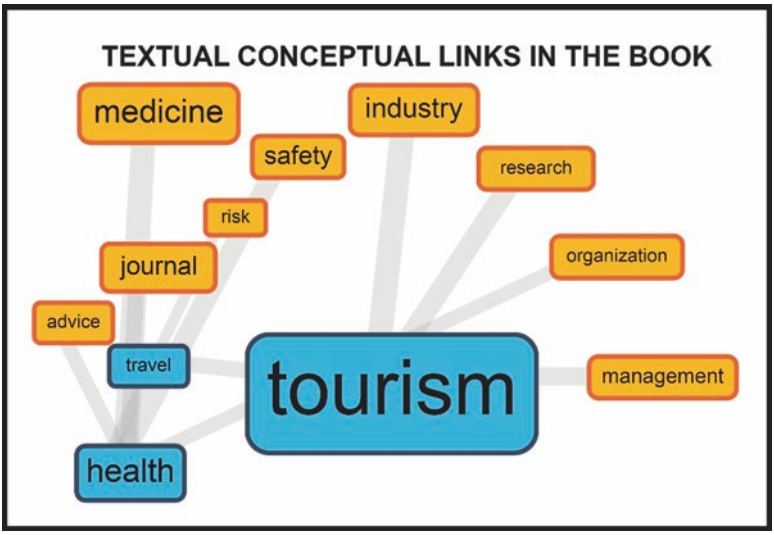


**Fig. 6** Textual conceptual links in the book. (Source: Developed by Professor Donna Pendergast)

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# Part I
# Health

# Travel Medicine and Tourist Health

**Peter A. Leggat**

**Abstract** Following a period of steady growth in tourism, COVID-19 has caused a tremendous decrease in tourist numbers travelling around the world. With the advent of COVID-19 vaccine programs we will no doubt see a resurgence in travel, but it may take years to recover to pre-COVID-19 levels. Travel medicine aims to assist travellers remain healthy and safe during their travels and will be very important to the recovery of tourism globally. Indeed, travel medicine will likely play a key role in when we can travel normally again.

**Keywords** Travel · Medicine · Tourist · Health · COVID-19

## Introduction

There has been an increasing trend for people to travel internationally. Ease of air transportation has ensured that a record 1.46 billion people travelled internationally to every part of the globe in 2019 (United Nations World Tourism Organization [UNWTO], 2020). However, in 2020, there was a 73% decrease in tourism due to the ongoing impacts of the COVID-19 pandemic and a decrease of 87% in tourism in January 2021 (UNWTO, 2021). Many in the press have described this as a tourism cliff, and recovery will largely depend on COVID-19 vaccine rollout, *travel bubbles* and sound pre-travel health advice.

Travellers are potentially exposed to infectious diseases for which they have no immunity, as well as other serious threats to wellbeing, such as accidents and exacerbation of pre-existing medical and dental conditions. Conservatively, it is estimated that between 30–50% of travellers and tourists become ill or injured whilst travelling (Cossar et al., 1990; Leggat & Zuckerman, 2015). Relative estimated

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_2

monthly incidence rates of various health problems have been compiled elsewhere (Steffen, 2018). The risk of severe injury is thought to be greater for people when travelling abroad (Cossar et al., 1990; Leggat & Zuckerman, 2015; Steffen & DuPont, 1994).

This chapter reviews current health and safety issues in travel medicine and tourist health, describes the discipline of travel medicine and how this may usefully impact on tourist health, highlights developments in the field, and discusses the various agencies working in this area.

## Morbidity and Mortality of Travellers

In terms of morbidity, infectious diseases such as respiratory tract infection and travellers' diarrhoea, and injuries are important concerns for travellers (Bewes, 1993; Cossar et al., 1990; Nothdurft & Caumes, 2013). The main health complaints of returned Australian travellers reported in a 1999 survey of travel insurance claims included respiratory (20%), musculoskeletal (17%), gastrointestinal (14%), ear, nose and throat (12%), and dental conditions (7%) (Leggat & Leggat, 2002). This compares with the major specified illnesses and accidents reported in a Swiss study, which included infectious disease (43.5%), accidents involving the extremities (15.3%), psychiatric conditions (8.2%), pulmonary disorders (4.7%), and accidents involving the head (4.7%) (Somer Kniestedt & Steffen, 2003).

Fortunately, only a relatively small proportion of travellers die abroad and those that do tend to die, die of pre-existing conditions, such as myocardial infarction in travellers with known ischaemic heart disease. However, accidents are also a major cause of travel-related mortality (Leggat & Wilks, 2013; Prociv, 1995; see also *Part II Safety: Tourist Injury*). A study published by Baker et al. (1992) analysed deaths of Americans while overseas (nearly 5000 per year) and concluded that most Americans who die overseas do so in developed countries of Western Europe and the causes of death are similar to the U.S. Moreover, deaths of Americans in less developed countries are not from infections and tropical diseases, but are mainly from chronic diseases, injuries, drowning, suicides, and homicides. Similarly, studies of deaths of Australian, Canadian, American and Swiss travellers found that cardiovascular disease, accidents and injuries, were among the most common causes of death abroad (Baker et al., 1992; MacPherson et al., 2000; Prociv, 1995; Leggat & Wilks, 2009; Steffen, 1991).

## Defining Travel Medicine

Travel medicine is a multidisciplinary specialty area, which has emerged in response to the needs of the travelling population worldwide.

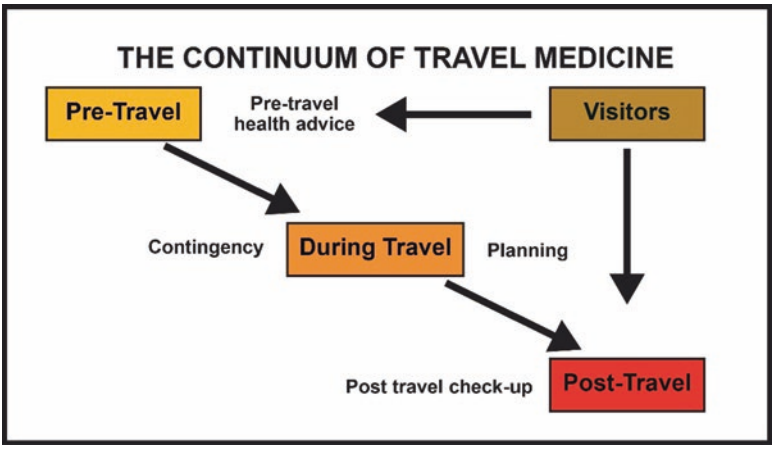


**Fig. 1** The Continuum of Travel Medicine. (Source: Developed by Professor Peter Leggat)

> Travel medicine seeks to prevent illnesses and injuries occurring to travellers going abroad and manages problems arising in travellers coming back or coming from abroad. Tourist health is also concerned about the impact of tourism on health and advocates for improved health and safety services for tourists (Leggat et al., 2005b, p. 3).

The latter aspect recognises the impact of travel on ecosystems around the world, particularly the introduction and spread of diseases and disease resistance. Specialists in travel medicine consider and advise on various aspects of travel-related health, including fitness to travel and the health risks of travelling in itself, as well as exposure to infectious diseases and diseases arising from travel. In this respect, travel medicine can be regarded as a continuum (see Fig. 1), which provides for pre-travel, during travel and post-travel health advice for travellers. This may necessitate the provision of malaria and other chemoprophylaxis or treatment, and various vaccinations. In this respect, Steffen and DuPont (1994, p. 1) state that "…the art of travel medicine is selecting the necessary prevention strategy without unnecessary adverse events, cost or inconvenience" and that "Travel medicine prevention should be based on epidemiological data" (Steffen, 1991, p. 156).

The areas that may be covered in the pre-travel health consultation with travellers are listed in Table 1.

## International Developments in Travel Medicine and Tourist Health

Several key developments in the past decade have ensured the continuing emergence of travel medicine as a specialty area. The World Health Organization (WHO, 2016) *International Health Regulations* and compulsory immunisation contributed significantly to the development of travel medicine. Current travel health practice

**Table 1** Areas that might be covered in pre-travel health consultations

| **Advise/Discuss** | |
|---|---|
| Insects | Repellents, nets, permethrin |
| Ingestions | Care with food and water |
| Infections | Skin; environment |
| Indiscretions | STDs, HIV. |
| Injuries | Accident avoidance, safety |
| Immersion | Schistosomiasis |
| Insurance | Health and travel insurance |
| | Finding medical assistance abroad |
| | First aid advice |
| **Vaccinate** | |
| Always | National immunisation schedule vaccines |
| Often | Hepatitis A |
| Sometimes | Japanese encephalitis |
| | Meningococcal disease |
| | Polio |
| | Rabies |
| | Tetanus-diphtheria |
| | Typhoid |
| | Yellow fever |
| Older travellers | Pneumococcus |
| | Influenza |
| **Prescribe** | |
| Always | Regular medication |
| Sometimes | Antimalarial medication |
| | Diarrhoeal self-treatment |
| | Condoms |
| | Traveller's medical kit |

Source: Modified from Leggat, Ross and Goldsmid (Leggat et al., 2005b) and Ingram and Ellis-Pegler (1996), STDs (Sexually-transmitted diseases), HIV (Human immunodeficiency virus)

often relies on travellers' need for compulsory yellow fever immunisation, based on the epidemiology of the disease. The development of WHO (2012) guidelines on travellers' health, *International Travel and Health*, was also an important advance as this recognised the need to develop a consensus strategy for combating commonly encountered infectious diseases and other problems encountered by travellers.

## *Professional Initiatives*

The International Society of Travel Medicine (ISTM), established in 1991, has taken the lead in establishing a global professional base for travel medicine (ISTM, 2021). Some of the early initiatives of the ISTM were the provision of travel health alerts to subscribers, a journal, biennial conferences, a global listing of travel health

**Table 2** Examples of major Internet and related resources in travel medicine practice

| Name of Resource | Internet address[a] |
|---|---|
| WHO, International Travel and Health | http://www.who.int/ith |
| WHO, Weekly Epidemiological Record | http://www.who.int/wer |
| CDC, Health Information for International Travel | https://wwwnc.cdc.gov/travel |
| CDC, Morbidity and Mortality Weekly Report | http://www.cdc.gov/mmwr |
| International Society of Travel Medicine | http://www.istm.org |

[a]Internet sites accessed 12 April 2021

practitioners, and a collaborative disease-reporting network (GeoSentinel) with the United States Centers for Disease Control and Prevention (CDC) (Freedman et al., 1999). GeoSentinel has played a role regionally in examining health problems post-travel (Freedman et al., 1999; Hamer et al., 2020). The ISTM has also developed an examination program based on a detailed Body of Knowledge in travel medicine leading to a Certificate of Travel Health (Kozarsky & Keystone, 2002). GeoSentinel is an excellent example of the contribution of travel medicine to the early detection and reporting of imported infections to which sites globally contribute (Freedman et al., 1999; Hamer et al., 2020).

Regional societies and faculties of travel medicine have also flourished, such as the Asia Pacific Travel Health Society, which conducts biennial conferences in travel medicine and tourist health in the Asia-Pacific region, in alternate years to the ISTM's Biennial Conference. The three major journals in the field of travel medicine are presently the ISTM's *Journal of Travel Medicine* published by Oxford University Press, *Travel Medicine and Infectious Diseases* published by Elsevier Science, and *Tropical Diseases, Travel Medicine and Vaccines* published by Springer Nature.

Comprehensive international guidelines in travel medicine and tourist health are published by the WHO (2012), as well as by many member countries, which provide guidelines and advice for travel medicine practice. In addition, there are a number of useful Internet and related resources, which provide valuable information on disease distribution and prevention (see Table 2), which have also been discussed elsewhere (Leggat, 2003). Access to current policy guidelines and up-to-date health intelligence, usually provided in travel medicine from Internet-based resources, is essential. Continuing research is also crucial for a better understanding of the epidemiology of travel-related diseases and injuries, which in turn leads to the development of improved guidelines in travel medicine and more effective countermeasures to combat infectious diseases and prevent injuries associated with travel.

## *Postgraduate Education*

Travel medicine and tourist health education is available both nationally and internationally through a range of postgraduate study options, including graduate certificate, graduate diploma, or masters' degree level programs. Several courses in travel, tropical, and migrant medicine are available throughout the world and many are

listed at the ISTM website from time-to-time. As previously mentioned, the professional certificate of knowledge initiative from the ISTM includes recognition for successful examination candidates with a Certificate in Travel Health (ISTM, 2021).

## Travel Medicine Practice

Three main challenges initially confront the establishment of effective travel medicine practice. The first challenge is that travellers must recognise the need for travel health advice before travelling abroad. One airport survey suggested that only 50% of Australian travellers abroad had sought pre-travel health advice (Wilder-Smith et al., 2004). The second challenge is ensuring that travellers seek travel health advice in a timely manner, preferably at least six to eight weeks before travel. The third challenge is for travellers to obtain travel health advice from a qualified source (Leggat, 2000). The airport survey previously mentioned found that only one-third of travellers had sought pre-travel health advice from a health professional (Wilder-Smith et al., 2004).

Many of these challenges can be at least partially addressed through industry and government co-operation, particularly at the level of the travel agent or airline, which will have initial contact with travellers. Although general practitioners (GPs) remain at the forefront of the provision of travel health advice, pre-COVID-19, there has been an explosion in the establishment of dedicated specialist travel clinics, many operated commercially with others being developed within teaching hospitals and general practices (Hill & Behrens, 1996). From earlier studies, it has been found that only 44% of travellers were seeking pre-travel health advice, mostly from travel agents (Cossar et al., 1990), although other studies have shown preferences for seeing GPs as high as 65% (Cossar et al., 1990). Airport surveys in Bangkok and Sydney suggested that only 35% were seeking pre-travel health advice from a health professional, the majority from GPs (Heywood et al., 2012).

Although we are yet to emerge from COVID-19, travel medicine continues to work with other areas of medicine and government agencies to determine when it is safe to start planning travel and to assist in determining what may be required for travel during the COVID-19 era, as complete elimination of the virus may not be possible in the short term. COVID-19 vaccinations are already being rolled out in many countries around the world; however, these vaccines are not necessarily 100% protective and may need two (2) vaccinations or even boosters down the track (Shlim et al., 2021). There may also be those who refuse vaccination and, if permitted to travel, will require advice about COVID-19 prevention (Shlim et al., 2021). There will also need to be close co-operation with airlines to ensure travel is as COVID-19 safe as possible with all useful measures employed (Alshahrani et al., 2021; see also *Part V Government and Industry Activity: Creating a Safer Journey: Exploring Emerging Innovations in the Aviation Sector*).

Public health continues to have a major role in quarantining returning travellers through public health legislation based on the incubation period of COVID-19,

which ranges from 1 to14 days, but is most commonly 5 to 6 days (WHO, 2021a). COVID-19 is also easily caught from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth, which are spread when a person with COVID-19 coughs or exhales (WHO, 2021a). These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, and then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets (WHO, 2021a). Hence, COVID-19 can also be transmitted in hotel and other quarantine facilities, if these droplets are allowed to spread. Contact tracing is the process of identifying, assessing, and managing people who have been exposed to a disease to prevent onward transmission (WHO, 2021a). These people are called contacts. Contact tracing for COVID-19 requires identifying people, who may have been exposed to SARS-CoV-2, the virus that causes COVID-19, and following them daily for 14 days (WHO, 2021a, p. 2).

## *Travel Clinics*

Travel clinics are usually designed to provide comprehensive pre-travel and post-travel health services (Virk & Jong, 2013), including the provision of advice and chemoprophylaxis as well as vaccination and other commercial items, such as travellers' medical kits, mosquito nets and repellents, and water purifiers. In travel clinics, typically health advice would be provided by a physician in 40.7% of cases, the nurse and the physician in 41.9%, and the nurse only in 15.6% (Hill & Behrens, 1996). It has been suggested that about 5000 patients per year were needed to economically sustain a dedicated travel medicine clinic (Freedman, 1996); however, only 13% of the world's travel clinics see more than 5000 patients per year (Hill & Behrens, 1996). The average number seen by these clinics was 750 (range 6–50,000) patients per year (Hill & Behrens, 1996), with a median opening time of 35 hours per week. Often these clinics would need to undertake other work, such as occupational health, aviation medicine, public health or general practice, in order to operate full-time. Considerable variability in the accuracy and extent of advice provided by North American travel health advisers has been found previously (Keystone et al., 1994).

## *General Practice*

A survey of GPs in Glasgow indicated that 87% believed that primary care was the best level at which to provide travel health advice and only about 8% of GPs recommended a travel medicine clinic (Cossar & Reid, 1992). Several studies have shown that general practitioners usually provide advice on travel vaccinations, malaria chemoprophylaxis, insect bite avoidance, geographic diseases, and traveller's

diarrhoea during travel health consultations (Leggat et al., 1999; Seelan & Leggat, 2003). However, the adequacy of advice given by GPs has also been the subject of some studies, and one study went as far as to suggest that general practice was not the best place to provide travel health advice (Jeffries, 1989). Considerable variability in the advice provided by GPs has been found in studies done elsewhere (Holden, 1989). A study by Carroll et al. (1998) of GPs and practice nurses in the UK indicated that more nurses (98%) gave pre-travel health advice and immunisations to travellers than GPs (87% and 48% respectively) and nurses saw more travellers than GPs per month (28 compared with 10).

### *Travel Industry*

Although there are still relatively few studies looking at the travel health advice provided by the travel industry, there have been deficiencies noted in brochures provided by travel agents. In one report (Reid et al., 1986) health information was absent from one-third of brochures; only 11% gave specific health information, and around half of the brochures gave very general health advice. There have also been deficiencies noted in the knowledge of and advice given by travel agents to travellers concerning their health while travelling (Lobel et al., 1987, 1990; Malcolm, 1996). The airline industry serving Australia, for example, has been shown to have a paucity of destination-specific information in their in-flight magazines (Leggat, 1997). Mobile phone apps and functions have also become powerful sources of information (Lai et al., 2019).

## Other Sources of Health Advice

It has been proposed that public health was "generally better equipped to offer comprehensive updated advice than are private practitioners" in the area of travel medicine (MacDonald et al., 1995, p. 103). Travel health advice may also be obtained from the Internet and the media. The information provided at travel medicine internet sites, from Apps and in the media tends to be fairly general or "regional", which can be misleading unless the travellers or the travel health adviser has the knowledge and training to source and interpret the best information available.

## Barriers to Accessing Pre-travel Health Advice

There are a number of potential barriers to travellers seeking adequate pre-travel health advice. The reasons may include:

- Financial
- Ability to access health services
- Language
- Cultural/different belief systems
- Perception that they are not at risk.

Visiting friends and relatives (VFR) travellers are also less likely to access pre-travel health advice (Leder et al., 2011).

## Infectious Hazards of Travel

One of the most important factors in whether travellers seek health advice at all is the perceived risk and severity of tropical diseases (Kain et al., 2019), despite their relatively low health and safety risk to travellers in comparison to accidents and less exotic conditions like travellers' diarrhoea. In addition to the prevention of potentially lethal diseases and injuries amongst travellers abroad, the importance of providing travel health services is also increasingly being recognised in relation to early detection and reporting of imported infections, such as through GeoSentinel (Freedman et al., 1999). Important infectious hazards of travel include vector-borne diseases, including malaria and arboviral diseases, and vaccine preventable diseases (see Fig. 2), which now includes COVID-19.

### *Vector-Borne Diseases*

Vector-borne diseases remain among the great personal concerns for travellers abroad, especially those travelling to more remote tropical areas. Some vector-borne diseases also represent a potential public health problem when returning home. Malaria remains the single most important vector-borne disease problem of travellers; however, arboviral and rickettsial diseases are also becoming increasingly important international travel-related health problems.

### *Malaria*

Malaria is a serious disease caused by a protozoan parasite largely confined to the tropics. The WHO estimates that there were 229 million cases of malaria infection and 409,000 deaths due to malaria worldwide in 2019 (WHO, 2021b). Most cases and deaths occur due to infection with *Plasmodium falciparum* species of malaria; however, infection due to *P. vivax* also remains important, especially as dormant

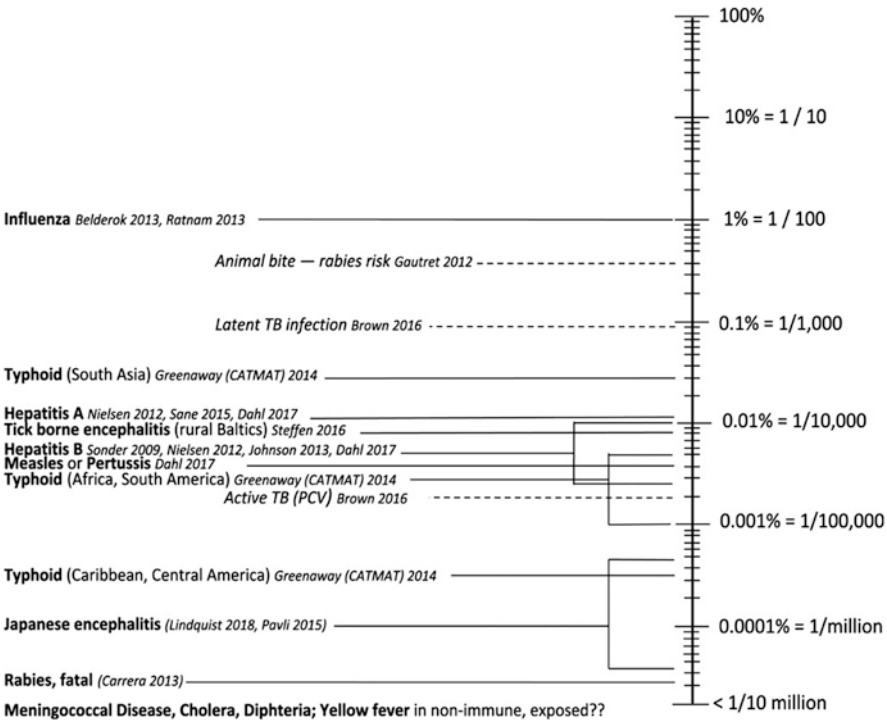


**Fig. 2** Vaccine preventable disease travel health risks: Estimated incidence per month in lower income countries among non-immunes. (Source: Adapted from Steffen, (Steffen, 2018, p. 1), used with permission)

liver stages of the life cycle or hypnozoites can cause relapses, sometimes several, for months after returning home.

Standard malaria preventive measures are considered as part of pre-travel health planning for travellers based on malaria endemicity patterns and policy guidelines. Current disease prevention measures against malaria include the use of malarial chemoprophylaxis, personal protective measures against insect bites, environmental health measures against disease vectors—where feasible, malaria eradication treatment for liver stages and gametocytes on return home, and early detection and treatment of malaria cases in order to avoid serious complications of the infection.

Guidelines for malaria chemoprophylaxis and treatment are described in various travel medicine guidelines. The growing incidence of multidrug resistance in *P. falciparum* and, more recently, *P. vivax*, has limited the antimalarial drug options for malaria chemoprophylaxis. Current recommended malaria chemoprophylaxis options generally include doxycycline (one 100 mg tablet daily), mefloquine (one tablet weekly), and atovaquone plus proguanil or Malarone (one tablet daily which consists of 250 mg of atovaquone and 100 mg of proguanil) (Antibiotic Expert Group, 2019). Chloroquine continues to be recommended as malaria

chemoprophylaxis for malaria in the few areas where there is no chloroquine resistance. Current eradication treatment for malaria is primaquine (two 7.5 mg tablets twice daily for 2 weeks), although Tafenoquine has recently been registered as both an alternative eradication treatment or radical cure for *P. vivax* (300 mg: two 150 mg tablets on day 1 or 2 of the three-day chloroquine course, Therapeutic Goods Administration [TGA], 2018).

Due to the incidence of neuropsychiatric side effects, such as anxiety and nightmares, it is advisable for travellers taking mefloquine for the first time to take several trial doses, possibly commencing as early as three weeks before departure (Looareesuwan et al., 1999). A protocol for determining eligibility for prescribing mefloquine has been described elsewhere (Antibiotic Expert Group, 2019). It is also advisable that travellers are given trial doses of other antimalarials, such as doxycycline and Malarone that they might be taking for the first time well before departure. This is to ensure that there is time to consider alternative chemoprophylactic drugs (Zuckerman, 2002). If travel is commenced at short notice, modification to antimalarial regimens may have to be done abroad, which is less satisfactory. There are varying opinions on how long antimalarial drugs should be continued after leaving an antimalarial area. However, antimalarial drugs, which have no pre-erythrocytic effects on the liver stages of the malarial parasite, such as doxycycline and mefloquine, should be continued for up to four weeks afterwards. This relates to the time it takes for parasites to develop in the liver and infect the bloodstream. Chemoprophylaxis with Malarone, which also has some effects on the hepatic stages of *P. falciparum* parasites, may be able to be given for shorter periods after return, for example one week after return (Looareesuwan et al., 1999) or perhaps even a few days (Antibiotic Expert Group, 2019).

For travellers to more remote areas, standby treatment, in the event of overt malaria infection whilst abroad, may also be useful. "Standby treatment consists of a course of antimalarial drugs that travellers to malaria endemic areas can use for self-treatment if they are unable to gain access to medical advice within 24 hours of becoming unwell" (Zuckerman, 2002, p. 262). In these situations, a travellers' medical kit may be supplied with a thermometer, possibly an immunochromatographic test (ICT) malaria diagnostic kit and written instructions, an appropriate malaria treatment course and written instructions, but regardless travellers must seek medical advice, as soon as possible. Antimalarials, which may be useful for standby treatment, include Malarone and artemether containing compounds such as Riamet (20 mg artemether and 120 mg lumefantrine) (Antibiotic Expert Group, 2019).

## *Arboviral Diseases*

There are many arboviral diseases that may impact on travellers and about two-thirds of the world's population live in areas infested with yellow fever and dengue vectors, mainly *Aedes aegypti* mosquitoes. Two of the most important arboviral diseases for travellers are Dengue fever and Japanese Encephalitis (JE), but also

Zika, as people are travelling to more remote areas in recent years, where these diseases are endemic. These diseases are in addition to Yellow Fever, which has a widespread distribution in many parts of South American and African countries and is controlled by International Health Regulations (WHO, 2016).

Dengue fever is a major global public health problem. The WHO estimates that there are between 100 to 400 million cases per year (WHO, 2020). Dengue is a viral illness transmitted by *Aedes sp*. of mosquito, classically *Aedes aegypti.* Infection may range from being subclinical to fever, arthralgia and rash, or be complicated by haemorrhagic diatheses or shock syndromes. Treatment is supportive, while management of the problem is directed towards early detection of the disease and preventing transmission upon return to receptive countries (Malcolm et al., 1999). Numerous outbreaks of Dengue have been attributed to travellers returning with the disease associated with delays in detecting the condition in recent work conducted in northern Australia (Malcolm et al., 1999). With travellers arriving or returning from abroad during the incubation period of the disease, it is vital that there is a collaborative effort made by various civilian public health authorities to contain and prevent the transmission of the disease amongst the local population (Kitchener et al., 2002). While the first dengue vaccine has been approved by a number of national regulatory authorities, it appears that trial participants who were seronegative at the time of first vaccination had a higher risk of more severe dengue and hospitalisations from dengue compared to unvaccinated participants (WHO, 2020). While the dengue vaccine may continue to have a place, the mainstays of Dengue prevention are personal protective and environmental health measures against disease vectors (WHO, 2020).

JE is the leading cause of viral encephalitis in Asia. The WHO estimates that there are around 68,000 clinical cases annually in South East Asia and the western Pacific region (WHO, 2019). The case fatality rate can be as high as 30% and about 30–50% of clinical cases with encephalitis can have permanent residual neurological sequelae (WHO, 2019). There are now relatively safe and effective vaccines against JE (Barzon & Palú, 2018). Travellers planning to spend extensive time in JE endemic areas should be vaccinated (WHO, 2019).

Zika is also a mosquito-borne flavivirus that was identified more than 70 years ago in Uganda (WHO, 2018). Sporadic outbreaks of Zika have occurred around the world. A large outbreak of Zika in Brazil in 2015 was found to be associated with Guillain-Barre syndrome and microcephaly (WHO, 2018). Eighty-six countries and territories have now reported evidence of mosquito-borne Zika infection (WHO, 2018). Travellers and those living in affected areas should take basic precautions to protect themselves from mosquito bites. Travellers who are pregnant or intending to become pregnant need to be counselled regarding congenital Zika infection (WHO, 2018).

**Table 3** Vaccinations that may be given in the travel health setting

| | Definition | Implications for travel | Examples |
|---|---|---|---|
| Routine | Included in the national schedule | A travel consultation is an opportunity to ensure routine vaccinations are up to date | Diphtheria, tetanus, polio, measles, mumps, rubella, hepatitis B |
| Recommended | Recommended following a risk assessment | Recommended according to an individuals' risk assessment taking into consideration factors, such as destination, length of stay and planned activities | Cholera, hepatitis A, Japanese encephalitis, meningococcal, rabies, tick-borne encephalitis, typhoid, tuberculosis |
| Required | Required under International Health Regulations (WHO, 2019) or as a visa requirement or where a country has stipulated required outside | Proof of vaccination (meningococcal or an International Certificate of vaccination or Prophylaxis (yellow fever) may be required | Meningococcal, yellow fever, COVID-19? |

Source: Adapted from Wong and Simons (2013)

## Prevention of Infectious Diseases Through Vaccination

A number of infectious diseases of travellers can be prevented by immunisation (see Table 3). There are few mandatory vaccines, for which certification is necessary, and these include yellow fever and meningococcal meningitis. Yellow fever vaccination is required for all travellers entering or returning from a yellow fever endemic area, which is prescribed by the WHO (2012). Meningococcal vaccination is required for travellers to Mecca (WHO, 2012).

The travel medicine consultation is also an opportunity to update routine and national schedule vaccinations, which may afflict travellers anywhere. There are also a variety of vaccinations, which may be required for travellers to particular destinations. It would seem prudent to vaccinate travellers against diseases that might be acquired through food and water, such as hepatitis A, typhoid and polio (Zuckerman, 2002), as well as using other measures to combat these diseases. The most common vaccine preventable disease is influenza (Steffen, 2018); however, typhoid vaccination should also be considered for travel to many developing countries. Polio vaccination is rarely required these days, with a concerted campaign for global eradication; however it may be required in situations where polio outbreaks have been reported (Steffen, 2018; Zuckerman, 2002).

There are a number of other infectious diseases, such as tick-borne encephalitis, hepatitis B, JE and rabies (Steffen, 2018), which may afflict travellers to certain destinations or are a result of the nature of their travel, that are vaccine preventable (see Table 1). For older travellers, pneumococcal and influenza vaccinations should also be considered. The development of combination vaccines, such as hepatitis A plus typhoid and hepatitis A plus B, has reduced the number of injections required

(Zuckerman, 2002). The development of rapid schedules for travellers departing at short notice has been useful in providing protection within four weeks (Zuckerman, 2002).

Of course, going forward, COVID-19 vaccination is likely to be a priority before tourists begin to travel again. Counselling for COVID-19 vaccination and prevention will be necessary by travel health advisors as the present suite of COVID-19 vaccinations are not 100% protective and have not been studied over the long term (Shlim et al., 2021). Interim guidance has been provided around evaluation of COVID-19 vaccines by the World Health Organization (WHO, 2021c). There are currently four main types of COVID-19 vaccination, including those based on the whole virus, protein sub-unit, nucleic acid (such as Pfizer's vaccine), and based on a viral vector (such as the Oxford AstraZeneca vaccine, Gavi [The Vaccine Alliance], 2021). There has been considerable discussion around how COVID-19 vaccination will be documented. One approach is a vaccine passport, which may be digital in nature (Needham, 2021). It will be important that all countries work out what will be required in the future to allow for travel during the COVID-19 era.

In addition, the usual travel-related disease risks will still be around, and travellers will need to see a travel medicine practitioner when planning to travel to resource-poor countries. Many diseases have no vaccination. For example, some parasitic diseases, such as intestinal and filarial helminths, can only be prevented through personal protective measures against the infective stages of the parasite and/or through periodic treatment or eradication treatment on return (Antibiotic Expert Group, 2019).

## Non-infectious Hazards of Travel

Despite the emphasis on infectious disease in travel medicine, the single most common preventable cause of death amongst travellers is accidental injury (Baker et al., 1992; MacPherson et al., 2007; Prociv, 1995; Steffen, 1991). About 35% of deaths of Australian travellers abroad were the result of ischemic heart disease, with natural causes overall accounting for some 50% of deaths (Prociv, 1995). Trauma accounted for 25% of deaths of Australians abroad (Prociv, 1995) and also for incoming travellers to Australia (Leggat & Wilks, 2009). Injuries were the reported cause of 18% of all deaths, with the major group being motor vehicle accidents, accounting for 7% of all deaths, which appeared to be over-represented in developing countries (Prociv, 1995). A similar pattern of mortality was observed in American (Baker et al., 1992), Canadian (MacPherson et al., 2000), and Swiss (Steffen, 1991) travellers abroad. Deaths of Australian tourists overseas have also resulted from drowning, boating accidents, skiing accidents, bombs, air crashes and electrocution (Prociv, 1995). Homicides, suicides and executions combined accounted for about 8% of all deaths (Prociv, 1995). Most fatal accidents in American and Swiss travellers were traffic or swimming accidents (Baker et al., 1992; Steffen, 1991). Deaths of tourists visiting Australia were similarly found to be due mainly to motor vehicle

accidents and accidental drowning (Leggat & Wilks, 2009). Drowning was also found to be a major cause of death of travellers visiting Australia (Peden et al., 2016). Infectious disease was reported as the cause of death in only 2.4% of Australians who died while travelling abroad (Prociv, 1995).

## Issues in Aviation Medicine

Travel medicine and tourist health is also a key component of the activities of many health professionals working in the aviation sector. At present, airline travel is severely curtailed by COVID-19 and airlines are seeking to ensure they employ COVID-19 mitigation measures on all their flights (see *Part V Government and Industry Activity: Creating a Safer Journey: Exploring Emerging Innovations in the Aviation Sector*). This has been a challenging undertaking by airlines and studies are just starting to emerge that there may be some way to go, at least in some regions (Alshahrani et al., 2021).

In addition to undertaking aviation medical examinations and advising their own staff, who are travelling, airline medical departments review passengers' clearances to fly and provide advice to travel health advisers. Some travellers need special clearance to fly in cases of aeromedical evacuation (AME) on commercial aircraft and in certain prescribed circumstances of normal travel, such as with recent surgery or serious physical or mental incapacity (Graham et al., 2005). Liaison by travel health advisers with the airline medical departments is usually also advisable. Health professionals working in the aviation sector also become involved in developing policies and guidelines for dealing with in-flight emergencies involving travellers, as well as training for flight attendants in first aid. Physicians working in aviation medicine have their own national or regional professional organisations, such as the Australasian College of Aerospace Medicine, Australasian Society for Aerospace Medicine, the International Academy of Aviation and Space Medicine and the Aerospace Medicine Association in the United States of America.

While some medical practitioners undertake the work of Designated Aviation Medical Examiners, particularly in respect of pilots, air traffic controllers and, in some instances, flight attendants (Leggat & Putland, 2004), travel health advisers also need to be aware of the potential health effects of modern airline travel, including COVID-19 (Grout & Leggat, 2021). These include the effects of reduced atmospheric pressure, low humidity, closed environment, inactivity, the effects of crossing several time zones on circadian rhythm, alcohol, and the general effects of aircraft motion and movement (Graham et al., 2005). These effects can produce conditions such as barotrauma, dehydration, jet lag, motion sickness, claustrophobia and panic attacks, air rage, spread of infectious disease, and contribute to the development of deep vein thrombosis (DVT) and venous thromboembolism (VTE) (Graham et al., 2005). There have also been concerns raised about the transmission of tuberculosis through close proximity to infected travellers on commercial aircraft (WHO, 2008). The provision of travel health advice and preventive measures for these conditions also largely falls to the travel medicine provider.

While considerable attention has been focussed on DVT and VTE, it remains uncertain what the contribution of air travel is to the development of this condition amongst travellers. What seems to be clear is that the development of DVT and VTE is multifactorial (Mendis et al., 2002). While the identification of travellers with predisposing risk factors would seem useful, it is only an option where the risks of side-effects of the screening procedure do not outweigh the risks of developing deep vein thrombosis after a long haul flight, which is estimated to be about 1 in 200,000 for travellers on a 12-hour long haul journey (Gallus & Goghlan, 2002). In the meantime, conservative measures should be recommended, such as in-flight exercises, restriction of alcoholic and caffeinated beverages, drinking lots of water. Other preventive measures for some at-risk cases, such as sub-cutaneous heparin, are worthy of investigation (Zuckerman, 2002). Current epidemiological research and pathophysiological studies are helping to establish which travellers are at greatest risk, which will in turn lead to appropriate intervention studies.

## Travel Advisories

In recent times, travel advisories have assumed great importance in endeavouring to secure the safety and security of travellers (see *Part V Government and Industry Activity: Government Travel Advisories*) and indeed have greatly reduced travel globally during the current COVID-19 pandemic. National governments regularly update their travel advisories, which are often included as part of information supplied by computerised databases used in travel medicine. Travellers and tourists can be confronted by a range of threats (see *Introduction: Issues in Tourist Health, Safety and Wellbeing*), including acts of terrorism resulting in numerous casualties, such as the October 12, 2002, bombings in Kuta, Bali, Indonesia, which required a rapid multiagency response to rescue foreign nationals trapped in Bali. This was in the context of under-resourced local health facilities, which were quickly overwhelmed by both local and tourist casualties (Hampson et al., 2002; Leggat & Leggat, 2004).

## Travel Insurance

Because of the potentially high costs of medical and dental treatment abroad, which may not be covered by private health insurance or local national health services, and the potential high costs associated with aeromedical evacuation (AME), all travellers should be advised of the need for comprehensive travel insurance. Travel insurance policies normally underwrite travel-related, medical and dental expenses incurred by travellers abroad under conditions specified by the travel insurance policy. In addition, travel insurance companies often provide a direct service, usually through their emergency assistance service contractors, to assist travellers

abroad. This may include assisting with accessing or obtaining medical care while overseas, including AME. Claims for reimbursement of medical and dental expenses abroad made up more than two-thirds of all travel insurance claims in Australia (Leggat et al., 2005a). In that study, almost one in five Australian travellers abroad have been found to use the travel insurer's emergency assistance service (Leggat et al., 2005a).

Travel insurance is the most important safety net for travellers in the event of illness, injury or unforeseen events, and needs to be available in the post-COVID-19 travel environment (Quantum Market Research, 2020). It should be reinforced by travel health advisers. Studies over the past few decades have shown about 60% of GPs in New Zealand (Leggat et al., 1998), 39% of GPs in Australia (Seelan & Leggat, 2003), and 39% of travel clinics worldwide (Hill & Behrens, 1996) usually advise travellers concerning travel insurance. In addition, 54% of GPs in New Zealand also usually advised travellers about ways to find medical assistance abroad, but in the same study only 19% of GPs recommended travel insurance companies as a source of medical assistance while travelling (Leggat et al., 1998). However, it is not known what proportion of travel agents or airlines routinely give advice on travel insurance. A cautionary note is that with *travel bubbles* beginning to open up between countries (Wego Travel, 2021) some insurers are now offering cover for medical expenses or cancellations due to the virus, but none are currently protecting travellers against sudden state border closures or overseas travel bans. The industry recommends that travellers should carefully read the product disclosure statements of each policy, or ask a trusted travel agent for advice (Williams, 2021).

## Conclusion

Travel medicine has emerged as a multidisciplinary specialty area catering for what has been an increasing number of travellers worldwide, until the past 12 months and the advent of the COVID-19 pandemic. Travel health advisers, primarily associated with travel clinics and general practice, are engaged in the provision of pre-travel health advice, chemoprophylaxis against travel-related diseases, traveller's medical kits, and post-travel assessments and eradication treatment for various travel-related diseases. They are also in a key position to liaise with public health authorities on possible imported disease risks, such as the current COVID-19 pandemic. Travel health advisors will also be central to managing travellers in the COVID-19 era, especially in terms of COVID-19 documentation and advice, including vaccination and testing. In terms of risk assessment and provision of preventive measures, accidents, vector-borne diseases, in particular malaria and the arboviral diseases, stand out as major concerns for travellers. However, common problems such as travellers' diarrhoea and respiratory tract infection also need to be addressed. Travel health advisors have many linkages with the aviation sector, especially in terms of fitness to fly and dealing with problems that may arise in travellers due to physiological and psychological stresses of travel. In the face of global terrorism and conflict, travel

advisories have assumed great importance in travellers' planning. Travel insurance remains an important safety net for travellers, which provides coverage for medical and dental treatment abroad as well as an emergency assistance service, which may include AME.

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# Pre- and Post-Travel Medical Consultations

**Deborah J. Mills, Lani Ramsey, and Luis Furuya-Kanamori**

**Abstract** This chapter reviews the main topics that should be covered in a pre-travel medical consultation, noting that what the traveller might think is important may not necessarily correspond to what is needed for the best protection of their health and wellbeing during the journey. Pre-departure travel medicine excellence is not just knowing which vaccine is required, but also planning how best they can be administered and recorded, how to encourage safer health behaviours, advising on medical supplies, and gathering the evidence for constant improvement in outcomes for all types of travellers. We also describe the main travel-related illnesses that a health provider may encounter during a post-travel consultation. The cessation of most international travel, resulting from worldwide measures to contain the COVID-19 pandemic, presents particular challenges to travel medicine providers, especially those more specialised. In this chapter, we also discuss how the requirements of the *new normal* may impact pre- and post-travel medical consultations.

**Keywords** Travel medicine · Pre-travel consultation · Vaccinations · Health advice · COVID-19

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_3

## Introduction

A pre-travel health consultation is a visit to a medical provider with the goal of the traveller accessing the advice and services necessary to protect their health during overseas or international travel. In the early 1980s, travel medicine education of doctors was limited, perhaps delivered as one lecture in a six-year medical program. Consumer demand inspired travel providers British Airways and Trailfinders to operate specialised travel medicine services for their passengers in London. Since that time, a great deal of development and fine-tuning of the pre-travel health consultation has occurred. The International Society of Travel Medicine (ISTM) was formed in 1991, and the tireless efforts of ISTM founders and members have catalysed this progress. Knowledge was shared at specialist conferences and research was inspired, which led to steady advances in understanding the type of health problems befalling travellers, and as a consequence, what could be done to decrease those risks. Gradually these conferences spawned textbooks. Now up-to-date research findings are published in well-respected journals including the ISTM's own Journal of Travel Medicine.

The health of all manner of different travellers has been investigated and consultations consequently fine-tuned; business travellers, student travellers, holidaymakers, and travellers visiting friends and relatives (VFR) all have unique risk profiles and challenges (see also *Part I Health: Vulnerable Groups and Travel Health Considerations*). The pre- and post-travel medicine consultations have evolved over the ensuing decades, with the development of improved vaccines for diseases such as polio, typhoid and hepatitis A, and more effective medications for the prevention of malaria, along with better diagnostic tools, for example, polymerase chain reaction (PCR) tests to rapidly reveal the aetiology of diarrhoea. Providers have also developed a better understanding of how to efficiently deliver these services to travellers. The spread of diseases such as HIV, dengue, Chikungunya, and Zika, and now the appearance of COVID-19, have reshaped the pre- and post-travel consultations, further emphasising the importance of tailoring each consultation to fit the travel itinerary and health profile of the traveller.

## The Pre-travel Health Consultation

According to Chen and Hochberg (2020), the pre-travel consultation offers dedicated time to prepare travellers to avoid those health concerns that might arise during their trips. The objectives of the pre-travel consultation are to:

1. Perform an individual risk assessment,
2. Communicate these anticipated health risks to the traveller,
3. Provide risk management measures, including immunisations, malaria prophylaxis, medical kits, and education as indicated, and,

4. Provide an understanding of the interaction between pre-existing medical conditions and the conditions in the destination.

Pre-travel consultations can be undertaken by providers with various backgrounds including doctors, nurse practitioners, registered nurses, and pharmacists. Each will bring their unique background and responsibilities to the task.

Pre-travel care is unique and different from a typical general practice consultation. In general practice, the doctor is required to make a diagnosis and then formulate a management plan. In travel medicine the "diagnosis", is clear, the challenge is the management plan. Therefore, much of pre-travel health care focuses on disease prevention—travellers are mostly healthy and wish to stay that way, both while overseas and on return (Flaherty et al., 2017). Just as many different instruments come together in an orchestra to play music—whether a symphony or an opera—in travel medicine delivery many different systems must come together: checklists; staff training; traveller educational materials; stock management procedures, and; optimal equipment such as purpose-built vaccine fridges. These are some of the essential instruments required for excellence in service delivery regardless of the country being visited or the health risks the traveller will face.

## Promotion and Benefits of Travellers Having a Pre-travel Consultation

A pre-travel health consultation is generally recommended by most governments around the world as part of their official travel advisory service for citizens (see *Part V Government and Industry Activity: Government Travel Advisories*). These advisory services also provide health warnings and precautions about destinations. Many travel agencies and tour operators recommend that their clients seek health advice before departure. There is considerable evidence that obtaining medical advice leads to better outcomes, with pre-travel consultations found to be associated with lower morbidity and severity of malaria (Schlagenhauf et al., 2015). Other studies have shown a strong association between receiving advice before travelling and risk-avoiding behaviour (Packham, 1995), with a lower incidence of diarrhoea and gastrointestinal symptoms (Tafuri et al., 2014).

Despite the benefits of pre-travel consultations, only a minority of travellers seek health advice prior to travel. Around a third of travellers departing from Bangkok and Sydney airports sought pre-travel advice from a health professional (mainly through a general practice), and less than 5% attended a more specialised travel medicine provider or travel clinic (Heywood et al., 2012). Similar results were observed by Stoney et al. (2016b) in the USA, where only 30% of people who travelled internationally sought pre-travel healthcare.

The main factor associated with not seeking pre-travel health advice was traveller perceptions of low disease risk while overseas. Additional factors for not seeking

pre-travel advice included being foreign-born (relative to the country of departure), visiting friends and relatives, travelling frequently, being male, travelling for a shorter duration, and time limitation before departure (Kain et al., 2019). Interestingly, cost was rarely mentioned as a barrier to attending pre-travel consultations.

## Elements of Medical History Needed for a Pre-travel Consultation

A pre-travel consultation begins with collecting information on the traveller's past medical history, their vaccine history, and trip details to aid an appropriate individual risk assessment. Even before vaccines or chemoprophylaxis are considered, ensuring that travellers pre-existing medical conditions are stable for travel is the most important part of the process. Pre-existing medical conditions are not uncommon in travellers. Wieten et al. (2014) found that 26% of all travellers suffered a pre-existing medical problem—becoming more common in those over 60 years of age, where 50% of travellers had a pre-existing medical condition.

Pre-existing medical conditions require consideration as to what (if anything) may cause these conditions to worsen or become unstable while overseas, for example, will asthma symptoms be precipitated by poor air quality at the destination, or will exertion worsen cardiac insufficiency in remote areas? Also, pre-existing conditions may influence the vaccine recommendations, for example, those with inflammatory bowel disease may be recommended cholera vaccination. Table 1, modified from the 2020 CDC Yellow Book, summarises items to be considered during the pre-travel consultation (Centers for Disease Control and Prevention, 2020).

## Business Travel—Duty of Care

People who travel overseas for some form of work, whether this is for-profit or humanitarian reasons, deserve special consideration. *High stakes* business travellers with packed itineraries who become ill, may incur not just inconvenience, but significant financial loss. Failure to provide appropriate pre-travel care might trigger expensive litigation targeting the sender organisation, should significant preventable medical problems develop. Thus Occupational Health and Safety (OH&S) concerns must impinge upon some pre-travel recommendations.

"Workers and other persons should be given the highest level of protection against harm to their health, safety and welfare from hazards and risks arising from work as is reasonably practicable" (Australian Work Health and Safety Act, 2011 s 3). This encompasses both "physical and psychological health" (s 4).

**Table 1** Topics which inform the pre-travel risk assessment

| **Health background** | |
|---|---|
| Medical history | Age and sex<br>Underlying conditions and current medications<br>Allergies (food, vaccines, medication) |
| Special conditions | Pregnancy (including trimester) or breastfeeding<br>Disability or handicap<br>Immunocompromising conditions or medications<br>Older age<br>Recent surgery |
| Immunisation history | Routine vaccines<br>Travel vaccines |
| Prior travel experience | Experience with malaria chemoprophylaxis<br>Experience with altitude<br>Illnesses related to prior travel |
| **Trip details** | |
| Itinerary | Countries and specific regions<br>Rural or urban<br>Reason for travel (e.g., tourism, business, seeking health care) |
| Timing | Trip duration<br>Season of travel<br>Time to departure |
| Travel style | Independent travel or tour<br>Propensity for "adventurous" eating<br>Traveller risk tolerance<br>General hygiene standards at destination<br>Modes of transportation<br>Type of accommodations |
| Special activities | Disaster relief<br>Medical care (providing or receiving)<br>High altitude<br>High risk/extreme sports<br>Cruise ship<br>Anticipated interactions with animals<br>Anticipated sexual encounters |

Source: Adapted from 2020 CDC Yellow Book (CDC, 2020)

In countries with extensive local OH&S legislation, the employer's responsibility may not cease at the country's border. The duty of care should provide, to the extent reasonably possible, a safe work environment for all personnel, whether in the head office or on assignment overseas. This means that workers need to receive "best practice" pre-travel health care prior to departure, as well as documentation of this completion.

Although business travellers may be regarded by some as "low-risk" travellers, they do experience a high prevalence of travel-related health problems. Chen et al. (2018) found that among 12,203 business travellers across 29 countries in the

GeoSentinel network, the most frequent diagnoses were malaria (9%), acute unspecified diarrhoea (8%), viral syndrome (6%), acute bacterial diarrhoea (5%), and chronic diarrhoea (4%). Diarrhoeal illness and malaria caused the largest morbidity in this group of travellers, which is concerning given that morbidity can be reduced by better adherence to malaria chemoprophylaxis and targeted vaccination. Furthermore, the researchers reported that pre-travel advice was under-utilised among this group of travellers, as less than half of them reported attending a pre-travel consultation.

## Which Vaccines for This Traveller?

It is beyond the scope of this chapter to provide a comprehensive list of which vaccines are recommended or required for each particular country, as the recommendations change as diseases ebb and flow. However, it is worth understanding that vaccines for travel can be broadly categorised into three groups: routine, recommended, and required. Vaccines to consider during pre-travel consultation are listed in Table 2.

### *Routine Vaccines*

These are also known as standard childhood vaccines. No travellers should depart without these standard vaccines; however, what is considered a standard childhood vaccine may vary depending on the birth year of the traveller or their country of origin, for example, recommendations change over time where some countries give varicella or hepatitis A vaccine and some do not, or not all countries include Bacille Calmette-Guérin (BCG) vaccination for tuberculosis as part of their national immunisation program schedule. Meningococcal vaccines may be included in a routine schedule, but the type and timing of these vaccines may vary depending on the country of origin.

**Table 2** Vaccines to update or consider during a pre-travel consultation

| Recommendation | Vaccines |
|---|---|
| Routine vaccines | Polio, tetanus, diphtheria, pertussis, measles, mumps, rubella, varicella, influenza (flu), pneumonia, hepatitis B, tuberculosis |
| Recommended vaccines | Typhoid, hepatitis A, cholera, Japanese encephalitis, tick encephalitis, rabies, Q fever |
| Required vaccines | Yellow fever, meningitis, COVID-19 |

## *Recommended Vaccines*

Recommended travel vaccines will vary depending on the risk-benefit analysis as outlined earlier. Certain vaccines may be recommended for travellers visiting anywhere in a country where health systems are under-resourced (e.g., hepatitis A vaccine), whereas other vaccines may only be recommended for particular parts of a country (e.g., Japanese encephalitis predominantly for rural areas of Asia). Some vaccines may be based on planned activities. For example, Q fever vaccination may be recommended for persons who will be working with animals or wildlife in certain regions.

## *Required Vaccines*

Compulsory vaccines are those where the vaccine record will be checked upon entry to a country, such as the yellow fever vaccine for parts of Africa and South America, meningitis vaccine for Hajj, and now COVID-19 vaccination.

Once vaccines are recommended, however, not all travellers will accept the vaccine. Lammert et al. (2016) found that more than one-quarter of travellers who sought pre-travel health advice refused at least one vaccine during the pre-travel health encounter. The most common reason for travellers to decline vaccinations was lack of perceived risk (i.e., not concerned with illness). A similar finding by Wang et al. (2019) also identified both threat and coping appraisals affect travellers' protection motivations (see also *Part IV Contexts: Understanding how Tourists Perceive and Respond to Risk: A Focus on Health Risk*).

In addition to the perception of low risk, vaccine cost was also another barrier for some traveller's vaccine uptake (Lammert et al., 2016). Leder et al. (2012) promoted the concept that vaccination recommendations may change if one looks through the lens of not just this trip, but future trips as well. Expensive vaccines may be perceived as better value when the risk is potentially more prolonged. Travel medicine providers themselves may also play a role in the uptake of a particular vaccine. Kain et al. (2019) found that travellers who consulted more experienced travel medicine providers were more likely to accept vaccination recommendations. Possibly experienced providers are more skilled at assessing and communicating information about disease threats and vaccine benefits.

Furthermore, once the vaccines are agreed to with the traveller, vaccination timing is an important part of the pre-travel service, as there are considerations regarding interactions of vaccines (particularly live vaccines) and vaccines that require multiple doses to complete the schedule. This vaccination timing issue leads to another challenge faced by travel medicine providers, that is, *when* a traveller presents in relation to their departure date. Some travellers present with insufficient time to complete the recommended vaccinations or pre-travel preparation (Yates et al., 2019). Late presentation may necessitate incomplete or condensed vaccination

schedules, often with limited data to guide best practice as to their effectiveness. Although it is seldom too late to get pre-travel health advice, the human immune system takes time to process vaccines and generate appropriate protection. Vaccination of "last-minute travellers" may still lessen the impact of some diseases, especially those with long incubation periods. It will also prime the immune system as many of these travellers undertake repeated last-minute trips. Encouraging travellers to seek medical advice early (at least 4 to 6 weeks prior to departure) might help mitigate the problem of late presentation. It behoves travel consultants or websites which organise travel arrangements to encourage travellers to plan for pre-travel health advice early in the booking cycle.

## Needle Phobia

People who suffer from needle phobia will likely avoid healthcare settings, but the presence of required vaccines funnels some of these needle-phobic travellers toward travel medicine providers. Despite immunisation being one of the key components of a pre-travel consultation, needle phobia has been largely neglected in the context of travel medicine.

The very nature of needle phobia makes it hard to determine its prevalence and consequent impact on vaccine uptake. McLenon and Rogers (2019) found that the prevalence of needle fear ranges from 20–50% in adolescents and 20–30% in young adults, and the prevalence tends to decrease with increasing age. They found that, even among health care workers, the prevalence of needle fear leading to avoidance of influenza vaccine was as high as 27% in hospital employees and 18% in workers at long-term care facilities.

Children are a particular concern regarding vaccination pain, as the experience of pre-travel medical care could have lasting effects on their tolerance of immunisations in adulthood. Pain management strategies have the potential to reduce distress during vaccination and improve satisfaction leading to positive experiences for children and their families (Taddio et al., 2009). Simple activities such as swaddling, combined with breastfeeding within 45 minutes of immunisation can decrease injection pain in neonates (Hashemi et al., 2016). Tools to minimise injection pain may be useful in some settings, for example, a CoolSense device or anaesthetic patches. Other techniques individualised to the travellers, such as using applied tension to maintain blood pressure in those predisposed to fainting, cognitive behaviour therapy along with a systematic desensitisation programme (Jenkins, 2014) or the use of geographical visualisation as a distraction technique (Andrews & Shaw, 2010), could improve a traveller's experience and satisfaction during pre-travel immunisation. Syncope (fainting or passing out) is a very real and important issue that can easily be prevented by lying down. It is also important to consider the order of administration when giving multiple vaccines, as this could make a difference to the pain experience (Kumar et al., 2016; Ravikiran et al., 2011).

## Mindfulness and Immunisation

Mindfulness, as an immunisation coping strategy, is becoming popular with some health professionals. Mindfully re-framing the words about procedures starts before the traveller enters the consulting room—from the website wording (e.g., changing words like *needles* and *painful*), to how we talk about *vaccines* or immune memory on the phone, or in written instructions. Even calling clients *travellers*, instead of *patients*, can make it better for some people. Encouraging travellers to be well-fed before their visit and to feel comfortable revealing their fears or history of feeling faint is important. Listening to the traveller's concerns during a consultation in a non-judgemental, empathetic and caring healthcare environment makes a big difference. Being alert to utilising the client's learning style (by observing how they talk "I see, I hear, I feel") allows a suitably trained professional to assist in reframing the experience and their concerns.

Young babies can be distracted with bubbles or sounds. Young children, especially those who have been taught mindfulness techniques in school, can be assisted to use imagination. For example, when dressed in a superhero t-shirt, that focus on the child can be utilised (they are being given superpowers) or they can be guided to imagine their favourite activity. Adolescents and adults are the ones that quite often need the most attention and time. Strategies which allow them to feel more comfortable, such as preparing vaccines away from eye-sight (removing vaccines from noisy packaging and placing syringes under sterile drapes), and slowing down to allow time to mentally create a favourite scene are beneficial. Facilitating engagement of all the senses such as having pleasant music or fragrances in the waiting room may be ways to help disengage the amygdala—the part of the brain that reacts quickly and adversely to stress.

Some travellers may need reassurance of what seems obvious to providers—that staff in travel medicine clinics have worked tirelessly to ensure they are getting the right choice of products, for the right style of trip, and within their budget, their pain threshold, and their values. For some travellers, it is enough to remind them that medical staff members are highly trained professionals whose goal it is to keep them safe. Experienced practitioners develop a personal spiel or system to put travellers at ease—from using their own brand of humour, letting travellers see, or not see what is going on depending on the traveller's preference, getting it over quickly, engaging in *verbal anaesthesia* by talking or asking the traveller questions. The describing language that is used by the medical staff is extremely important to ensure "just a light feathery touch" to let them know they are safe. Positive reinforcement for their success, once achieved, is imperative.

Some individuals have serious reservations (phobias) about invasive procedures and simple techniques can help them find their courage, and make all the difference between a calm experience and a downright terrible one, which will also assist them with their future health care needs.

## Vaccine Records and Safety

Recording of vaccines is important to minimise unnecessary future vaccination. Records must include a provider system to store vaccine batch numbers for later retrieval in the event of a vaccine batch recall. Travellers may need to be re-called and re-vaccinated if there is a recognised failure of some aspect of the complicated journey of vaccines from manufacture into the traveller. For example, the rabies vaccine recall of four lots of IMOVAX in 2004 by Aventis Pasteur would not have been possible without these records (Centers for Disease Control and Prevention, 2004).

Vaccine records must also be provided to the traveller. Sometimes this will be in the form of an International Certificate (e.g., Yellow Fever, polio). Some countries have national immunisation registers to solve the problem of lost vaccination records, such as the Australian Immunisation Register (AIR) which is a national register that records all vaccines given to all people in Australia (Australian Government, 2019).

Vaccine administration entails even further responsibilities. Despite newer vaccines having been developed in the last decades which are more effective (i.e., immunogenic) and have better safety profiles, education about potential side effects of vaccines is required. Needed too are systems for follow-up in the event of problems or queries, even if problems develop after hours. There are now excellent technological solutions to the problem of revealing safety signals for vaccines using real-time tracking of vaccine side effects, such as SmartVax.

**SmartVax: An Active Text Message-Based Surveillance System Following Immunisation**

As of November 2020, the SmartVax vaccine-safety monitoring network consisted of 356 sites made up of 320 general practices 22 pharmacies, three hospitals, four local government councils, two Aboriginal Medical Services, three university clinics and two community clinics—located across every state and territory in Australia. SmartVax is an active adverse event following immunisation (AEFI) platform which monitors all vaccinations at all ages.

The platform works by sending an automated text message to patients 3 to 5 days after receiving a vaccination. The text asks if the patient experienced a reaction to the vaccinations and invites them to respond with a *Yes* or *No*. *Yes* responses are followed by a second automated text message enquiring if the reaction was medically attended, as well as another message containing a link to a brief survey enquiring about the nature, severity and duration of the reaction. The response rate to the first text is 72.9% with reactions reported in 6.7% of encounters and medically attended reactions reported in 0.4% of encounters (based on data from the 12 months to 31 October 2020).

(continued)

Since its inception in 2011, SmartVax has monitored over 2.5 million vaccination encounters (including 426,604 for influenza vaccinations in 2020). The database contains over three million vaccine profiles and over four million SMS messages have been sent. The network spans approximately 6.5% of the Australian population. Travel vaccines comprise 13% of vaccination encounters in the SmartVax database.

SmartVax partners with AusVaxSafety, a world's first national system, funded by the Australian Government Department of Health, analysing and monitoring adverse events following immunisation and facilitates the early detection of potential vaccine safety issues.

More information is available at www.smartvax.com.au or www.ausvaxsafety.org.au/safety-data for specific vaccination safety data gathered by SmartVax.

## Health Education in a Pre-travel Setting

Vaccines may be the catalyst for travellers to seek health care, but the interaction affords a useful opportunity to inform and educate travellers on key health messages. Protective health behaviours may be more effective at ensuring better health outcomes than the vaccinations.

Many topics must be covered in a pre-travel setting to achieve the goal of the traveller protecting their health while overseas. Every destination and set of activities will impose a consequent set of risks. Similar to other individuals, rational tourists tend to be risk-averse and avoid dangerous situations. The travel medicine provider must assist the traveller to understand the personally relevant risks and adopt relevant risk reduction strategies. It is impractical to discuss every risk, so priorities must be established. The burden of the proposed health-protective behaviour, along with the likelihood and severity of the negative outcome must be weighed. Health care providers must be sensitive to the information needs of the travellers in order to have any chance of encouraging adaptive behaviour change.

Some risks are well-known in Australia, but may not be expected in destination countries. For example, travellers may be aware of jellyfish envenomation in Australia but unaware this is a risk to tourists visiting other countries. Fatal envenomation from jellyfish has been reported from Thailand, the Philippines, Borneo, Japan, and Malaysia (Thaikruea et al., 2015). Some risks have entered the public consciousness such as deep vein thrombosis (DVT), but they may be carried with a wave of misinformation such as the expectation that DVT does not occur in Business Class travellers. Some risks are not well-known as they are seldom in the news, like ciguatera poisoning. Also, not all counselling is effective. Svensson et al. (2018) found that the impact of routine safe sex counselling during pre-travel consultation was limited. Burdensome preventative health behaviours are easier to encourage

when risks are well-publicised. Those who have never heard of methanol poisoning may be disinclined to give up drinking spirits if they see this alcohol as an integral part of their travel experience. No amount of pre-travel care is likely to predict all possible risk activities of tourists. An example being the need to tell travellers to avoid walking into an active volcano despite the tour operators stating they have had no problems so far. In such matters, the Domain-Specific Risk-Taking (DOSPERT) scale can be used to assess risk-taking and perception of health/safety among travellers (Farnham et al., 2018).

The principle health concerns of travellers may not accord with those of their travel health providers and it behoves the providers to be sensitive to the information requirements of their travellers. Travel health providers are recommended by Flaherty et al. (2017) to invite travellers to nominate their principal travel health priorities prior to the pre-travel consultation, lest the priorities of the traveller are not addressed. Travellers also have different levels of information need, some need (and are eager) to know details, while other travellers do not—"Don't tell me what the vaccines are for Doc, just give them to me and let me get out of here"—this attitude may make informed consent problematic. Stories are an important technique to share health information and travel medicine providers, both doctors and nurses, must adapt their stories to the information needs of the patients (Haigh & Hardy, 2011).

Likewise, with vaccine recommendations, there is evidence that recommendations to minimise health risks are not always followed by travellers (e.g., there may be poor compliance with malaria chemoprophylaxis risk reduction recommendations). Travellers may remember little of what was discussed during the pre-travel medical consultation, thus providing written information is important—whether it is in the form of books, sheets of paper, electronic documents, or apps for carrying on a smartphone. Checklists for travel medicine providers can aid in documenting what has been discussed, especially if the traveller may be seen over multiple visits by different staff members. An example of items that can form part of a health education checklist is presented in the following box.

**Checklist of Potential Educational Needs of Travellers**

- During the flight: sanitation, hydration, thrombosis prevention
- Jetlag and adjusting to new time zones
- Gastroenteritis prevention, food and water precautions
- Acquisition of antibiotic-resistant bacteria and implications for surgery on return
- Respiratory disease prevention, hand hygiene, social distancing, masks
- Animals: avoiding risk exposure and what to do if bitten; dogs, rodents, monkeys
- Mosquito diseases: repellents, bednets, permethrin
- Insect bites: prevention and management especially ticks

(continued)

- Worms and parasites: especially schistosomiasis, strongyloides, ascaris
- Motion sickness
- Accident prevention especially motor vehicles and pedestrian
- Personal security
- Mind-altering drugs/herbs, alcohol, methanol, ayahuasca
- Sexually transmitted diseases, HIV
- Extremes of hot or cold climates
- High altitude travellers
- Sports such as snow sports, trekking, scuba diving, surfing, climbing
- Marine environment—water safety, marine envenomation, ciguatera, fresh and seawater infections
- Cruise ship risks
- Culture shock
- Travelling with medications
- What to do if you get sick
- Travel insurance

Special recommendations related to travellers' individual medical history

Enhanced pre-travel education/preparation including country-specific briefing sessions, reading material, access to an electronic version of the book *Travelling Well: The "Must Have" Guide to a Safe and Healthy Journey*" (Mills, 2019), and the smartphone app Travel Health Guide (Dr Deb The Travel Doctor, 2017) have been shown to improve gap year travellers' wellbeing (Furuya-Kanamori et al., 2020a).

## Malaria and Mosquito Diseases

The subject of which (if any) malaria pill should be recommended for a particular traveller and journey, is a topic that generates a lot of "airtime" in travel medicine training and at conferences. The actual risk of malaria (and other arboviral diseases) in travellers is extremely difficult to estimate—a veritable quixotic pursuit (Davlantes et al., 2017) and has been discussed previously in this book (see *Part I Health: Travel Medicine and Tourist Health*).

In Australia, the most recent available annual report of the National Arbovirus and Malaria Advisory Committee (NAMAC) reported 260 notifications of malaria during 2014–15 (Knope et al., 2019). Papua New Guinea was the most frequently reported country of acquisition (17%) followed by India (13%). Malaria was most frequently reported among young travellers aged 20 to 29 years, with 25% of notified cases in this age group. Even when it comes to malaria deaths, the risk among travellers is still relatively low compared to other causes of death such as road traffic accidents (Prociv, 1995). This does not take away from the need to advise travellers

how to stay safe from malaria, but informs the need to assist travellers avoid other threats to life and limb, for example, precautions about road safety.

Personal protective measures (PPM) are those activities undertaken by travellers to decrease the risk of arthropod-borne disease (Alpern et al., 2016). PPM includes such things as the use of insect repellents containing approved chemicals (e.g., DEET and picaridin as these have been shown to offer sufficient protection against arthropod bites). It also includes protective measures, such as bite avoidance, protective clothing, insecticide-treated bed nets, and insecticide-treated clothing.

The main problem faced by travellers (and thus health care providers) which impinges on the effectiveness of PPM is the traveller's poor adherence to the recommendations. Adam et al. (2018) found that compliance with recommended antivectorial prevention measures was low among both chikungunya and malaria-infected travellers. Likewise, Ropers et al. (2008) identified that the correct intake of malaria chemoprophylaxis was approximately 50% among German travellers to tropical destinations. Poor compliance and failure to take chemoprophylaxis is linked with an elevated risk of severe malaria and malaria-associated deaths (Gryseels et al., 2015). Therefore the goal during the pre-travel consultation must be to improve compliance with malaria chemoprophylaxis. Several studies have found that forgetting to take medications was a common problem (Bocci et al., 2016; Stoney et al., 2016a), so compliance could potentially be improved by utilising simpler drug dosages, such as shorter duration, fewer doses, or schedules that can be completed before travel (Lau et al., 2019; Stoney et al., 2016a).

## Medical Kits

What to take in a medical kit for travellers is an educated guess at best and one size does not fit all. Experienced travel medicine practitioners will endeavour to recommend the contents based on the destination, activities, likely medical problems and the traveller's medical history and preference. There are many variables to factor into the likelihood of illness and consequent utilisation of kit supplies. Looke et al. (1992) and Goodyer and Gibbs (2006) found that analgesics and anti-diarrhoeal/rehydration solutions were the most commonly used items in travellers' medical kits. Other items that were often used and should be considered were dressings and antiseptic, insect repellent, throat lozenges, and antihistamines (Fig. 1).

Antibiotics were once considered a mainstay for the self-treatment of travellers' diarrhoea. The rising spectre of multidrug-resistant bacteria is, however, of worldwide concern (Holubar 2019). We found that acquiring traveller's diarrhoea overseas increased the risk of contracting multidrug-resistant bacteria and taking antibiotics led to higher risk (Furuya-Kanamori et al., 2020b). This has led to difficulties for providers and travellers in deciding whether to carry antibiotics—trying to balance the potential benefits of immediate recovery from traveller's diarrhoea, with potential disadvantages from dangerous multidrug-resistant bacteria carriage later.


**Fig. 1** Specialist travel medicine clinics supply comprehensive travel medical kits. (Image courtesy of Laura Mills)

Specialised travellers' tools such as a self-test kit for malaria may be useful for a select group of travellers who will be visiting malaria areas remote from medical care (Berthod et al., 2017). Extensive research is still needed to guide medical kit recommendations to ensure better clinical outcomes for sick travellers and reduce potentially avoidable visits to health care services overseas, or problems on return.

## Post-Travel Health

Like the pre-travel consultation, post-travel health care can be delivered by a wide range of providers, such as travel medicine specialist doctors, general practitioners, nurse practitioners, registered nurses, or medical specialists in other areas, depending on the needs and symptoms of the returned traveller.

The most common travel-related illnesses, identified in a large study with over 42,000 returned travellers by the GeoSentinel Surveillance Network, varied by region of travel, but overall were gastrointestinal diagnoses (34%), febrile illness (23%), dermatologic problems (20%), and respiratory illness (11%) (Leder et al., 2013). This finding reinforces the need for protective health behaviours in travellers as most of the conditions are potentially preventable.

The most common gastrointestinal diagnosis was acute diarrhoea; *Campylobacter*, *Salmonella*, and *Shigella* species were the most common cause of bacterial infections; while *Giardia* was the most commonly found parasite. It is worth reinforcing

that there is a high risk of returned travellers, especially those from South Asia and Northern Africa, becoming asymptomatic carriers of antibiotic-resistant *Enterobacterales* (Furuya-Kanamori et al., 2020b). Despite being asymptomatic, these travellers are at higher risk of infections on return. Extended-spectrum beta-lactamase-producing *Escherichia coli* bacteraemia has been reported in recently returned international travellers after prostate biopsies (Williamson et al., 2012). Evidence is building that these multidrug-resistant organisms can spread to family members on return home (Arcilla et al., 2017). Therefore, the potential role of screening and contact precautions for some returned travellers needs to be further examined.

The GeoSentinel surveillance study found that the main cause of febrile illness in returned travellers were vector-borne diseases, malaria (29%) and dengue (15%); these infections were mainly found in returned travellers from Africa, Southeast Asia, Latin America, and the Caribbean. Dermatological problems were reported by one-fifth of the travellers and the most common causes were animal bites or scratches, insect bites or stings, skin or soft-tissue infections, and rashes (Leder et al., 2013).

## Pre- and Post-travel Consultations in the New Normal

The degree to which telemedicine has been necessitated by the pandemic in many countries has meant that many of the perceived barriers to telehealth have disappeared. As a result, telemedicine for pre, during and post-travel consultations will have a larger role to play in the future of travel medicine. As travel medicine providers, we are particularly aware of the problem of travellers being stuck in areas without access to best-practice medical care. Telehealth may be part of a solution for this problem. New and innovative vaccines such as COVID-19 vaccines and perhaps variant boosters will have pride of place in our fridges.

## Pivot

The pandemic has meant that most providers who work in the field of travel medicine have suffered a catastrophic drop in demand for their services. Providers whose travel medicine practice is combined with other services (e.g., general practice), may have less difficulty pivoting to spending more time on other aspects of their work. The ISTM recently carried out a pilot survey of travel medicine practitioners to examine the impact of COVID-19 on Travel Health/Medicine Providers (International Society of Travel Medicine—COVID-19 Task Force, 2020), the unpublished results are presented in the box below.

**Initial Impact of COVID-19 on Travel Health/Medicine Providers—Pilot Survey Report**

The respondents included 58% physicians, 27% nurses or nurse practitioners, and 10% pharmacists. Respondents included 64% North America, 12% Europe and 12% Oceania. As a result of the pandemic, 40% stopped practising travel medicine altogether. Whilst a few retired, many respondents reported pivoting to other areas of their normal general practice or hospital work, increasing their writing, advisory or telehealth work, or assisting the COVID-19 response. Of those respondents whose travel medicine work was impacted by the pandemic downturn, 80% said it was *very likely* or *somewhat likely* that they would return to travel medicine. Only about 1.8% planned to leave the specialty.

Shlim et al. (2020) recommend that travel medicine practices should think about the ways they can be involved in immunisation, testing, and protection of people in their own countries. Finding other useful work to maintain the financial viability of travel medicine practices will ensure that personnel are not lost to the field of travel medicine. Experienced staff members are an essential resource for the provision of any medical service, and will be needed when international travel returns—as it surely will. Experienced immunisers will likely play a vital role in the delivery of the COVID-19 vaccines.

Pivoting to undertaking research by partnering with universities may be an avenue to find useful employment and also advance the field of travel medicine. Vaccines are one of the most cost-effective medical interventions, but they are still underutilised. Research into ways to enhance traveller engagement, minimise injection discomfort, or provide vaccinations at less cost would be useful.

## Adapt

Travel medicine practitioners more than most perhaps, can place infectious diseases in their historical context—just like the Spanish flu, this too will pass. However, we must "never let a good crisis go to waste" as Sir Winston Churchill is credited with first saying. Adaption has always been a feature of travel medicine practice. The ever-changing medical (and legal) landscapes have always meant that providers of travellers' medical services must constantly strive to ensure their knowledge and systems are thoroughly up to date and best practice.

In addition to knowledge of the diseases present in different regions of the planet, travel health care providers must be familiar with the conditions that travellers will experience in the microclimate of environments such as hotels, airports, or cruise ships. These microclimates have certainly changed as a result of the pandemic,

mostly for the better, with improved cleaning, ventilation, and fewer buffet meals. A set of agreed standards for these microclimates, such as those which are now being developed for cruises (Healthy Sail Panel, 2020) will facilitate safer cruising of all travellers. Better *COVID-Safe* facilities and systems will decrease the risk of other infectious diseases including influenza. Whilst education of travellers in safer behaviours will always be important, improved systems in commonly visited travel destinations will serve to enhance safety and wellbeing for travellers without having to rely on individual travellers' behaviour. Development of these COVID-safe standards in conjunction with other authorities may be a new role for the ISTM.

As well as the usual provision of yellow fever certificates, familiarity with the paperwork required by airlines and tour companies with respect to health, and particularly COVID-19 status, has become a normal expectation of travel medicine providers. Along with the usual considerations of mental health, an understanding of the mental health demands of quarantine will need to be researched, and suggestions to mitigate the potential negative effects may become a necessary part of a pre-travel consultation.

Standards for travel insurance policies may be another area where provider input may be useful. The extensive financial losses that accompany the pandemic may necessitate insurance companies limiting travellers' cover for preventable medical problems until they return home. The increasing emphasis on occupational health and safety may necessitate a more extensive pre-departure medical assessment of business travellers, possibly even with investigations to uncover hidden problems, so they do not surface in areas with poor medical care. There will need to be a better evidence base to determine the most cost-effective screening and pre-travel assessment.

## Recalibrate

Many low-income countries, which are popular destinations for travellers, have suffered extra challenges due to the pandemic. Aside from copious morbidity and mortality from COVID-19, there will have been a deterioration of medical facilities brought on by the deluge of pandemic patients, leading to a consequent decrease in capacity to maintain normal public health measures and tropical disease mitigation. Even if travellers have the much-awaited protection of a safe and effective vaccine against COVID-19, visitors to these areas may be exposed to more unrelated health risks than previously, as other diseases spiral out of usual control due to deterioration of basic public health measures. The usual range of human injuries becomes more problematic to treat when the local medical services are under strain. All this increases the importance and utility of good pre-travel health care.

Some persons, especially those who live in countries with excellent public health infrastructure such as Australia, New Zealand, Europe, and the USA, have never

given much thought to infectious disease. As a result of the pandemic, a virtual tidal wave of stories about infection, illness, and death have appeared in the media for most of 2020, along with a rising number of "saviour vaccine" stories. This prolonged news coverage just might cause a recalibration of the understanding of health and infections in the wider population, and lead some previously unconcerned travellers to pay more attention to their health in future. Certainly, many travellers report postponed trips which were planned for 2020 and 2021. Persons who have never availed themselves of the option to travel overseas may suddenly find the embargo on overseas travel has enhanced their wish to do so. For all these reasons, demand for travel medicine services may surge.

In future, it may be interesting to see if there is a shift in the demographic of those travelling, with consequent changing pre-travel requirements. For example, there may be fewer immunosuppressed travellers. Travellers who see themselves are more vulnerable may opt to avoid cruises, change their preferred destinations or even stay home. Eligibility for travel insurance may become a deciding factor.

We would like to believe that in future, as a result of the pandemic news, more travellers will decide that it is worthwhile to "get their shots just in case". As a result of the pandemic, those booking travel may have a better appreciation of the impact of infectious disease and hence the importance of encouraging travellers to get proper pre-travel health care, well in advance. Employers may embrace their duty of care to their staff and so organise better pre-travel care and even post-travel care for those who return home with medical issues. As travel medicine providers, when travellers present for their care, in addition to organising their vaccines, we must keep educating travellers that optimal pre-travel care is not just vaccines, but knowing which health behaviours will keep them safer, and which useful tools they should carry such as medical kits, and even self-test kits for some diseases.

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# Vulnerable Groups and Travel Health Considerations


**Sarah L. McGuinness and Robert Steffen**

**Abstract** Renowned speaker and author Denis Waitley states that "Life is inherently risky" and travel may be associated with additional risks, particularly to health. The nature of these health risks depends on environmental and host factors. In this chapter we focus on the latter, particularly factors related to physiological vulnerabilities or pre-existing conditions (as opposed to particular risk behaviours). We consider vulnerable travellers to be those at relatively increased risk of travel-related health problems and/or who face particular challenges or issues while travelling. Vulnerable traveller groups include children, pregnant and breastfeeding women, older adults, travellers with pre-existing diseases, physically challenged travellers and the immunocompromised. While travel is rarely contraindicated for these groups, pre-travel consultation with a health practitioner is essential to ensure that risks are evaluated, and appropriate precautions taken. In this chapter, we discuss the literature pertaining to travel health risks in these vulnerable groups, and specific considerations with regard to prevention and management of infection, injury, and other health issues that may be encountered while abroad.

**Keywords** Travel · Health · Vulnerable groups · Medical conditions · COVID-19

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_4

## Introduction

Vulnerability can be defined as the degree to which an individual or group is susceptible to physical or emotional harm. Travellers may be considered *vulnerable* if they are at increased risk of travel-related health problems or face particular issues or challenges related to travel. Amongst tourist travellers, vulnerable groups that warrant special consideration include those listed in Table 1. The increasing accessibility and convenience of travel mean that these groups are able to travel further and wider than ever before. However, specific considerations exist for these groups in relation to risk communication, pre-travel preparation and access to medical care or special equipment during travel. The evidence base for guiding risk-reduction in these groups is more limited than for other travellers, largely resulting from their

**Table 1** Vulnerable traveller groups

| Group | What makes them vulnerable? |
|---|---|
| Children | Increased susceptibility to/severity of some infections (including malaria, tuberculosis and rabies)<br>More susceptible to variations in temperature and dehydration and more likely to be bitten by animals than adults<br>Precautions/contraindications exist for some vaccines and medications, particularly in young children (many vaccines have lower age limits) |
| Pregnant and breastfeeding women | Increased susceptibility to/severity of some infections (e.g., malaria, hepatitis E, influenza, travellers' diarrhoea)<br>Increased risk of venous thromboembolism<br>Risk of obstetric complications<br>Limited safety data for some vaccines and medications<br>Contraindications for some vaccines and mediations |
| Older adults | Greater likelihood of underlying medical conditions, physical and sensory limitations<br>Increased risk of illness, injury or death while travelling, even in the absence of pre-existing medical problems<br>Increased severity of some infections (e.g., influenza, COVID-19, hepatitis A, encephalitis)<br>Reduced efficacy and immunogenicity of some vaccines<br>Increased risk of yellow fever vaccine-related adverse events<br>Increased risk of stress, panic (e.g., associated with mental impairment, general slowdown) |
| Travellers with pre-existing disease | Heterogenous group with differing levels of vulnerability<br>May be at increased susceptibility to/severity of some infections (e.g., influenza, COVID-19)<br>More likely to require medical attention during travel |
| Physically challenged travellers | May require assistance on certain forms of transportation and/or special accommodations or services that may not be easily available in some areas |
| Immunocompromised travellers | Increased susceptibility to/severity of some infections<br>Reduced efficacy and immunogenicity of some vaccines<br>Precautions/contraindications for some vaccines |

frequent exclusion from research studies due to concerns regarding risk and generalisability.

The COVID-19 pandemic has highlighted the particular vulnerability of certain groups to symptomatic and serious COVID-19 illness. There is substantial overlap between the vulnerable traveller groups outlined in Table 1, and groups at increased risk for severe COVID-19 illness, which include older adults, those with pre-existing conditions and the immunocompromised. In this chapter, we will review the literature relating to each of these vulnerable groups in the context of COVID-19 and other travel-related risks or issues and discuss specific pre-travel considerations for each group in the *new normal*.

In all vulnerable groups it is paramount to have travel health insurance that covers the travellers' particular vulnerability and includes cover for hospitalisation abroad and repatriation, even if it is costly and challenging to obtain (Askling & Dalm, 2014; Hezelgrave et al., 2011).

## The Paediatric Traveller

An estimated 7% of international travellers are infants and children; their main reasons for travel are tourism and visiting friends and relatives (VFR) (Hagmann et al., 2010). Infants and small children are more susceptible to infections such as travellers' diarrhoea (TD), and diarrhoeal illness accounts for an increased proportion of travel-related diagnoses with increasing age (Hunziker et al., 2012). Children may also be prone to more serious complications than adults (Garbash et al., 2010) and require hospitalisation more often. Malaria is associated with a case fatality ratio of <0.4% (Stager et al., 2009). Children are more likely than adults to play with, pat or feed animals, and are therefore at higher risk of rabies (Gautret et al., 2015; Hagmann et al., 2010). Children suffer a higher proportion of motor vehicle related deaths abroad (Guse et al., 2007), with accidents the leading cause of mortality in young travellers (Stewart et al., 2016).

Prior to deciding whether to travel with infants and small children, caregivers must assess whether pleasure and benefits outweigh discomfort and risks (Summer & Fischer, 2019). Caregivers must be prepared to be far more vigilant than at home, and should avoid overloading the programme and ensure they offer children plenty of time to play and relax (Stauffer et al., 2001). Most children dislike vaccine injections, long flights and extreme temperatures, whereas they usually like animals, action and entertainment, an altered horizon, family cohesiveness and the opportunity to share some special stories with friends.

Most children are in good health and do not need medication, but some may have special needs (Kohl & Barnett, 2020). Absolute contraindications to travel are rare, but air travel should be avoided with <2 week-old infants. Caregivers should be discouraged from taking very young children on vacation to countries highly endemic for tropical or infectious diseases; the WHO discourages travelling with children to malaria endemic areas. Similar precautions and contraindications exist

for children with a history of pre-existing conditions, immunosuppressive medication or recent surgery as for adults. There is inconsistent evidence relating to a greater risk of acute mountain sickness in children (Wu et al., 2018).

## *COVID-19 in Children*

Based on literature published to date, children tend to have milder COVID-19 disease and better prognosis than adults (Gotzinger et al., 2020; Ludvigsson, 2020). COVID-19 may go undetected in children, with risk of transmission to adults in the travelling party while undiagnosed. Nevertheless, a small proportion of children will require hospitalisation and intensive care due to COVID-19 and its complications, such as the rare but emerging entity of multisystem inflammatory syndrome in children (Consiglio et al., 2020; Jiang et al., 2020; Feldstein et al., 2021).

## *Pre-Travel Paediatric Counselling*

Overall advice should include the same topics as for adults, but attention must be paid to some special aspects. The primary reason to seek a pre-travel consultation is usually immunisation—this is a perfect opportunity to update missing routine immunisations as per national recommendations. Depending on the destination and other trip characteristics, additional travel vaccines may be indicated, particularly those against rabies, hepatitis A and possibly typhoid (Steffen & Hamer, 2020). Detailed recommendations have previously been published (Slonim et al., 2014; Starr, 2013; Torresi et al., 2019). Concerns exist about non-adherence to such recommendations, particularly by VFR families (Decuyper et al., 2019).

If travelling to malaria-endemic areas, malaria prophylaxis is paramount in this age group, and detailed advice relating to personal protection measures against mosquito bites is the first line of defence (Korzeniewski, 2018). Repellents containing N, N-diethyl-meta-toluamide (DEET) in a concentration ≤30% can be applied safely (Stanczyk et al., 2015; Swale & Bloomquist, 2019). Repellents should be washed off following return to a protected indoor area. Malaria chemoprophylaxis for children follows the same basic rules as for adults. Atovaquone-proguanil (Malarone) is now the first choice for children with a weight of ≥11 kg; the number of paediatric tablets must be adapted to the body weight. Mefloquine can be given to children ≥5 kg and tends to be better tolerated by children than adults. Doxycycline is contraindicated for children <8 years (<12 years in the UK) (Hagmann & Schlagenhauf, 2011; Kafai & Odom John, 2018).

TD is common in children and may develop into a major problem (Chong et al., 2019). Even though there is no evidence for effectiveness, we recommend strict

food and drink hygiene for children. As diarrhoea can become life-threatening within a few hours in children, rapid intervention in the form of rehydration (via the oral route if possible) is indicated. Consultation with a paediatrician or family physician is prudent, particularly if the child is not tolerating oral fluids, as hospitalisation will often be necessary (Ashkenazi & Schwartz, 2020; Torresi et al., 2019). In most countries loperamide (Imodium) is contraindicated for those aged <6 years (some countries <2 or <12 years), and there is increasing reluctance to use antibiotics (Ashkenazi & Schwartz, 2020; Leshem, 2020).

Children are more susceptible to motion sickness than adults. Commonly used medications include diphenhydramine and dimenhydrinate. Scopolamine and various other agents should be avoided in those aged <12 years, owing to increased risk of side effects. On planes, small children often develop earaches during descent as they lack knowledge on how to air the middle ear through the Eustachian tube. Drinking, yawning, or chewing gum may offer relief. In contrast, children usually get over jet lag much faster than do adults (Stauffer et al., 2001).

Travelling children are susceptible to accidents. To ensure car safety, special seats must be carried or ordered in advance and seatbelts must be used. Children must be educated on how to carefully cross streets in countries where driving patterns are different, particularly if the traffic comes from the opposite side of the road to that which is familiar to them. They must abstain from petting animals (Ashley et al., 2019). Supervision on the beach and in the swimming pool is paramount, as drowning is the second leading cause of death in paediatric travellers (Sleet & Balaban, 2013). Swimming pools in developing countries with hot climates bear a higher risk of ear infections due to bacterial and fungal contamination. Excessive chlorination of water may cause conjunctivitis. Children who stay in the pool for prolonged periods of time should wear protective goggles and earplugs. In developing countries, hotel rooms should be checked for potential hazards; specifically, open electrical wiring and sockets, paint chips, pest poisons or traps, and low or unstable balcony railings. Adolescents must be warned about sexually transmitted infections and drugs (Guilamo-Ramos et al., 2015).

Children are more susceptible to environmental hazards, particularly related to climate. To prevent heat injuries, caregivers should limit physically demanding daytime activities, minimise direct sun exposure and ensure that children maintain hydration and wear loose-fitting and light clothing. Sunscreen should be applied often and liberally in hot climates and during periods outdoors, as melanoma risk is more than doubled in individuals who have had one or more episodes of severe sunburn in childhood. In cold climates, caregivers should ensure that children wear layered clothing and gloves and woollen socks to prevent cold injuries. Layers should include an underwear layer that takes away moisture, an insulating layer (e.g., wool or fleece), and an outside shell (e.g., nylon). Appropriate footwear should be worn at all times, particularly on the beach (Stauffer et al., 2001).

## Pregnant and Breastfeeding Women

Travel during pregnancy is increasingly common (Antony et al., 2017) and pregnant women appear just as likely to travel to high-risk destinations as other travellers (Hagmann et al., 2017; Hochberg et al., 2013; Jaeger et al., 2015). Pre-baby getaways are a growing tourism trend, with the concept of a *babymoon* (a holiday taken by parents-to-be before their baby's birth) now firmly ensconced in popular culture (Gallivan et al., 2019).

Pregnancy is associated with a range of hormonal, anatomical and physiological changes that increase susceptibility to certain travel-related health risks (Antony et al., 2017). These include increased vulnerability to travel-related infections such as malaria, influenza and Zika; heightened risk of venous thromboembolism (VTE) with long-distance journeys; and the risk of an obstetric mishap far from home and reliable (or familiar) medical care. Due to concerns regarding risks to mother and foetus, pregnant women are often excluded from randomised trials. Recommendations are therefore often based on small observational studies or extrapolated from non-pregnant travellers, and vaccine and medication safety data is often limited (Antony et al., 2017; Nasser et al., 2020).

### *Epidemiological Evidence for Health Problems in Pregnant Travellers*

Physiological changes in pregnancy, including changes to the immune system, may increase susceptibility to or severity of infections (Kourtis et al., 2014). Pregnant women are at increased risk of influenza and its complications, including critical illness and neonatal morbidity and mortality (ANZIC Influenza Investigators, 2010; Mertz et al., 2017). Malaria in pregnancy is often more severe, and may be associated with pregnancy complications such as low birth weight and foetal loss (McKinney et al., 2020). Amongst pregnant travellers, VFR travellers are at highest risk for acquiring malaria, with most cases imported from West Africa (Kaser et al., 2015; Mace et al., 2019). Hepatitis E virus infection in pregnancy may follow a fulminant course, with hepatic failure and pregnancy complications such as membrane rupture and foetal loss (Perez-Gracia et al., 2017). Infection by *Listeria monocytogenes* during pregnancy may result in foetal loss, preterm birth, or invasive disease in the newborn (Madjunkov et al., 2017). Another concern for pregnant travellers is Zika virus, which can be vertically transmitted, leading to congenital microcephaly, other congenital abnormalities, or foetal loss (Pomar et al., 2019; Vouga et al., 2019). Maternal Zika infections in the first trimester appear to be associated with more severe foetal adverse outcomes (Vouga et al., 2019). Most maternal Zika infections are asymptomatic and associated with low rates of maternal complications comparable to other adults (Flamand et al., 2017; Honein et al., 2017). Infection with rubella or varicella during pregnancy can lead to complex

congenital anomalies; pre-pregnancy rubella and varicella vaccination is indicated for non-immunes (Swamy & Heine, 2015).

Delayed gastric emptying and increased intestinal transit time during pregnancy may result in more severe dehydration and ketosis with TD, increasing the risk of premature labour (Agnew et al., 1993; Hezelgrave et al., 2011). The tendency to nausea and vomiting in early pregnancy may be aggravated by travel, particularly by activities prone to motion sickness (Carroll & Williams, 2008).

Prothrombotic changes to the endothelium and relative obstruction to venous flow by the gravid uterus increase the risk of VTE in pregnancy (Hezelgrave et al., 2011). While specific data about travel-related VTE in pregnant women is limited (Izadi et al., 2015), studies in non-travellers suggest that VTE is five to ten times more common in pregnant women compared to matched non-pregnant controls, and complicates about one in a thousand pregnancies (Hezelgrave et al., 2011; Kourlaba et al., 2016). Pregnancy is associated with increased weight gain, decreased abdominal muscle strength, increased joint laxity and spinal lordosis, which shift a pregnant woman's centre of gravity and alter postural balance (Cakmak et al., 2016). This places pregnant women at greater risk for falls, especially during activities that require extreme balance, coordination and agility. Falls during pregnancy may result in maternal and foetal complications including maternal bone fractures, head injuries, placenta abruption, and rupture of the uterus and membranes (Cakmak et al., 2016).

### *Pregnancy and COVID-19*

Published evidence on the impact of COVID-19 in pregnant women and their babies remains limited (Khalil et al., 2020). Based on existing evidence, perinatal and maternal mortality due to COVID-19 appears to be rare (<1%) (Khalil et al., 2020; Vouga et al., 2021; Ellington et al., 2020). However, emerging data suggests that pregnancy is a risk factor for hospitalisation and more severe COVID-19 illness, and that women who experience COVID-19 in pregnancy are at increased risk of maternal morbidity, mortality and neonatal complications compared to pregnant women without COVID-19. Reported risk factors for severe COVID-19 in pregnancy include older maternal age, pre-existing medical problems (including hypertension and diabetes), high body mass index, and non-white ethnicity (Khalil et al., 2020; Knight et al., 2020; Allotey et al., 2020; Villar et al. 2021; Vouga et al., 2021). Obstetric and neonatal outcomes are influenced by the severity of maternal disease, with an increased risk of caesarean section, preterm birth and neonatal admission to the intensive care unit observed among pregnant women with severe disease. (Khalil et al., 2020; Knight et al., 2020; Vouga et al., 2021). Although some reports suggest that the virus causing COVID-19 may be transmitted from mother to baby, this appears to be rare (Khalil et al., 2020). In babies born to COVID-19 positive mothers, perinatal transmission is unlikely to occur if correct hygiene precautions are undertaken and breastfeeding is safe when paired with effective parental education

of strategies to protect the infant (Salvatore et al., 2020). While high rates of thrombotic complications have been reported in patients hospitalised with COVID-19 (Klok et al., 2020; Middeldorp et al., 2020) and concerns exist about the potential for increased risk in pregnancy, data published to date do not signal an increased risk of VTE in pregnant women with COVID-19 (D'Souza et al., 2020).

## *Travel Health Advice for Pregnant and Breastfeeding Travellers*

Pre-travel preparation for the pregnant traveller should start with a review of her obstetric and medical history and planned travel itinerary. Travel is rarely contraindicated during a normal pregnancy, but the presence of certain obstetric or medical risk factors or planned travel to hazardous destinations (Table 2) warrants consultation with an obstetrician, often in conjunction with a medical specialist, regarding the advisability of the proposed itinerary (Hezelgrave et al., 2011).

The safest time for a pregnant woman to travel is generally during the second trimester, as the most common obstetric emergencies occur in the first and third

**Table 2** Potential contraindications to travel during pregnancy

| Obstetric risk factors | |
|---|---|
| **Absolute contraindications** | **Relative contraindications** |
| Placental abruption<br>Active labour or pre-term labour<br>Cervical insufficiency<br>Premature rupture of the foetal membranes<br>Suspected ectopic pregnancy<br>Threatened abortion with vaginal bleeding<br>History of or current eclampsia | Multiple gestation, placental abnormality, or foetal growth restriction in present pregnancy<br>History of miscarriage, ectopic pregnancy, pre-term birth or premature rupture of foetal membranes<br>Maternal age >35 or <15 years of age |
| **Medical risk factors** | |
| Severe anaemia or haemoglobinopathy<br>Symptomatic valvular heart disease, unstable angina or congestive cardiac failure<br>Pulmonary hypertension, cystic fibrosis, pneumothorax or bullous lung disease<br>Poorly controlled asthma, epilepsy or diabetes<br>Other chronic medical problems requiring frequent medical assessment or interventions<br>History of venous thromboembolism | |
| **Hazardous destinations** | |
| High altitude (≥3000m)<br>Areas endemic for malaria (particularly mefloquine-resistant *P. falciparum* malaria) or hepatitis E<br>Areas with ongoing Zika virus transmission<br>Areas with active outbreaks of infections for which there is increased maternal or foetal risk<br>Areas where live virus vaccines are required or recommended | |

Source: Adapted from Antony et al. (2017) and Hezelgrave et al. (2011)

trimesters (American College of Obstetricians and Gynecologists [ACOG] Committee, 2018). First trimester complications such as miscarriage and ectopic pregnancy can be disruptive, costly, and potentially life-threatening. When travel during the first trimester is planned, a pre-travel ultrasound should be recommended to confirm the pregnancy's location and the presence of a foetal heartbeat (Antony et al., 2017). In the third trimester, the biggest risk is that of pre-term delivery. Women planning travel during pregnancy should consider the availability of maternity and neonatal care facilities at their destination (Easa et al., 1994).

Occasional air travel is considered safe for pregnant women without obstetric or medical complications (ACOG Committee, 2018). Radiation protection authorities recommend a maximum exposure of 1mSV of radiation over the course of a pregnancy, which equates to about 200 h of flying (Antony et al., 2017). Most airlines require pregnant women to carry a letter from a registered medical practitioner or midwife after 28 weeks documenting the status of the pregnancy and the expected delivery date. Air travel is generally discouraged after 36 weeks (or after 32 weeks for a multiple pregnancy). As regulations vary, women should be advised to check with their airline before flying. Due to the increased risk of VTE, pregnant travellers should be advised about measures aimed to reduce VTE risk, such as choosing an aisle seat, taking regular walks around the cabin, frequent exercises of the legs and feet, drinking plenty of fluid (not containing alcohol or caffeine), avoiding restrictive clothing and wearing graduated compression stockings (Royal College of Obstetricians and Gynaecologists, 2013).

Certain activities, such as sports for which the risk of injury is high (e.g., downhill skiing), or where there is risk of significant changes in atmospheric pressure (e.g., scuba diving), may need to be restricted or avoided during pregnancy (Table 3).

Practitioners should review safety data and relevant categorisation systems prior to administering or prescribing any vaccine or medication to a pregnant or breastfeeding woman.

**Table 3** Activities that may need to be restricted or avoided during pregnancy

| Activity | Risks and recommendations in pregnancy |
|---|---|
| SCUBA diving | Not recommended due to risks to foetus (Conger & Magann, 2014); inadvertent exposure in early pregnancy is not a reason for pregnancy termination (Reid & Lorenzo, 2018) |
| Downhill skiing, horse riding, skating | Not recommended in the second half of pregnancy due to injury risk (Jean & Moore, 2012) |
| Water-skiing | Not recommended during pregnancy due to risk of injury and peritonitis (Cooper, 2006) |
| Cruise ship travel | Gestational age limit for most cruise lines is 24 weeks (Dahl, 2007); risks include influenza and gastroenteritis outbreaks, motion sickness and falls; cruise ships also have limited resources for managing an obstetric emergency (Morof & Carroll, 2017) |
| Altitude | Travel to sleeping altitudes of ≥3000m is not recommended (Jean & Moore, 2012; Mieske et al., 2010) |

Vaccination during pregnancy has benefits for the mother, and may also benefit the foetus through passive immunity (transplacental transfer of maternal antibodies) (Swamy & Heine, 2015). With the exception of smallpox vaccination, which has been associated with congenital defects and foetal loss (Badell et al., 2015), there is no clear evidence that any vaccine (inactivated or live) poses a risk during pregnancy (Nasser et al., 2020). However, vaccine safety data in pregnant women is typically limited, and live vaccines are generally avoided due to theoretical risks to the foetus (Nasser et al., 2020; Swamy & Heine, 2015). Inactivated influenza and pertussis vaccines are considered safe and are recommended for all pregnant women (Hall et al., 2020a; Nasser et al., 2020; Swamy & Heine, 2015). Administration of other vaccines may be considered in situations where exposure is likely and the benefits outweigh the risks (i.e., disease poses a greater risk to the woman or foetus than the vaccination) (Antony et al., 2017; Nasser et al., 2020). If there is a choice between a live and an inactivated vaccine (e.g., polio, typhoid), the inactivated one should be administered (Cooper, 2006). As yellow fever vaccine is a live vaccine for which limited safety data exists in pregnancy, pregnant women should be advised to avoid or postpone travel to yellow fever risk areas (Hall et al., 2020b; Reno et al., 2020). However, if travel cannot be avoided, yellow fever vaccination is recommended for pregnant women travelling to endemic areas (Staples et al., 2010; World Health Organization [WHO], 2013).

Pregnant women should be counselled about the risk of travel-related mosquito-borne diseases including Zika and malaria. Pregnant women who do not reside in Zika transmission risk areas should be advised to avoid travel to risk areas (Vouga et al., 2019). If travel cannot be avoided, advice on how to prevent mosquito bites and sexual transmission should be provided. Similarly, travel to malaria-endemic areas should be avoided during pregnancy when possible (McKinney et al., 2020). If travel is unavoidable, counselling on effective malaria chemoprophylaxis and mosquito avoidance measures is essential. There are a limited number of chemoprophylaxis agents approved for use in pregnancy. Chloroquine and hydroxychloroquine are considered safe and are recommended for prophylaxis in pregnant women travelling to areas without chloroquine resistance (McKinney et al., 2020). Mefloquine is the agent of choice for prophylaxis of pregnant women travelling to chloroquine-resistant areas if no contraindications exist (Roggelin & Cramer, 2014). The safety of atovaquone-proguanil during pregnancy has not been established, but small studies have shown no evidence of adverse effects (Roggelin & Cramer, 2014). Primaquine and tafenoquine are contraindicated during pregnancy and breastfeeding because of the risk of glucose-6-phosphate-dehydrogenase (G6PD) deficiency in the foetus (Baird, 2018). Most chemoprophylaxis guidelines advise against the use of doxycycline during pregnancy and breastfeeding (McKinney et al., 2020). Topical mosquito repellents containing DEET are safe and well-tolerated during pregnancy and breastfeeding (Stanczyk et al., 2015).

## Older Travellers

*Eighty is the new sixty* and age is now less of a barrier to international travel than ever before (South African Society of Travel Medicine, South African Geriatrics Society, and International Association for Medical Assistance to Travelers, 2016; Suh & Flaherty, 2019). There is a growing proportion of seniors travelling internationally; an estimated 5–30% of travellers are aged >60 years (European Union, 2020; Gautret et al., 2012; Lee et al., 2017). On cruise ships, up to 37% of passengers are 50–70 years of age and a further 14% over 70 years old (Cruise Lines International Association, 2018). A rapidly increasing interest in the wellbeing of this population is therefore justified.

Definitions as to when one becomes *older* vary from age >50 years as determined by immunologists based on immunosenescence, >60 years as per the World Health Organization (WHO, *elderly individuals*), >65 years according to the cruise industry and others (McClean and the Committee to Advise on Tropical Medicine and Travel [CATMAT], 2011). Some remain fit much longer, such as Yuichiro Miura who climbed Mt Everest a second time aged 80 years and 224 days.

### *Epidemiological Evidence on Health Problems in Older Travellers*

Ageing results in physiological changes including vision and hearing deficits (Torresi et al., 2019), cognitive decline and increased risk of dementia (Jafari et al., 2019). Decreased strength and frailty are associated with susceptibility to falls and an increased risk of fractures due to osteoporosis (King & Lipsky, 2015). Many of those aged 65 years have one or more morbidities (Barnett et al., 2012) and require medication(s), increasing the risk of interactions with medications that may be prescribed for the trip. Reduced functional reserve and homeostatic dysregulation may result in emergencies under extreme conditions (Lee et al., 2017). Immunosenescence is associated with an increased risk of complications with many infections and also with decreased protection by vaccines (Del Giudice et al., 2018; Nichols et al., 2018; Wagner & Weinberger, 2020). The case fatality rate of COVID-19 markedly increases in old patients.

The largest study to evaluate proportionate travel-related morbidity in older versus younger travellers is based on GeoSentinel data (Gautret et al., 2012). These data suggest that older travellers experience higher proportionate morbidity due to more serious diagnoses such as lower respiratory tract infections, cardiovascular and neurologic diseases and injuries, but lower morbidity in relation to diarrhoea and febrile illness (Table 4). Motion sickness is rare among senior citizens.

Older travellers are more likely to need air evacuation while abroad. In one series, over 50% of evacuations were of travellers aged >70 years with trauma and a variety of internal medicine, neurologic and urologic disorders (Sand et al., 2010).

**Table 4** Health problems according to age group

| Syndrome | 18-45 years | ≥ 60 years | p-value | Remarks |
|---|---|---|---|---|
| Respiratory | 10.3 | 14.6 | <0.001 | Pneumonia, high-altitude pulmonary oedema |
| Dermatologic | 13.3 | 14.5 | 0.004 | Arthropod bites |
| Musculoskeletal | 3.9 | 6.5 | <0.001 | Trauma, injuries |
| Neurologic | 2.2 | 3.6 | <0.001 | Vertigo, cerebrovascular accident |
| Urological | 2.8 | 3.5 | 0.001 | Urinary tract infections |
| Chronic disease | 1.8 | 3.4 | <0.001 | Gastro-oesophageal reflux |
| Cardiovascular | 0.5 | 3.4 | <0.001 | Heart, phlebitis, pulmonary embolism |
| Acute diarrhoea | 22.9 | 16.7 | <0.001 | Bacterial and parasitic |
| Febrile systemic illness | 18.3 | 12.6 | <0.001 | Upper respiratory tract infection, influenza/ Influenza-like illness (ILI), dengue, malaria |
| Chronic diarrhoea | 6.5 | 5.9 | 0.045 | |
| Psychological | 2.1 | 1.5 | 0.001 | |
| Oral, dental | 2.0 | 1.1 | <0.001 | |
| Obstetric, gynaecologic | 2.3 | 0.3 | <0.001 | |
| Genital infections, STD | 1.3 | 0.7 | <0.001 | |

Note: Number of cases (per 100 ill travellers) in ill travellers ($n = 7049$ aged > 60 years, $n = 56{,}042$ aged 18–45 years) seen in GeoSentinel clinics between 1997 and 2008 (Gautret et al., 2012)

Focusing on *vaccine preventable diseases* (VPDs), there are multiple reports on influenza and its complications, particularly during cruise ship voyages (Goeijenbier et al., 2017; Payne et al., 2018). The risk of pneumococcal disease increases with age; observed mainly in association with mass gatherings (Hoang et al., 2019). Based on GeoSentinel data, other VPDs typically affect younger populations, with a median age of <40 years and interquartile range (IQR) with an upper limit <50 years; exceptions include pertussis (median 44 years, IQR 30–61 years) and bacterial meningitis (51 years, IQR 27–60 years) (Boggild et al., 2010).

Older travellers probably do not expose themselves as often to malaria risks compared to younger age cohorts (Gautret et al., 2012), but if they are infected they have a significantly increased risk of severe malaria with acute renal failure and cerebral malaria (Kurth et al., 2017).

From the age of 40 years, risk of VTE is increased (Gavish & Brenner, 2011). The risk of cold stress is highest in the very young and in those aged 60 years or more (Gocotano et al., 2015). Based on experience at the Hajj, heat-related disorders are most prominent in senior pilgrims (Khan et al., 2018). Jet lag is worse in senior travellers (Kim & Duffy, 2018). In contrast to the above, there does not appear to be an association between age and the risk of acute mountain sickness (Gonggalanzi et al., 2016; Wu et al., 2018). Despite increasing achlorhydria there is no increase in the incidence of TD (Torresi et al., 2019).

## *Travel Health Advice for Senior Travellers*

During the COVID-19 pandemic many national authorities advise that older adults abstain from international travel. In some older travellers, fitness to fly (see *Part V Government and Industry Activity: Creating a Safer Journey: Exploring Emerging Innovations in the Aviation Sector*) or to travel at all must be evaluated and discussed.

Older travellers usually make reasonable selections in their destination and know how to avoid excessive stress and physical activity. Many choose organised tours, cruises and all-inclusive resorts rather than individually planned multi-stop journeys. Slightly longer transfer times with options to rest are recommended. Aisle, exit-row or bulkhead seats may be more comfortable and thus advisable for older air or bus passengers. A general check-up, ideally 8 weeks prior to departure, may be indicated before longer or strenuous trips. Additional recommendations relevant for older adults with pre-existing conditions will be discussed below.

With respect to VPDs, the national routine adult immunisation schedule should be completed (Burke & Rowe, 2018; Esposito et al., 2018). Specific travel vaccines may be indicated. For older travellers, influenza vaccination is paramount (Goeijenbier et al., 2017) and vaccination against pneumococcal disease should also be considered. Older travellers undertaking cruise travel or staying in resorts are less likely to be exposed to the risk of rabies (Steffen et al., 2020). Exposure to hepatitis B is also less likely, unless there is a persisting desire for casual sex or the need for medical interventions abroad, which remain unsafe in some (mostly remote) places. The proportion of hepatitis B vaccine non-responders increases with age (Tohme et al., 2011). Older travellers are usually immune to measles, mumps and rubella. Although the risk of hepatitis A is much lower as compared to previous decades (Beaute et al., 2018), there is an elevated case fatality rate of hepatitis A above the age of 65 years. The risk of typhoid is low at most destinations (Greenaway et al., 2014; Muresu et al., 2020; Neumann et al., 2014) and the case fatality rate of typhoid is <1% (Jin et al., 2019). For tick-borne and Japanese encephalitis, the risk of sequelae and death increases with age and those travelling to endemic areas should be offered vaccination (Kaiser & Dobler, 2010). Yellow fever vaccination in older adults is probably more frequently associated with severe adverse reactions, thus this vaccine should only be given if there is a risk of infection, otherwise an exemption certificate will be sufficient (Reno et al., 2020; Teitelbaum et al., 2018).

For prevention of malaria the same fundamental recommendations—personal protection measures (PPM) against mosquito bites and chemoprophylaxis—apply to older and younger travellers (*Part I Health: Travel Medicine and Tourist Health*). Older travellers are typically more adherent to chemoprophylaxis, but less adherent to PPM (Ahluwalia et al., 2020; Del Prete et al., 2019). Older travellers are less likely to experience adverse effects and intolerance to chemoprophylactic medications (Del Prete et al., 2019).

Even though the incidence rate of TD decreases with age (Steffen et al., 2015) it remains a relevant topic and overall the general rules described in *Part I Health: Travel Medicine and Tourist Health* and *Part II Safety: Food Safety and Hygiene*

apply as determined by a consensus conference for prevention and treatment (Riddle et al., 2017). There is some evidence that TD in the elderly may be more serious, for example, dehydration may lead to electrolyte imbalance or increase the risk of cerebrovascular accidents (Yamakawa et al., 2018). Travel kits should be recommended, with particular attention given to options for oral rehydration solutions. For those with a minimally unsteady gait, walking sticks may be useful to reduce the risk of falls and injury.

## Conclusions

Healthy older adults can travel to almost any destination reasonably taking into account limitations associated with their age. In preparing for the trip, particular attention should be given to avoid stress and undertake preventive measures against influenza and falls.

## Travellers With Pre-Existing Conditions

Pre-existing disease or disability may exist in travellers of any age and require special consideration in pre-travel counselling due to the increased risk of health problems or issues abroad (Wieten et al., 2012). As the risk of a trip may be excessive in the setting of an unstable condition, any chronic illness should be well-controlled prior to travel. Some patients, for example those with chronic arthritis, may experience improvement of their ailment in a warmer climate.

A few rules apply to all conditions. Patients with medication needs should carry at least enough to last for the entire trip. As checked-in luggage may get lost and hand luggage stolen, medication supplies should be split across bags. For some remote destinations, syringes and needles should be packed. Travellers should be advised that it is illegal to import certain medications to some countries (International Narcotics Control Board, 2019). A range of medication interactions with antidiarrhoeals and antimalarials is possible, and practitioners should check for interactions before prescribing these drugs (Baker, 2007; Lee et al., 2017).

In addition to a classical pre-travel consultation, consultation with a specialist regarding the pre-existing disease may be indicated with subsequent discussion between these experts. Patients should carry a detailed report in English or in the language of the destination country prepared by their treating doctor which includes a medication list, recent results and any other relevant information including his/her contact details. Detailed advice for every condition is outside of the scope of this chapter (see Barbeau et al., 2019 for further information).

## *Cardiovascular Problems*

Although cardiovascular events are among the most frequent causes of death abroad and aboard airplanes and other conveyances (Epstein et al., 2019; Lee et al., 2017; Leggat & Wilks, 2009; Stamatakis et al., 2017) underlying cardiovascular conditions rarely preclude travel. Individuals who are able to tolerate vigorous exercise at home will usually manage well during travel and at the destination, unless this is at an exceptionally high altitude. As a rule of thumb, people who are able to climb a flight of stairs without shortness of breath are fit to fly (Hammadah et al., 2017; Smith et al., 2010). Stable coronary heart disease is not a contraindication to travel, but those with unstable disease and/or recent myocardial infarction should be discouraged from travelling due to the stress of travel, exertion of carrying heavy luggage, and abrupt changes in climate that may aggravate their condition.

Patients with stable hypertension can tolerate a prolonged stay abroad or altitude exposure and can be instructed to self-check their blood pressure. Some antihypertensive medications, such as beta-blockers, may interfere with a compensatory increase in heart rate at high elevations. This may result in shortness of breath and symptoms that mimic acute mountain sickness. Antihypertensive or diuretic medication may result in low blood pressure symptoms, with a risk of fainting in zones with a hot climate.

Mild to moderate congestive heart failure usually causes no problems during air travel but may result in progressive problems upon arrival. Patients on diuretics are particularly prone to electrolyte imbalances during bouts of TD or due to excessive perspiration. Altitudes above 2400 meters/8000 feet can also compromise cardiopulmonary function in travellers with pre-existing heart or lung disease or severe anaemia (Donegani et al., 2014).

Patients on medication for arrhythmias and those with prolonged QT requiring malaria chemoprophylaxis need particular attention (Lewis et al., 2020). Those on warfarin should plan monitoring, and those at risk of endocarditis need specialist advice prior to prolonged stays in developing countries. Patients should be safe to travel 10 days after an uncomplicated myocardial infarction and 6 weeks after a complicated event; 2 days after a percutaneous coronary intervention, 14 days after coronary artery bypass grafting, and 1–2 days after insertion of an implantable cardioverter-defibrillator. Patients with older unipolar pacemakers or implanted defibrillators should get clearance from security staff and avoid passing through metal detectors (although theoretically, metal detectors should not induce magnetic interference that results in deprogramming of such instruments).

Long flights or bus, car, and train rides may present a risk of venous (and rarely arterial) thrombosis for patients with risk factors. They must be reminded to maintain adequate fluid intake during the flight, to walk around periodically, and to avoid in-flight sleeping medication. In selected cases, compression stockings, low-dose pre-flight heparin or new oral anticoagulants may be considered; aspirin probably gives insufficient protection (Marques et al., 2018; Ringwald et al., 2014).

With respect to medication, concomitant use of warfarin and doxycycline or atovaquone/proguanil will result in increased anticoagulation. There is no unanimity as to whether intramuscular vaccine injections are contraindicated during anticoagulation (Ringwald et al., 2009; van Aalsburg & van Genderen, 2011). Hydrochlorothiazide may not only result in dehydration but may also increase the risk of non-melanoma skin cancer (Pedersen et al., 2018).

## *Pulmonary Disease*

Patients with pulmonary conditions must be assessed for fitness to fly prior to travel (Lee et al., 2017). Patients with chronic respiratory insufficiency who need oxygen supplementation for long periods on a daily basis are certainly unfit for pleasure travel but, if necessary, may be transported by air (Nicholson & Sznajder, 2014). Patients with chronic obstructive pulmonary disease with acceptable levels of arterial blood gases on the ground may well require oxygen during the flight because oxygen saturation will drop. Arrangements must be made prior to travel with the respective airline.

Chronic obstructive pulmonary disease may be aggravated by high altitude (>2500 m), with patients often suffering from increased dyspnoea. In contrast, patients with asthma may experience easier breathing. Bronchopulmonic disease may be exacerbated, particularly in cities with smog (Vilcassim et al., 2019), whereas chronic bronchitis may improve in a humid, warm climate. Recommendations for the public have been published by the British Lung Foundation (2021). Patients with chronic obstructive airway disease should take ample medication to cope with episodes of aggravation, as required. Immunisation against influenza and pneumococcal disease is particularly important for this at-risk population.

## *Metabolic and Endocrinologic Disease*

Patients with insulin-dependent (type 1) diabetes should avoid travel unless they are stable, able to assess their blood sugar frequently and competently adjust their insulin doses (Wieten et al., 2012). Long-term travellers should ensure that they are free of comorbid complications. The disruption of daily routines and the stress of travel may precipitate episodes of hypo- and hyperglycaemia (Burnett, 2006).

Before travel, patients with diabetes must make sure that they have sufficient stock of the following in their hand luggage (Mullin et al., 2018):

- Insulin (usual supplies, plus extra short-acting insulin)
- Injection equipment
- Blood glucose meter (with extra batteries) and blood glucose testing strips

- Urine ketone and glucose testing strips
- Sugar and snacks for treating hypoglycaemic episodes and in case of meal delays
- Glucagon kit for use in case of hypoglycaemia resulting in unconsciousness (travel companions should be instructed in the signs of hypoglycaemia and use of the kit prior to travel)
- First aid kit
- Diabetes logbook

Diabetic travellers should request special in-flight diets at least 24–48 h in advance. They should take appropriate preventive measures against motion sickness, which may result in hypoglycaemia caused by decreased caloric intake. Selecting appropriate seats in the bus (front), plane (over wing), and on a boat (low, in the centre) may benefit.

Patients with insulin pumps should inform security staff that they should avoid passing through metal detectors (MacNeill & Fredericks, 2015). Although, theoretically, these should not induce magnetic interference resulting in deprogramming of an insulin pump, this cannot be ruled out, particularly in developing countries where the machines may be faulty. Altitude may alter performance of glucometers and insulin pumps (Jendle & Adolfsson, 2011).

Flights crossing no more than three time zones represent no problem to insulin-dependent diabetics, but additional doses of regular insulin may be necessary for longer westbound flights with prolongation of the day. In contrast, for eastbound flights with shorter days, reducing the insulin dose or using short-acting rather than long-acting insulin may be indicated (Chandran & Edelman, 2003; Pinsker et al., 2013). When preparing insulin during a flight, half the normal amount of air should be injected into the bottle due to the decreased air pressure at high altitude. Dehydration resulting from prolonged flights may make glucose control more difficult; therefore, the individual should consume plenty of non-alcoholic fluids, and should frequently monitor blood sugar. Patients should consult their endocrinologist or another competent medical professional for detailed and personalised pre-travel advice. Oral hypoglycaemics for patients with type 2 diabetes can be taken as prescribed, without any adjustments for time zone changes.

The tropics are associated with additional health risks for patients with diabetes. In hot climates, during travel and at the destination, insulin should ideally be refrigerated. However, it will keep for at least 1 month unrefrigerated if protected from freezing or temperatures above 30 °C (86 °F). If insulin is likely to be exposed to heat above 50 °C (approximately 120 °F), protect this with a wide-mouthed thermos or insulated bottle. For trips exceeding 1 month in duration, patients with diabetes should check in advance the local availability and equivalent brand names of their usual form of insulin.

Diabetes increases susceptibility to heat-related problems. Symptoms of hypo- or hyperglycaemia may mimic some of the symptoms of heat exposure, such as weakness, dizziness, headache, and confusion. Increased perspiration may result in an increased risk of cutaneous infection; therefore, hygiene measures should be strictly followed. Diabetic patients with autonomic neuropathy, a condition that

interferes with sweating, should avoid hot climates, or ensure air-conditioned environments are available. Patients with diabetes should be reminded to drink lots of fluids. This is particularly important in senior travellers with type 2 diabetes to avoid dehydration and hyperosmolar coma. Before vigorous exercise, it may be necessary to slightly reduce the dose of insulin.

Diabetic patients must rigorously carry out diabetic foot care and obey common sense rules. They should avoid going barefoot and frequently change their socks to keep the feet dry and comfortable. They must inspect their feet carefully each day and seek immediate medical attention if they detect a foot infection or non-healing cut or puncture wound. If staying in humid climates, an antifungal powder is a useful addition to the first aid kit.

If vomiting occurs and individuals with type 1 diabetes are unable to eat, patients should use insulin (preferably short-acting) at a reduced dose regularly. During any illness, patients should carefully monitor blood sugar levels to accurately determine insulin requirements.

Diabetics should obtain names and addresses of local diabetes associations by consulting appropriate websites. Local diabetic associations can provide information about physicians specialising in diabetes in many parts of the world, as well as restaurants offering special diets, pharmacies open 24 h, and other useful information. The American Diabetes Association provides a wallet-size *Diabetic Alert Card* with emergency information in 13 languages.

Hyperuricaemia may become a problem if recurrent bouts of gout occur. Hyperlipidaemia is of comparatively little relevance with respect to travel.

## *Renal and Urinary Tract Disorders*

Renal insufficiency may be complicated during travel by dehydration due to excessive perspiration or diarrhoea. In addition, serious metabolic problems may occur following dietary errors or diarrhoea, resulting in hyperkalaemia, hyponatraemia, or metabolic acidosis. Finally, uraemia may increase the risk of infection through various mechanisms that decrease immunocompetence. Severe renal insufficiency may be associated with problems in extensive travel or prolonged stays in developing countries. Atovaquone-proguanil is contraindicated for patients with a creatinine clearance <30 L/min (Jolink et al., 2010).

Haemodialysis is available almost anywhere, but it is necessary to organise it in advance (Footman et al., 2015). Various tour operators specialise in tours and cruises for patients on dialysis and kidney-transplant patients, with necessary access to medical resources. The patient may, however, need to be adequately equipped with all the required materials (e.g., erythropoietin), particularly for prolonged stays. Patients must take particular care to avoid infections and to drink enough fluids to avoid thrombosis of their arteriovenous fistula. Dialysis does not affect the metabolism of mefloquine and doxycycline.

Patients with urolithiasis may have an increased risk of recurrence, especially during the first months of stay in a warm climate, thus the need for them to drink plenty of fluids. A pre-departure ultrasonic evaluation may occasionally be indicated. Prostatic hypertrophy and other conditions resulting in urinary urgency may present a challenge in transit, particularly on planes and buses.

Men with benign prostatic hyperplasia should avoid decongestants and antihistamines in the setting of coryzal symptoms as these may lead to urinary retention. They should carry a nightlight or torch to safely find the bathroom in the dark and should be encouraged to select aisle seats.

## *Disorders of the Gastrointestinal Tract*

Chronic inflammatory bowel disease may predispose travellers to enteric complications if they are staying in areas with high risk of gastrointestinal infection or at high altitude (Chan et al., 2018; Vavricka et al., 2014). Patients with colostomies planning to fly should use large bags as air expansion may result in increased output. Chronic liver disease is a concern because of the risk of hepatic infections resulting in deterioration of the condition. Patients with chronic hepatitis B should be immunised against hepatitis A and avoid travelling to those countries where hepatitis E is hyperendemic.

Patients on aspirin, or those using non-steroidal anti-inflammatory products must be aware of the risk of gastric mucosal injury and the risk of bleeding. Concerns that proton pump inhibitors or other contributors to a reduced gastric acid barrier may increase the risk of TD are justified (Bavishi & Dupont, 2011; Wieten et al., 2012). Patients with diverticulosis should carry antibiotics to treat a bout of diverticulitis and should abstain from antimotility agents in the event of diarrhoea. Haemorrhoids may flare up after prolonged sitting, excessive alcohol intake, or consumption of spicy food. In these patients, the travel medical kit should contain the necessary medications. Participants on expeditions traveling to remote areas may consider elective surgical care to prevent potential problems (e.g., appendicitis).

## *Dermatological Problems*

Sunlight, heat, moisture, cold dry climate, and positive or negative emotions may aggravate or alleviate some skin diseases. A few people have a genetically determined higher susceptibility to photosensitivity. Patients who take oral retinoids or doxycycline should be warned of sunburn. Sunlight (more specifically, ultraviolet light) may provoke symptomatic herpes simplex infection and may also aggravate seborrheic dermatitis, rosacea, Mallorca acne (acne aestivalis), and transient acantholytic dermatosis. Ultraviolet (UV) radiation may also result in skin cancer, particularly in ageing skin or those using hydrochlorothiazide medication (Daniels

et al., 2020). In contrast, psoriasis is usually improved by UV light, but sunburn of the untanned skin may cause Koebner's phenomenon and lead to exacerbation. UV light induces peeling of the skin and usually improves acne vulgaris. Some forms of urticaria may improve during a vacation with greater exposure to sunlight.

Many agents used for malaria prophylaxis (atovaquone/proguanil, chloroquine, doxycycline, mefloquine, sulfadoxine/pyrimethamine) may be associated with exacerbation of psoriasis or may result in phototoxicity; additionally, sulfadoxine/pyrimethamine may cause severe cutaneous adverse reactions (Amelot et al., 2014; Goetze et al., 2017; Nunes et al., 2017).

Heat plays a prominent role in intertrigo and hyperhidrosis. Individuals with anhidrotic ectodermal dysplasia have no eccrine sweat glands and experience heat congestion when they are exposed to sun and heat. Travel to tropical countries may be life-threatening. Cold will aggravate Raynaud's disease and syndrome, peripheral vascular malperfusion, vasculitis owing to cryoglobulins and cryofibrinogens, erythrocyanosis crurum, acrocyanosis, and cold panniculitis.

A dry climate may exacerbate ichthyosis vulgaris and atopic dermatitis. Individuals with dry skin should use a body lotion after a shower, take brief showers, and use soap only on the intertriginous areas.

## *Allergies*

Travellers prone to allergies should avoid known allergens, but they face the risk of being exposed to new ones during travel. Air pollution is associated with atopic dermatitis (Baek et al., 2020). House dust mites thrive in tropical conditions and can be particularly sensitising. The risk of seasonal reactions to pollens varies region by region. Food allergies are a constant threat due to unknown ingredients in exotic dishes. Various insect bites may result in anaphylaxis. Some medications recommended for use during travel in tropical areas may trigger hypersensitivity reactions. Avoidance of allergens is more difficult in a foreign environment.

Travellers with allergies should carry identification cards that include a list of substances to which they are allergic and carry a travel medical kit containing antihistamines or corticosteroids.

## *Other Pre-existing Health Problems*

Degenerative rheumatologic disease is often improved during a stay in a warm climate. Depending on the type of aircraft seat, low back pain could often be aggravated during and after a long flight; thus arranging for stopovers during long journeys and spending a night in bed may help.

Among neurologic disorders, epilepsy is frequently observed in-flight or upon arrival; often this is associated with drugs or non-adherence to medication

(Alonso-Canovas et al., 2011). Mefloquine and chloroquine may lead to a recurrence of seizures (Schneider et al., 2013). Tension headaches may improve while abroad because the individual is removed from the usual factors causing stress.

Psychological and psychiatric conditions are a frequent reason for air evacuation, primarily in expatriates (Gardiner et al., 2020; Linton & Warner, 2000). Mefloquine is contraindicated in individuals with a history of such conditions. Patients with a history of substance abuse and individuals who cannot easily adapt to new conditions are not good candidates for a prolonged stay abroad (Foyle et al., 1998). Some people may become disoriented in a strange town. It may help them to carry a card with the name, address, and telephone number of their residence, as well as a card showing their destination to obtain directions or assistance if they get lost (Bauer, 2019).

## Physically Challenged Travellers

The benefits of travel are increasingly available to people with physical limitations, as globally there is an increased awareness and support for their needs. Specialised organisations, tour operators, air- and cruise lines and hotels offer advice and support tailored for particular disabilities, but this must be requested in advance (Bauer, 2018; Jorge et al., 2005).

Wheelchair users are usually advised that a lightweight folding chair is most convenient during travel. It is useful to carry the necessary tools for repairs as well; power wheelchairs may be too complex for the available infrastructure in lower income countries. Rental may be possible at some destinations. Many cities throughout the world publish accessibility handbooks, and local tourist bureaus will provide information.

For the visually impaired, transport of guide dogs across international borders can be a major problem, as quarantine may be imposed. Entry regulations for the destination and regulations for re-entry into the country of origin should be evaluated pre-travel. Additional vaccinations may be requested.

Hearing-impaired travellers should inform transportation and hotel staff of their impairment so that they do not miss travel announcements or emergency information and alarms. Those with hearing aids must carry sufficient supply of batteries.

## The Immunocompromised Traveller

The immunocompromised are a heterogenous but increasingly important group of travellers who may present to any travel health practitioner (Patel et al., 2015). The term *immunocompromised* encompasses a range of hosts with varying degrees of immune dysfunction, including transplant recipients, cancer patients, patients receiving immunomodulatory treatments, HIV-infected, and asplenic individuals.

Immunocompromised travellers often travel to *high-risk* destinations and appear just as likely to engage in risky behaviours as healthy travellers (Bialy et al., 2015; Schwartz et al., 2015). They are often at increased risk for acquisition and severity of travel-related infections, but risks vary according to the intensity of the underlying immune dysfunction, travel destination and activities (Aung et al., 2015). There is also the potential risk of a flare or complications related to their underlying disease during travel. Vaccine choices, timing and responses are highly dependent on the underlying cause and degree of immunosuppression; live vaccinations are frequently contraindicated, and vaccine responses may be suboptimal (Rubin et al., 2014). Drug interactions between immunosuppressive medications and commonly prescribed travel drugs may occur (Kotton et al., 2013).

While special considerations exist for immunocompromised travellers when it comes to pre-travel counselling and preparation, most travel can be undertaken safely and there are few absolute contraindications to travel. Detailed advice for every immunocompromised patient group is outside of the scope of this chapter; see Bourque et al., 2019; Kanhutu et al., 2017; Kotton et al., 2019; Rubin et al., 2014; Torresi et al., 2019 for further information. The following recommendations apply to all immunocompromised groups. Pre-travel preparation can be optimised by beginning the risk assessment process early, communicating risks effectively, and vaccinating prior to immunosuppression or after immunological recovery where possible. Patients taking medications should carry enough medication to last the trip, plus some extra, and a detailed medical letter outlining their current immune function, health status, medication list and treating doctor's contact details. All immunocompromised travellers should be informed about how to prevent and manage the more common infections that they may encounter, and when to seek medical attention. Unvaccinated travellers with severe immunocompromise should be strongly discouraged from travel to destinations with true risk of yellow fever (Freedman & Chen, 2019).

## *Epidemiological Evidence for Health Problems in Immunocompromised Travellers*

While few studies have evaluated the incidence of health problems encountered by immunocompromised travellers, they appear to be at higher risk for serious health problems during or after travel compared to their immunocompetent counterparts, with high rates of hospitalisation when illness occurs (Dekkiche et al., 2016; Roukens et al., 2007; Wieten et al., 2012). They may be more susceptible to a range of bacterial, fungal, viral and parasitic infections, although the infections that pose an increased risk and the degree of susceptibility vary according to the extent and nature of immune dysfunction (Aung et al., 2015; Kotton, 2012). The risk of TD may be increased (due to reduced mucosal immunity and/or proton pump inhibitor

therapy) and disease may be more severe (Suryapranata et al., 2019; van Aalst et al., 2018).

Food- and water-borne parasitic infections that are typically self-limited in immunocompetent patients (e.g., cryptosporidiosis, giardiasis and cyclosporiasis) may cause prolonged severe diarrhoea in the immunocompromised (Ericsson et al., 2001). Similarly, bacterial infections (such as non-typhoidal salmonellosis and shigellosis) may be complicated by bacteraemia, invasive disease and recurrence (Gordon, 2008). Following exposure to tuberculosis (TB), risk of progression to active disease is increased; this is especially true for HIV-infected individuals and those receiving anti-TNF-alpha inhibitor therapy (up to 10-fold increased risk) (Denholm & Thevarajan, 2016). Endemic fungal infections posing an increased risk of severe outcomes for the immunocompromised (particularly HIV-infected individuals and transplant recipients) include talaromycosis (formerly penicilliosis) in Asia, coccidioidomycosis and paracoccidioidomycosis in the Americas, and histoplasmosis and blastomycosis (distributed worldwide, but endemic in North America) (Cao et al., 2019; Lee & Lau, 2017; Miller et al., 2013; Panackal et al., 2002). Risk of complications from influenza infection is increased in transplant recipients, cancer patients, and those receiving some biologic therapies; additionally, influenza vaccine immunogenicity in these populations is typically low (Bosaeed & Kumar, 2018). Immunosuppression is a well-established risk factor for development of disease following *Leishmania* exposure, and immunocompromised individuals are more likely to develop diffuse and disseminated forms and experience disease reactivation (van Griensven et al., 2014).

## *COVID-19 in the Immunocompromised*

Published data relating to the incidence and severity of COVID-19 in immunocompromised individuals are still limited, but organ transplant and cancer patients appear to be more likely to need intensive care and more likely to die than the general population (Fung & Babik, 2020; Belsky et al. 2021). Amongst solid organ transplant recipients, increased COVID-19 disease severity and mortality has been reported, with comorbidities highly prevalent among those infected (Cravedi et al., 2020; Fraser et al., 2020; Hoek et al., 2020; Pereira et al., 2020). Higher rates of hospitalisation and higher case fatality rates have been reported amongst cancer patients in cohort and registry studies (Kuderer et al., 2020; Lee et al., 2020). Subgroups at increased risk of worse outcomes (e.g., severe disease and death) appear to include those with lung cancer, haematological malignancies, and recent active therapy (Kuderer et al., 2020; Liang et al., 2020; Mehta et al., 2020; Yang et al., 2020; Yu et al., 2020). The risk of COVID-19 acquisition may be increased in cancer patients, with these individuals making up a larger proportion of COVID-19 cases in both the USA and China compared to the general population (Liang et al., 2020; Miyashita et al., 2020). People living with HIV also appear to be at increased risk of severe COVID-19 disease and mortality (Bhaskaran et al., 2021; Tesoriero

et al., 2021). Existing data do not show an increased risk of severe COVID-19 in patients taking biologic therapies or targeted disease-modifying anti-rheumatic drugs (DMARDs) (Brenner et al., 2020; Fung & Babik, 2020).

### *Patients Receiving Immunosuppressive Medications*

Indications for immunosuppressive medications are varied, and include autoimmune diseases, malignancies, and transplantation. Classic immunosuppressive drugs include corticosteroids, antimetabolites (e.g., azathioprine, methotrexate), calcineurin inhibitors (e.g., cyclosporine, tacrolimus) and cancer chemotherapeutic agents (Askling & Dalm, 2014; Zwar, 2020). In recent decades, there has been a dramatic increase in the availability and use of *biologic* agents (drugs derived from living organisms or their products), many of which have immunosuppressive or immunomodulatory properties (Askling & Dalm, 2014; Hall et al., 2018). Immunosuppressive medications may be administered alone or in combination, and the potential travel-related infection risks are dependent on the dosage(s) and mode(s) of action of the agent(s) received (Hall et al., 2018). Live vaccinations are contraindicated in most patients receiving immunosuppressive medications, and responses to inactivated vaccines may be blunted (Rubin et al., 2014).

High-dose corticosteroids, generally defined as doses >20 mg/day of prednisolone or equivalent for ≥2 weeks, are well-recognised to be associated with an increased risk of severe infections (Youssef et al., 2016). Live vaccines should not be administered until at least 1 month after cessation of high-dose corticosteroids (Australian Technical Advisory Group on Immunisation, 2018). Treatment with tumour necrosis factor (TNF)-alpha inhibitors is associated with increased susceptibility to granulomatous and intracellular infections, such as TB (Hall et al., 2018). Given the increased risk of progression to active TB following TB exposure in those receiving TNF-alpha inhibitors; pre- and post-travel screening for TB should be considered for travellers to high incidence countries, particularly those planning extended stays (Denholm & Thevarajan, 2016). A detailed description of the potential travel-related infection risks and pre-travel recommendations for every immunosuppressive agent is outside of the scope of this chapter, but readers are encouraged to seek further detail (see Australian Technical Advisory Group on Immunisation, 2018; Hall et al., 2018; Kotton et al., 2019).

### *Transplant Recipients*

Transplant recipients include those with solid organ transplants (SOT) and haematopoietic stem cell transplants (HSCT). The degree of immunosuppression in HSCT recipients is dependent on the conditioning agents administered pre-transplant, and whether the transplant is derived from the patient's own (autologous) or donor

(allogeneic) stem cells (Aung et al., 2015). Most HSCT recipients undergo an initial period of intense immunosuppression, with impaired immunity and functional asplenia, but recover their immune function over time, to the point where they may be presumed immunocompetent at or beyond 24 months post-transplant provided they do not develop graft-versus-host disease (GVHD) requiring treatment (Aung et al., 2015; Rubin et al., 2014). In contrast, most SOT recipients undergo an initial period of moderate immunosuppression (usually greatest in the first 6 months post-transplant) but are committed to long-term immunosuppression with anti-rejection drugs (Aung et al., 2015).

Transplant recipients should be encouraged to avoid high-risk travel during periods of intense immunosuppression (e.g., in the 6–12 months post-transplant or during episodes of rejection or GVHD) (Aung et al., 2015). Live vaccines should not be administered to SOT recipients or to HSCT recipients within 24 months of transplantation (Rubin et al., 2014). Inactivated vaccines are usually considered safe, but antibody responses may be blunted and additional or booster doses may be required to achieve adequate responses (Trubiano et al., 2016). Routine vaccinations should be up-to-date pre-travel. Potential drug-drug interactions should be reviewed prior to prescribing travel-related medications such as malaria chemoprophylaxis (Kotton et al., 2013; Trofe-Clark et al., 2013). As transplant recipients may be at increased risk of TD-related complications (including bloodstream infection) and diarrhoea-related dehydration may result in renal insufficiency and anti-rejection drug toxicity, TD should be managed aggressively (Beeching et al., 2018). Early, aggressive fluid and electrolyte replacement is recommended, along with empiric antibiotic therapy for those with fever, bloody stools, or three or more episodes in one day (Beeching et al., 2018). Sun protection should be recommended due to the increased risk of skin cancer in transplant patients receiving immunosuppressive medications (Kotton et al., 2013). Transplant recipients should also be advised to avoid caving, spelunking, and dust-laden activities and environments (e.g., construction, demolition and excavation sites) due to the risk of inhalation of fungal spores (Miller et al., 2013; Panackal et al., 2002).

## *HIV-Infected Travellers*

The advent of highly effective combination anti-retroviral therapy (ART) has led to dramatic improvements in the health of HIV-infected individuals, and those who adhere to their treatment regimens can now expect a near-normal life expectancy (Fauci & Lane, 2020). However, HIV-infected individuals may be at increased risk for travel-related infections and adverse outcomes, with the greatest risks seen in those not on ART or with lower CD4+ T-cell lymphocyte counts (Bourque et al., 2019).

HIV-infected travellers should be advised to adhere to food and water precautions, safe sex practices, and insect bite avoidance during travel (Bourque et al., 2019). As HIV infection is an independent risk factor for VTE (Bibas et al., 2011)

they should be encouraged to mobilise frequently and stay well-hydrated while in transit (especially on long flights) (Bourque et al., 2019). Most vaccines are safe in HIV-infected individuals, but live vaccines should be avoided in those with CD4+ counts <200 cells/mm$^3$ (Rubin et al., 2014). Because HIV-infected individuals may have blunted post-vaccination immune responses and shorter durations of seroprotection, additional or booster doses of some vaccines may be recommended. For example, a booster dose of yellow fever vaccine is recommended for HIV-infected travellers travelling to areas with yellow fever risk if it has been more than 10 years since their last dose and they have a CD4+ count of 200 ≥ cells/mm$^3$ (Staples et al., 2010).

Practitioners should consult current guidelines for HIV-specific vaccine recommendations (Crum-Cianflone & Sullivan, 2017a, 2017b). Potential drug-drug interactions should be reviewed prior to prescribing travel-related medications such as malaria chemoprophylaxis; an excellent free HIV drug interaction checker is available at the University of Liverpool's website (HIV Drug Interactions, 2021). Due to increased risk of progression to active TB following TB exposure, pre- and post-travel screening for TB should be considered for HIV-infected individuals travelling to high incidence countries, particularly those planning extended stays (Denholm & Thevarajan, 2016). HIV-infected travellers should be aware that some countries have laws that may restrict entry for individuals with HIV, and be advised to speak with the destination country's consulate or embassy prior to travel (Bourque et al., 2019).

## *Asplenic and Hyposplenic Travellers*

Asplenic and hyposplenic individuals are at increased risk for severe infection due to encapsulated bacteria (e.g., *Streptococcus pneumoniae* and *Neisseria meningitidis*), bacteria transmitted through animal bites (especially *Capnocytophaga canimorsus*) and intra-erythrocytic parasites such as malaria and babesiosis (Chotivanich et al., 2002; Luu et al., 2019; Rosner et al., 1984). Pre-travel education is of vital importance; individuals should be aware of the need to seek medical attention in the event of a fever or animal bite and should carry an emergency supply of antibiotics (Boeddha et al., 2012; Kanhutu et al., 2017). Those who are not otherwise taking antibiotic prophylaxis should be encouraged to do so during periods of travel. Patients travelling to malaria-endemic areas should be aware of the risk of severe malaria and take optimal precautions to prevent infection (mosquito avoidance measures plus antimalarial chemoprophylaxis) (Kanhutu et al., 2017). Asplenia is not a contraindication to vaccination and live vaccines pose no risk to asplenic and hyposplenic individuals (Rubin et al., 2014). In addition to recommending appropriate travel vaccines, practitioners should ensure that routine vaccinations are up-to-date, including specific vaccines recommended for asplenic and hyposplenic individuals (annual influenza vaccine, pneumococcal [both conjugate and

polysaccharide vaccines], meningococcal [ACWY and B] and Hib vaccines, Kanhutu et al., 2017; Rubin et al., 2014).

## Travel in Those Who Have Recovered From COVID-19

Increasingly, patients who have recovered from COVID-19 will wish to travel. Emerging literature suggests that COVID-19 infection may result in long-term sequelae, but further research to characterise the frequency and extent of sequelae is needed (Yelin et al., 2020; Zhao et al., 2020). The degree to which individuals develop protective immunity following infection remains unclear, and cases of reinfection have been reported (Tillett et al., 2020; To et al., 2020). Optimal pre-travel advice for individuals who have recovered from COVID-19 and are planning to travel is yet to be established, but considerations may include assessment for sequelae (e.g., pulmonary function testing), assessment of exposure risk at the destination, and advice on preventive measures such as hand hygiene and vaccination.

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# Part II
# Safety

# Tourism Security in a Post-COVID-19 World: Issues of Tourism Policing and Civil Unrest

**Peter Tarlow**

**Abstract** The COVID-19 pandemic has created new and challenging issues for tourism policing. Prior to COVID-19 tourism policing dealt with issues such as criminality and terrorism. Few police departments saw public health issues as part of their mandate, nor were most of their officials experts in pandemics and the interaction between health issues and tourism security. As the reader will see in this chapter, COVID-19 added a new layer to the role of the tourism security official. Not only were health regulations a part of the travel industry, but their flaunting became a crime committed by members of the tourism industry and their guests. Secondly, tourism security professionals also fell victim to the pandemic and had to care not only for the industry and its visitor's health but also had their own families about which to worry. This chapter examines how tourism policing around the world faced new challenges and how the intersection of security and public health has changed, perhaps forever, the fundamentals of tourism policing.

**Keywords** Tourism security · Safety · Policing · Civil unrest · COVID-19

## Introduction

At the time of writing (November 2020) the world was going through multiple upheavals. In the United States people were suffering from the pain of the international COVID-19 pandemic. At the same time, the nation was rocked by multiple riots and a movement that seeks to defund (or in its extreme version abolish) police departments and other forms of law enforcement. Europe and the Middle East were facing both continuous and multiple new waves of the pandemic. The same was true for parts of the Australian continent and Asia. Throughout the world economies were in tatters and millions faced unemployment and even hunger.

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_5

Although some sectors of the world's economy are beginning to rebound, tourism, the world's largest peacetime industry, still faces an uncertain future. For example, on 1 October (2020) Bloomberg reported that:

> American Airlines Group Inc. has warned that furloughs of 19,000 employees will start when existing U.S. payroll support runs out at the end of the day Wednesday. United Airlines Holdings Inc. said earlier this week that it was planning 12,000 job cuts, and smaller carriers are set to make additional reductions (Schlangenstein & Mohsin, 2020, para. 2).

The layoffs came about the following day.

What is true of the airline industry around the world is also true of the hotel and restaurant industry, as well as the meetings and convention industry. Furthermore, to a great extent business travel has now become a stay-at-home-and work-virtually affair. Corporate management has begun to evaluate the necessity of expensive business travel. Although some predict an eventual return to business travel, it is of note that the National Law Review (2020) reminded business leaders that:

> Given the challenges presented by COVID-19, many businesses must consider large-scale, transformational changes to their operations. As social distancing continues and safety concerns pervade the public consciousness, adjustments to the physical workspace and business travel practices will be necessary to reflect these new considerations (Busch et al., 2020, para.1).

The World Economic Forum in September 2020 reported that the United Nations Secretary-General António Guterres

> released a new report that draws on UNWTO data to quantify the devastating impact that the coronavirus pandemic has had on global tourism. It warns that up to 120 million tourism jobs are at risk, with the economic damage likely to exceed $1 trillion in 2020 alone (Richter, 2020, para.1).

The challenges to the tourism industry and the world at large at the end of 2020 seem sociologically distant from the year 2006. In that year Wilks et al. (2006) published the book *Tourism in Turbulent Times: Towards Safe Experiences for Visitors*. The book touched upon many of tourism's problems and challenges. It is now an historical record of the problems that were occurring during the twenty-first century's first decade. Although the book was published less than two decades ago, the world has radically changed since the turn of the millennium. For example, despite the fact that the book dedicated two chapters to health and tourism, re-reading those chapters and other chapters within the book, it becomes clear that none of the book's multiple authors, or tourism leaders, were aware of the enormous impact that issues of health would have on all aspects of the tourism industry. In 2006 no one could have imagined that a worldwide pandemic would change almost every aspect of tourism and tourism security. Although the world had seen epidemics, the idea of a worldwide pandemic seemed to be either something from the past or an event reserved for science-fiction writers.

For example, the book chapter by Annelies Wilder-Smith (2006) on the SARS (Severe Acute Respiratory Syndrome) epidemic noted that:

> SARS had (a) major political and economic impact. The FIFA Women's World Cup, originally scheduled for China, was moved to the United States…(A) severe decline in customer numbers occurred for Chinese cuisine restaurants in Guangdong, Hong Kong, and Chinatowns in North America; a 90% decrease in some cases (p. 55).

She noted further that: "The International Health Regulations (IHR) have not been revised since 1977" and that "the appearance and spread of SARS on a global level also raised vital legal and ethical issues" (Wilder-Smith, 2006, pp. 59–60).

Rereading the book, from the perspective of the twenty-first century's third decade, the reader rapidly notes that the chapters dealing with tourist health preceded but were not included in the books' section on safety and security. This organisational structure was not unusual for the times and in fact it reflected the universal assumption that issues of health concern were different from those of tourism safety and security. Rather, the placement of these chapters underscored the longstanding notion that issues of public health were not at that time what people considered a part of the world of tourism safety and security. For example, in Chapters 5 and 6 Tarlow (2006a, 2006b) did not touch upon the relationship between medical issues and security. Although in 2006 both tourism and security professionals were aware of the potential for biological terrorism, these issues were viewed as remote, minimal, and were rarely found at the forefront of problems that the tourism industry faced. In 2006, terrorism-tourism scholars, industry professionals and security experts had other priorities.

Almost two decades ago, cyber-crimes, identity theft, biological attacks, and/or pandemics were absent from, or barely on, tourism security specialists' radar screens. For example, besides issues of petty crime, hotel room invasions, and murder rates, tourism-security specialists feared physical terrorist attacks, kidnapping and/or airplane hijackings. It should be remembered too that 2006 was a mere 5 years since the devastating attacks of September 11, 2001 on the United States that resulted in worldwide negative economic consequences for much of the tourism industry (UNWTO, 2002). There were health problems on the horizon but they tended to be localised and manifest far from major tourism centres. The world had suffered from various epidemics such as SARS, but these illnesses seemed to be isolated and remote and did not have a worldwide impact.

Since 2006 much has changed. The third decade of the twenty-first century has presented the tourism industry with a great many new challenges. These challenges not only impacted those who work in the tourism security fields but also the industry at large. The extent of these challenges was noted when Tarlow (2020a) wrote in the June edition of the online industry newsletter Tourism Tidbits:

> To a certain extent the work of the psychiatrist Kübler-Ross and her five stages of death has much to teach the tourism industry. Kübler–Ross spoke of these five stages as being: 1) Denial, 2) Anger, 3) Bargaining, 4) Depression and 5) Acceptance (para. 2).

Kübler-Ross (1969) was writing about personal grief and not business, and although the travel and tourism industry is not a person, its leaders have responded to the COVID-19 pandemic in ways very similar to that of a person in mourning. To

a great extent Kübler-Ross's five stages, plus a sixth stage that can be called *renewal*, reflect much of what the industry's leaders have experienced.

Although the challenges posed by COVID-19 are different from past security challenges, they have totally changed the way the tourism industry views the world and how its customers view it. These new challenges are ubiquitous and without precedent. The economic pain and health risks to employees caused by COVID-19 have touched both large and small tourism businesses, tourism ministries, and transportation hubs. No one in any of tourism's multiple components has been exempt. For the first time in the history of modern tourism, the world's largest peacetime industry has seen the potential for long-range economic ruin. The United Nations World Tourism Organization (UNWTO, 2020, para. 1) noted this level of decline when it stated:

> The latest edition of the UNWTO World Tourism Barometer shows that the near-complete lockdown imposed in response to the pandemic led to a 98 per cent fall in international tourist numbers in May when compared to 2019. The Barometer also shows a 56% year-on-year drop in tourist arrivals between January and May. This translates into a fall of 300 million tourists and US$320 billion lost in international tourism receipts—more than three times the loss during the Global Economic Crisis of 2009.

The economic and bio-security challenges to the total tourism industry have touched every aspect of the industry; from the airline industry to the cruise industry, from the hotel and restaurant industry to the attractions and meeting industries. For example, KPMG (2020, para. 1) notes that:

> The airline industry is in freefall as travel bans cause a significant decline in passenger numbers and revenues in rapid time. The airlines that combine air freight in addition to *revenue passenger miles* (or kilometers) within their business model may have a slight benefit when supply chains and the market demands return.

Further,

> the International Air Transport Association's (IATA) estimates US$252 billion in lost revenues now looks optimistic and IATA has suggested up to US$200 billion of state aid in the form of cash injections and loan guarantees may be required to save the industry from collapse (KPMG, 2020, para. 3).

The impact of COVID-19 on the tourism industry and tourism security was so severe that it would not be erroneous to divide the recent 2020 history of tourism into two unique historical periods: Tourism pre-COVID-19 (TPC) and the tourism industry after COVID-19 (TAC). This division is supported by findings such as that of the Organisation for Economic Co-Operation and Development (OECD, 2020). In June of 2020 the OECD report described the scope of the economic catastrophe by noting:

> The coronavirus (COVID-19) pandemic is, first and foremost, a humanitarian crisis affecting people's lives, and has triggered a global economic crisis. This has very tangible impacts for the tourism sector, which is critical for many people, places and businesses, with the impact particularly felt in countries, cities and regions where tourism is an important part of the economy (para.13).

## COVID-19 and Tourism Security

Due to the COVID-19 crisis many of the past paradigms used by tourism security professionals, in both the private and public sectors, simply are no longer viable. Former assumptions have fallen by the wayside and the Post-COVID-19 world has forced not only tourism professionals to fight for their survival, but also those who work in tourism security. It is clear that without tourism there is no tourism security. Both tourism and security specialists have had to reassess the past and seek new and creative measures for a still uncertain future. It should be understood, however, that although a great many new challenges have arisen, older challenges and problems have not ceased to exist (as noted in *Introduction: Issues in Tourist Health, Safety and Wellbeing*). Issues such as cyber-security, robberies, larcenies and stealing, kidnappings, human trafficking, and the potential for terrorism attacks still threaten the tourism industry. The addition of public safety issues and of civil disorder (Hribernik & Haynes, 2020) means that tourism security professionals and industry leaders must now seek ways to fight what in military parlance is called a *multi-front* war.

Despite COVID-19, not everything has changed. For example, tourism depends on security. This simple premise was true in the past and will remain true in the after-COVID-19 world of tourism. Referring to safety and security in tourism the World Tourism Organization (WTO, 1996) highlighted that this is an issue that affects us at all levels. The success or failure of a tourism destination depends on being able to provide a safe and secure environment for its visitors (see also Tarlow, 2018; Wilks et al., 2006). Over recent years we have seen the wider impact of natural and person-made crises on tourism. Global internet and social media coverage can escalate reports of local incidents resulting in booking cancellations in unaffected but associated regions. With tourists becoming targets for terrorism attacks, our feelings of safety, both physically and psychologically, and our sense of security as tourists, has been increasingly challenged.

In fact without security there is no tourism. Tarlow (2005) noted this in an article: *Issues of Health, Safety and Security* published by the Caribbean Tourism Organization in which he wrote:

> Another example of this interfacing between safety and security is in the issue of health related matters. Visitors are capable of carrying diseases from one part of the world to another. Visitors are also subject to poor health standards in food preparation and the transfer of health problems from local tourism employees to visitors. Terrorists are also very much aware of this fact. The current discussion on avian flu raises the possibility of the need to quarantine whole nations and could have disastrous impacts much greater than that of the SARS panic that took place just a few years ago. Perhaps the first question that may need to be asked is: are international media, public health officials, and science writers causing undue panic over the bird flu question, just as they did with the West Nile fever, Swine flu, Ebola, SARS, dengue and any rabies outbreak? The media may create such a scare about avian flu that becomes a self-fulfilling prophecy due to the lowering of natural immunity systems by stress (2005, p. 3).

The COVID-19 worldwide pandemic is a perfect example of what happens when fear and feelings of insecurity enter into the world of tourism. Even before the

pandemic, tourism scholars were becoming ever more aware of the impact that emotions, such as fear and insecurity, were having on the tourism industry (see also *Part IV Contexts: Understanding how Tourists Perceive and Respond to Risk: A Focus on Health Risk*). For example, Bianchi (2006) writes:

> as the growing insecurities engendered by the globalisation of terrorism and military interventionism, as well as targeted attacks on foreign tourists in certain parts of the world illustrate, the liberal calculus of unhindered mobility, political stability and the unfettered expansion of the market, which underpins the "right" to travel, is, however, increasingly mediated by heightened concerns of risk and security (p. 64).

Because tourism security is so multi-faceted, this chapter utilises the term *tourism surety* to address many of the problems that exist in the post-COVID-19 tourism world. Surety is a term borrowed from the insurance industry and is defined as the point where safety, security, health, reputation and economic wellbeing meet (Fig. 1).

The following sections provide a brief overview of tourism surety issues during the first decades of the twenty-first century, starting with the September 11 terrorism attacks in the United States and finishing with the COVID-19 crisis. The chapter


**Fig. 1** Tourism surety

then turns to the question of tourism policing. In the pre-COVID-19 world, tourism policing was purely a subdivision of law enforcement. Law enforcement has now changed radically. The anti-police movements in both the United States, and to a lesser extent in Europe, have taken many police departments by surprise. In the United States many police departments are now facing the fact that governments are defunding (or in some radical cases seeking to dismantle) public safety organisations. Minneapolis Minnesota has become one of the epicentres of the defund-the-police movement. Minneapolis television station, CBS Minnesota, has noted that:

> The Minneapolis City Council wants to take part of the city's police department budget and put it toward other programs. The majority of its members have also said they want to dismantle MPD (Minneapolis Police Department) altogether. Business and tourism leaders in the city are working to figure out what a change like that could mean for them. Melvin Tennant, the president and CEO of Meet Minneapolis—the group tasked with promoting the city—says public safety is a priority for attracting and planning major events. MPD officials are typically on those local host committees, so they're very integral to that part (Schuman, 2020, para. 1–5).

In the post-COVID-19 world of tourism, the physical protection of visitors against crimes such as theft and kidnapping has been joined by questions of health. This paradigm shift means that we have come to interpret law enforcement and judicial procedures from a new perspective. For example Jennings and Perez (2020, p. 692), writing in the *American Journal of Criminal Justice* noted that: "Beyond the dangers associated with close contact with the public, the COVID-19 pandemic has also highlighted the potential for intentional contamination of officers". In March of 2020, the Federal Bureau of Investigation (FBI) alerted local police agencies that extremist groups, such as neo-Nazis and white supremacists, have encouraged their members who contract COVID-19 to intentionally spread the virus to police officers by spraying bodily fluids on police officers on the streets (Margolin, 2020). Police officers have also reported incidents of being spat at or coughed on by people claiming to be positive for the virus (Bates, 2020). To protect their officers and decrease these risks, agencies nationwide have transitioned many of their personnel to working remotely where possible (Bates, 2020; National Police Foundation [NPF], 2020).

It is for this reason that it is impossible not to consider that the tourism policing of the pre-COVID-19 era might be different from law enforcement once the pandemic has subsided. COVID-19 is producing many of the following changes in the way that both the tourism industry and governments view tourism policing.

1. Issues of health will impact the social distance between tourism police officers and visitors
2. The use of masks impacts communication
3. There are fewer people travelling, at least in the immediate periods after COVID-19. It is not known for how long this trend will continue, but a lessening of the number of visitors will impact the staffing needs of tourism policing.
4. If the present economic decline continues both governments and tourism industries might have to face forced constriction due to economic issues. Police

departments facing an economic crunch may have to do more with less and may well consider the elimination of special units, such as a tourism policing unit, to meet restricted staffing needs.
5. Tourism policing may have to "partner" with public health officials, medical professionals, and ecologists so as to create a coordinated body that addresses both tourism industry and local concerns.

## Tourism Policing in an Age of COVID-19

As is the case with most of the post-COVID-19 tourism world the tourism security industry might be very different from the type of tourism policing that it has known in the past. In an industry that still does not understand all the ramifications of the COVID-19 pandemic on tourism, or what new challenges might lie ahead, tourism policing professionals will have to be extremely flexible. Additionally, no one knows what the economic or political consequences will be should there be additional or long-term civil disobedience. Although tourism leaders and scholars cannot accurately predict future economic, public health or political trends and their impact on tourism with any measure of certainty, an understanding of the *what-was* is a necessity in creating pro-active policies for the *what-will-be*.

What we do know is that the tourism surety challenges of the past will remain. Tourism police and security experts will need to continue to focus on the twin issues of tourism crimes and terrorism, and at the same time they will also have to pay greater attention to multiple new areas of tourism surety. These additional areas will not only include issues of cyber-security and public health, but also areas that have not yet come to the forefront, such as: attacks against food and water supplies, environmental issues, the restructuring of vehicle fuels. These new challenges will change the face of tourism policing and security in that they are a-geographic or a-locational in nature. For example, hotel security might no longer be solely dependent on what occurs inside of the hotel or its property but on facts that impact the location's security from great distances. As we have seen during the pandemic, constantly changing lockdown protocols have caused uncertainty regarding the advisability of travel for many people. Additionally, the tourism industry will once again have to deal with the issue of travellers' perceptions and (lack of) confidence. For example an August 2020 study by McKinsey and Company states:

> Our surveys of traveler confidence in the United States suggests anxiety remains high, and authorities and destination managers must work to ensure travelers know about, and feel reassured by, protocols put in place for their protection. Our latest survey of traveler sentiment in China suggests a significant gap between how confident travelers would like to feel and how confident they actually feel; actual confidence in safety is much lower than the expected level asked a month before. One reason for this low level of confidence is confusion over the safety measures that are currently in place (Constantin et al., 2020, para.13).

## Tourism Policing: Some Historical Aspects

To understand what tourism policing will like be in the future it is first necessary to consider this in the pre-COVID-19 world of tourism. Historically, tourism policing has long been a controversial subject both within the world of tourism and that of policing. The U.S. Department of Justice's COPS (Community Oriented Policing Services) office underlined the need for some form of special policing protection for tourists when in 2019 it published an article, titled *Small Town, Big Crowds: Policing Tourist Destinations* by Fay Elkins. Elkins (2019, p. 1) is both justifying some form of tourism policing and explaining its necessity to law enforcement and local city governments. She states:

> In addition to (tourists) being easy prey for criminals, out-of-towners seldom report crime, much less testify against a suspect. They can also cause serious problems themselves, usually by disregarding traffic laws or becoming drunk and disorderly, but occasionally by engaging in criminal activity. All of this can make policing tourist destinations challenging—especially in small towns, such as beach or mountain resorts, whose populations may grow ten- or even hundredfold in peak season. Dealing with the additional load on their services and personnel may not be easy, but many local departments have found ways to keep both visitors and community safe and happy while not breaking the bank (Elkins, 2019, p. 1).

Elkins was writing under the assumption that tourism would continue to grow. In 2019 this was a fair assumption and all data pointed toward continual growth in the tourism industry. It is for this reason that Elkins (2019, para.18) ended her article on an economic and positive note stating:

> Tourism is a growing source of employment and revenue throughout our country. According to the U.S. Travel Association direct spending by domestic and international travelers in the U.S. averaged $3 billion a day for a total of $1.1 trillion in 2018. According to the association's Travel Impact Calculator the economic impact of a 4.95 percent increase in 2019 travel spending could result in almost $4 billion in additional state and local tax revenues, which could fund the hiring of an additional 60,300 American law enforcement officers.

Elkins (2019) then continued by reminding people of the importance of police as image builders and stated:

> What's more, the benefits of tourism extend beyond the revenue, to the interactions that all members of the community, including law enforcement officers, have with people from all over the U.S. and the world. Like other members of the community, the men and women in blue are ambassadors for their towns and for our country, and their contacts with travelers can leave a positive lasting impression (para.19).

Others have disagreed with the importance of tourism policing, often known by the acronym: TOPs (sic) (or TOPPs: Tourism Oriented Policing and Protection Services). In a study of police attitudes on the island of Tobago, Wallace (2020, p. 167) notes:

> [N]ot all participants (20) recognised the need for a special tourist unit. In fact, one male constable (10 years' active policing service) submitted that "there should be no specific unit to police tourists, as citizens have the same desire for protection from crime as tourists do". Meanwhile, another corporal (16 years experience) believed that "having a TOP unit may

> make tourists uneasy due to the fact that they are on vacation and do not wish to be unnecessarily disturbed."

Jarrod Booker of the *New Zealand Herald* has looked at both sides of the issue regarding New Zealand tourism. Booker (2007, para. 1) wrote that:

> A dedicated "tourist police unit" is being proposed to try to stem the alcohol-fuelled crime wave involving overseas visitors in hotspots like Queenstown. A group set up to try to combat the alcohol problems say the proposed police offshoot would focus on tourists causing or becoming victims of crime. It has been suggested the specialist tourist police could take on their own unique image like Bobbies on bicycles in the United Kingdom, or Canadian Mounties.

Booker, however, was aware that the idea of tourism policing was controversial and summed up the mixed feelings at the time regarding tourism policing:

> Other popular tourist destinations such as Rotorua could also benefit from a dedicated tourist police, Mr. Richards said "We think it would be helping crimes they are facing as well, because quite often they are victims as well as offenders." Inspector Phil Jones, who oversees policing in Queenstown, said he saw pros and cons in a dedicated tourist police. He had seen it working in places such as Santa Monica, Los Angeles. "There is a negative in the fact the more you start differentiating staff in particular roles, the more people become quite specialized and it affects their ability to work in the wider sense." Booker (2007, para. 9–12).

During much of the latter half of the twentieth century and into the first decade of the twenty-first century many police departments and tourism organisations were either against or even hostile to the concept of a tourism-oriented police unit. Their reasoning tended to be three-fold:

1. Philosophically they argued that visitors should not be given special treatment and that police departments had a responsibility to treat all people alike.
2. Police departments worried that the creation of such special units might produce staffing shortages.
3. Tourism industry leaders were fearful that if the public saw too much visible policing then the police or security officers' presence would create fear in the mind of the visitor and therefore would be harmful to business.

Many of the tourism industry's marketers were fearful of even using the word *security*. Another example of this fear of security is the fact that many tourism marketers tended to replace the word *security* with the word *safety*. For example, the first Las Vegas International Tourism Safety and Security Conference began in 1991 as a tourism safety workshop. For fear of harming Las Vegas's image the workshop carefully avoided using the word *security* (Tarlow, 2018).

The rise of terrorism and major attacks against tourism, however, changed industry perceptions. Additionally, many in the tourism industry and international law enforcement agencies ceased viewing visitors as self-victimisers but rather as people who needed special protection and local agency aid. These new realisations helped change attitudes toward tourism policing. Another reason was economic. Tourism and community leaders began to understand that visitors were shying away from those places with high crime rates and the loss of local revenue and taxes

meant that without visitor protection there would be revenue short falls and additional unemployment. Matakovic and Cunjak Matakovic (2019, p. 12) addressed these issues when they wrote:

> The reduced number of tourist arrivals has other negative effects on the destination: since revenues are reduced, the destination will lose employees who are essential for the functioning of the tourism sector, and the reduction in revenues may also affect the quality of infrastructure.

Likewise, insecurity of a destination will encourage investors to invest funds in other destinations or other sectors (Pizam & Mansfeld, 2006). The effects on the country where the destination is located are also multiple: fewer tourists in the first place mean less income, but also fewer taxes that are collected from tourist arrivals.

Tarlow's (2014a) research supports the views of Matakovic and Cunjak Matakovic (2019). Those police departments engaged in TOPPs have come to recognise that the protection of visitors is different from other forms of police protection. In some communities there are special TOPPs units, while in other communities the police department has embraced the TOPPs philosophy and has integrated this philosophy into its everyday policing. Some police departments use other names, from community action policing to tourism safety units, but despite the differences in names, there is a common philosophy that unites these diverse police departments and protection professionals (Tarlow, 2014b).

The fear of terrorism combined with major economic losses and the public's post-September 11 fear of travelling lead to the first real development of aforementioned special police and security units known as TOPPs. Tarlow (2018) has noted:

> These units differed from other types of policing in several ways. To begin with, officers assigned to these specialized units understood that part of their job was to promote their city, locale, community or state, to aid its economic development, and to be a part of its creative marketing programs. Like their police officer colleagues, tourism police officers in the United States are trained, commissioned police officers. However, they also possess specialized skills, including formal training in foreign languages, intercultural communication, sensitivity, marketing, speaking, and customer anger management (2018, p. 26).

The above sections begin to demonstrate the interconnection for the need of maintaining a civil society with tourism and the important role that tourism policing and surety can play. Not only does the tourism industry depend on a civil society, but also almost all forms of businesses and governments depend on law and order. Civil disobedience coupled with major negative publicity can become a nail in the coffin of a tourism industry.

The ongoing civil unrest in American cities such as Portland (Oregon), Seattle (Washington) and New York City and the Black Lives Matter (BLM) movement are perfect examples of what happens when policing ceases to be accepted by local media, many (or at least a well-organised *few*) of the community's citizens, and local government. The Portland (Oregon) media have demonstrated what happens to a tourism industry when that industry's location is no longer viewed as secure and civil disobedience becomes the norm. To illustrate, a news report on Portland television in August (2020) addressed hotel occupancy and noted that:

> "Make no mistake, we are in a tough spot in Portland," said Jason Brandt, president and CEO of the Oregon Restaurant and Lodging Association. "We have the worst occupancy rates in the entire country for like-sized markets. We are even behind Oahu, which has a 14-day quarantine, so we have a lot of work to do to showcase what Portland is" (Dooris, 2020, para. 4).

Although the media have portrayed many of the "protestors" as peaceful, the reality would indicate a lack of truthfulness that is bound to hurt both the city's tourism and economy in general. Local observer Nate Hochman as early as August of 2020 wrote:

> This violence, as its apologists like to emphasize, is predominantly property damage—setting fires to courthouse buildings, firebombing police stations, smashing windows, and covering Portland buildings with graffiti—but it has not been confined to such crimes. Police officers have been sent to the hospital on multiple occasions as a result of street battles with mortar-wielding anarchists. In the past week, a disturbing new video surfaced showing a driver being pulled out of his pickup truck and brutally beaten by a mob (Hochman, 2020, para. 4).

Although tourism policing cannot be a total panacea to the current state of tourism and civil unrest it can provide a number of important tools. Because tourism police officers and security professionals understand cultural differences and interlock customer service with issues of tourism surety they have much to offer during this period of disconnect between sections of the public and the police, not only in the United States, but also in multiple nations around the world. The same is true of Latin America and much of the Caribbean. Throughout these nations tourism police have the training needed not only to work with visitors but also with a broad range within local populations.

TOPPs units will differ from location to location especially as tourism policing emphasises the interrelationships between law enforcement and public perceptions and customer service. As such, tourism-policing professionals study such skills as:

- How to deal with a transient population,
- Understanding and working with multiple cultures
- Socio-psychological analytical abilities
- Crowd control
- The use of persuasion
- The creation of non-invasive physical barriers
- The use of language as a method to pacify angry people
- The ability to create positive media perceptions
- The ability to persuade the public that it is being heard
- Crime and disorder prevention through environmental design

The skills listed above are an essential part of a tourism police professional's skill set and training and in a time during periods when tourism has almost ceased to exist, such as the pandemic of 2020, these same skills can be additional law enforcement tools when dealing with issues of civil disobedience and community anger.

The twenty-first century has been a time of civil unrest in multiple nations around the world. For example, the popular French social movement *des gilets jaunes*

(yellow jackets) has, like BLM to a lesser extent, not only created civil unrest and hurt the French tourism industry but underscored the chasm between the government and the governed. The unrest occurred in the heart of Paris' tourism district especially during the early months of 2019. France's news agency France-24 cited tourism officials as stating:

> "There are clearly fewer customers, especially higher-end clients, people who come for the weekend. So I am hoping that there will be a return to calm after this latest eruption of violence comes to an end," said Serge Cachan, owner of 17 hotels in Paris. His hotel on the Champs-Élysées has lost nearly 20 percent of its turnover in December and January (France 24, 2019, para. 3–4).

Hong Kong and Thailand are other examples of civil unrest and the challenges to tourism and the role of police. For example in November 2019 Mercedes Hutton writing in *Destinations Known* noted that:

> As civil unrest in Hong Kong stretches into its sixth month, the territory's tourism industry has taken a battering. Arrivals fell almost 40 per cent in August compared to the same period the previous year, and the first 15 days of October saw a 50 per cent decline, marking the worst downturn since the outbreak of severe acute respiratory syndrome in 2003 (Hutton, 2019, para. 1).

Another way to understand the impact is the absence of Mainland Chinese visitors. Hutton writes:

> While mainland Chinese tourists are avoiding their erstwhile favourite destination, their appetite for wanderlust is taking them and their e-wallets elsewhere. According to China's largest online travel agent, Ctrip, after taking third place in 2018's list of the most popular places for travelers from the Middle Kingdom to visit during "golden week", Hong Kong did not even feature in the top 10 for 2019, which ran from October 1 to 7, slipping behind Japan, Thailand, Singapore, the United States, Australia, Malaysia, the Philippines, Vietnam, Britain and Italy (Hutton, 2019, para. 2).

It is not only Hong Kong's civil unrest that it is hurting its tourism reputation by heavy-handed police actions. A 2019 report by Amnesty International notes:

> "The Hong Kong police's heavy-handed crowd-control response on the streets has been livestreamed for the world to see. Much less visible is the plethora of police abuses against protesters that take place out of sight," said Nicholas Bequelin, East Asia Director at Amnesty International.
>
> "The evidence leaves little room for doubt—in an apparent thirst for retaliation, Hong Kong's security forces have engaged in a disturbing pattern of reckless and unlawful tactics against people during the protests. This has included arbitrary arrests and retaliatory violence against arrested persons in custody, some of which has amounted to torture" (Amnesty International, 2019, para. 3-4).

Thailand is another example of the interaction between civil unrest and a failing tourism industry. The Seattle Times reported about the unrests during 2013–2014 that:

> Arrivals will fall by half to 1 million this month, Minister of Tourism and Sports Somsak Phurisisak said recently, with some hotels in the capital and nearby Pattaya and Hua Hin 30 percent full. The revenue loss could amount to 22.5 billion baht ($685 million), the Tourism

> Council of Thailand said, with China last week warning its citizens to avoid protest sites and reconsider non-essential travel to the country (Nguyen & Yuvejwattana, 2014, para. 3).

Thailand's police reaction has been inconsistent. The police first tried to defuse the situation by: "After several days of fierce clashes with anti-government protesters, police in Bangkok today (Dec 3) defused the worst civil unrest to hit the country in three years by simply standing down—and presenting their opponents with red roses" (Purnell, 2013, para. 1).

Unfortunately, the methodology did not work and the friendly protests turned violent. A few months later (February of 2014) CNN reported violent clashes between protestors and police noting:

> After police fired tear gas in an attempt to disperse crowds of demonstrators in the streets, people among the protesters began firing guns at police. With the two sides about 200 meters (656 feet) apart, police responded by firing rubber bullets and live ammunition. During the firefight, which lasted about 20 minutes, a grenade exploded near a group of police officers, knocking them to the ground. At least four of them were wounded, said Lt. Gen. Paradon Patthanathabut, the national security chief (Olarn & Mullen, 2014, para. 6–8).

The above examples are just a few that reinforce the notion that where there is civil unrest leading to insecurity tourism suffers and, at least until the period of unrest ends, the tourism industry may come to a state of full or partial paralysis. The difficulties that tourism faces when there is instability are well-documented (Haddad et al., 2015). For example, Kebede (2018) describes Ethiopian tourism in the aftermath of tourism instability noting that the tourism industry is susceptible to a range of external shocks, such as natural disasters, political unrest, economic crisis, and contagious diseases.

Returning to the current state of civil unrest in the United States there are five phenomena occurring almost simultaneously. These are:

- The need for lockdowns due to multiple "waves" of COVID-19
- The rise of crime and civil distrust due to sporadic corona virus lockdowns
- The rise of the Black Lives Matter (BLM) political movement
- The rise of anti-police sentiment leading to defunding efforts and local prosecutors or state attorneys-general not prosecuting crimes of looting, vandalism, and physical assaults
- The economic chaos that has occurred due to one or a combination of the above, resulting in high unemployment, family violence, children lacking proper educational and social outlets.

For fairness and clarity's sake it is essential to distinguish between the public's belief that African-Americans' lives matter and that all people should be treated equally by and before the law and the political movement of the same name that is a self-declared extreme left-wing group with a specific political agenda. There is a vast difference between the BLM slogan and the political action party by the same name, but separate from the politics. It should also be noted that the BLM movement has developed at a time when the poor especially have suffered due to Corona virus lockdowns, when the public has lost trust in the institutions of government,

academia and science, and the country entered a heightened state of political acrimony. As a political movement BLM is against policing and we may assume that such a political position also includes tourism policing. The American Friends Service Committee provides six reasons why the BLM movement seeks to defund police departments. These are:

- Policing in the USA was established to maintain white supremacy
- Policing does not keep us safe
- Body cameras, training, and other so-called reform measures will not end cycles of police violence
- Policing diverts billions of dollars from schools, health care, and other vital programs that need more funding to strengthen our communities and support wellbeing
- Black organisers are calling for divestment from policing and investment in human needs across the country
- Our tax dollars should be invested in more humane and just alternatives to policing (Zerkel, 2020).

It should be noted that the above calls merely for defunding of the police but not for the abolishment of the police. The more radical elements of the BLM seek total police abolishment. For example, activist Miski Noor has been working daily for a total abolishment of the Minneapolis (Minnesota) police department. Noor is quoted as saying:

> When activists say they want to abolish the police, they '100%' mean they want no more police. What we're saying is that whatever it is that we're envisioning together to move toward is much safer than what currently exists, she says, because what currently exists is a police system that is entrenched in and comes from slave catching and union busting and that is incapable of keeping so many of us in mostly marginalized communities safe (O'Dowd & Raphelson, 2020, paras 4-5).

In less chaotic times Noor's views might not be taken seriously. Due to political upheavals however she has had a major influence on the local city government and *Forbes* reports that: "The Minneapolis City Council on Friday, 18 days after the death of George Floyd, unanimously passed a resolution to replace the police department with a community-led public safety system" (Beer, 2020, para. 1). Since that vote there are calls for reconsideration and it should be noted that many citizens are seeking not to abolish the police department, especially as since the defunding calls there has been an increase both in lawlessness and crime.

The reasons that this movement is important for the tourism industry to understand is that the anti-police sentiments:

1. Are spreading to other nations
2. Without proper funding and staffing tourism policing cannot survive
3. Spikes in crimes against the most vulnerable, and tourists, conventioneers and other visitor industry personnel, will result not only in reduced revenues and jobs but the potential for major changes within the world of tourism.

The introduction of racial-economic overtones to the tourism industry might result in the public's unwillingness to protect people who might be viewed, as in the late nineteenth century and early twentieth century, as "white oppressors" (Matis, 2020).

## Tourism Policing in a Post-COVID-19 World

During 2020 the tourism industry throughout much of the world came to a complete halt. The problems that the tourism industry and tourism security professional faced in January 2020 became irrelevant by March of that year. Once the extent of the worldwide pandemic was understood, concerns about such issues as over-tourism, crowd-control and terrorist attacks at large gatherings almost overnight seemed to have become ancient history. By April of 2020 the tourism industry faced questions of survival. The dearth of tourism clients meant that tourism surety issues had radically changed.

At the time of writing this chapter (November 2020), it is still almost impossible to know what tourism and therefore tourism policing will look like in a post-COVID-19 world. It is for this reason that the rest of this chapter is divided into two distinct sub-sections. The first will look at how tourism policing is preparing itself in selective locations around the world. The second sub-section will examine how tourism policing might change once the pandemic has ended and how tourism policing may become a necessary tool in helping locales confront issues of civil disobedience.

In reality the use of the term *tourism policing* is a misnomer. Just as tourism is location-specific the same is true of tourism policing. There is no one form of tourism policing. Some communities employ special police divisions. These TOPPs unites tend to be found in the larger communities or in locales that are highly tourism dependent. In other communities the tourism industry has established special relationships with local police departments. Additionally, large institutions such as a major hotel, athletic complex or convention centre may also have their own professional security apparatuses.

## Tourism Policing/Security Professionals and the Convention and Meetings Industry

The convention and meetings component of the tourism industry is an example of just how complex is the total tourism industry. It is also an example of one component of the tourism industry that is fighting to survive and must now face not only the pandemic's challenges but also the impact of cyber-oriented virtual meetings and conventions. Bringing thousands of people to a single enclosed convention

centre means that even before the pandemic the convention/meetings industry had to be extremely sensitive to safety and security issues.

Convention centres are a major economic investment and convention locations understand their economic importance. Some of the major convention cities around the world include: Chicago, Las Vegas, New York, London, Buenos Aires, Toronto, Vancouver and Barcelona. These centres created not only infusions of cash into the local economies, but provided both tax revenues and employment opportunities. The convention and meeting's component also adds to the economic strength of other tourism industry components such as the restaurant, catering and lodging industries. Additionally, throughout the world there also are many successful smaller cities that have also greatly benefited from conventions. In all cases convention and meeting locations understood that although few meeting planners would choose their location simply on the strength of its security, they also understood that a lack of security would act as a reason not to choose that location. In highly litigious locations such as the United States attention to issues of destination safety/security became overriding criteria.

Additionally, professional meeting planners know that their reputation rests on the success of the events they plan and manage, and for this reason they strive to minimise every form of risk, especially if it can result in negative publicity or issues of litigation. For example Deborah Sexton, president and CEO of the Professional Convention Management Association stated in October 2016 or 4 years prior to COVID-19's outbreak:

> We're facing a new normal in the travel industry, and the challenges of this new normal carry over to conventions, conferences and business events. Regardless of where a convention is being hosted, organizers are facing the reality that bringing people together in public spaces can elevate risks. As an industry, we must work together to address these concerns. Hoteliers, convention centers, shuttle bus companies, convention organizers and more—we all need to collaborate to make sure we are using appropriate onsite security measures to keep our attendees safe. When necessary, we should also consider enhanced measures such as metal detectors, K-9 patrol units, baggage limitations, additional personnel and more (Loomis, 2016, para. 7).

Besides the medical and disease risks that are consistently present when thousands of people gather in an indoor arena or centre, other tourism risks include factors such as: crime rate, emergency services capability, climate and propensity for natural disaster. No two conventions are alike, and even the same convention presents different challenges each year. Major conventions brings with them different issues and priorities. Some events feature valuable product on display, while others may include dignitaries, celebrities, or similar high-profile attendees. Some events may even attract their own particular protesters. Some events are associated with excessive alcohol consumption, generating all sorts of *misdemeanour craziness.* In the post-COVID-19 world the issue of social distancing and contagion due to the public's ability to touch products on display will present challenges never before considered.

All large events invite *crimes of opportunity*, and may attract a class of criminals who prey specifically on conventions and conventioneers. The challenge for

security teams is to adapt the services they deliver to the needs of each individual group. Common crimes and investigations involving conventions include: distraction theft, pickpockets, theft of laptop computers, theft from exhibits, theft from the facility, auto burglary, counterfeit currency, credit/check fraud, copyright infringement, public intoxication, assault/battery, sexual assault, and various civil disputes. These cases may involve delegates and exhibitors as either victims or suspects. In all cases, the law enforcement or security agency will have to create a safe and healthy environment without attracting excessive media attention. Despite the uniqueness of each tourism policing or security unit, there are overall commonalities. Twenty-first century common characteristics of tourism policing include skills such as: specialised tourism training, proficiency in more than one language, duty assignments intended to provide security for (1) the visitor or tourist to a particular community or region, (2) protection of those working in the tourism industry, and (3) upholding the reputation of the community as a desirable place to visit. In so doing, tourism policing becomes an integral part of that community's economic development team (Tarlow, 2018).

## TOPPs Agents Both Public and Private Around the World

Prior to the COVID-19 pandemic, the tourism security industry principally tended to face localised problems. Security agencies often divided these issues into those of crime and those of terrorism. For example, as noted earlier in the chapter, this was the division used in *Tourism in Turbulent Times* (Wilks et al., 2006). Numerous textbooks and articles also used this same division. Although there were issues of civil unrest, these issues tended to be both local and transitory in nature and, due to less media exposure, did not impact large areas of the tourism industry. Just as past illnesses were epidemics rather than pandemics, the same can be said of civil unrest. In the case of civil unrest social media has been a super-spreader. Until COVID-19 many tourism organisations worried more about issues of terrorism. The tourism industry had good reason to fear terrorism. The industry based this worry on the facts that a terrorism act could: (1) produce mass casualties, (2) produce a great deal of negative publicity, and in some cases, such as in Egypt, repetitive terrorist attacks against the tourism industry resulted in long-term halts to the local tourism industry, (3) could cause major harm to a locale's economy and image.

As Tarlow (2020b, p. 4) notes:

> Terrorism goes beyond violence. Terrorism produces fear and through fear seeks the destruction of economies and reputations, and as such, it is a major threat to the tourism industry. Perhaps it is for this reason that we cannot separate terrorism from tourism and tourism from marketing. To understand terrorism is to see it as a form of de-marketing. Instead of encouraging people to visit a place, terrorism seeks to discourage visitors. It seeks to empty hotel rooms and to transform the vibrant into the decadent. It creates xenophobia and a sense of mistrust and fear both of the foreign visitor and even the local citizen. For the customer, perception is reality. The point is so critical that it is worth repeating: *Perception is reality*. Terrorism was (is) much more than merely attacks against the innocent.

> Tourism scientists and professionals understood terrorism in its fullness, the use of murder and destruction as a purposeful negative marketing. Terrorism is the attempt to destroy not only lives but also economies (Tarlow, 2020b, p. 4).

Tourism police had three major tasks when it came to acts of terrorism against tourism. These were (1) to work with other law enforcement and military entities to prevent the attack, (2) to create positive responses should there be an attack, and (3) create positive recovery publicity in case of an attack. The second and third layers were specific to the tourism security division. The tourism industry recognised that visitors had specific needs in the case of a terrorism attack. They might not know the local language, they might have lost needed documents; they might not be able to communicate with family and friends abroad who now worried about their safety and whereabouts.

## *Tourism Policing and Crime*

Unfortunately, crime is a constant force within this world. Although all people can become victims of crimes due to issues of anomie, unfamiliarity with the local terrain, economy and language, visitors are especially vulnerable. Some of the reasons why tourists and visitors are often more vulnerable to issues of crime include:

- Travellers often assume where they are going is safe.
- Travellers often lack proper details about their destination and the places through which they will pass on their way to their final destination.
- Travellers often have multiple destinations. This means that they may not even notice that they have lost something of value and when noticed may not have any idea as to where the object was lost.
- Travellers often forget objects of value or lose them along the way. Thus, the traveller may have no idea as to whether the object was lost or stolen.
- To travel is to take risks; travellers often take risks that they would not take at home.
- Travellers are often tired and/or hungry. Therefore, they may be thinking of immediate biological satisfaction rather than safety and security needs.
- Travellers do not know the place to which they are travelling (or through which they are passing), as well as the local population. Travellers may not know the local customs, tipping schedules, language, geography, and points of danger. Consequently, it is the traveller who is always at a disadvantage in a confrontation.
- Travellers often let down their guard or lower their level of inhibition.
- Travellers are on a schedule, so they often lower their standards of security and safety for the sake of staying within a specific time frame.
- Rarely are travellers willing to invest the time needed to file a police report, and they are often unwilling to spend the time and money needed to return to the site in order to testify against their assailant.

- Travellers are prone to become upset easily, leading to acts of rage.
- Few travellers are professional travellers, but most con artists and thieves are highly adept at what they do. In the competition between the traveller and the victimiser, the victimiser all too often has the advantage (Tarlow, 2014b, pp. 6–7).

It is important to understand that this list is universal and relates to visitors throughout the world. Although tourism police departments, security departments, or TOPPs units must adapt their protocols to local geographic, political, and sociological conditions from the Middle East to the Caribbean and from Asia to Europe and the Americas solutions to the above challenges must be met.

## Current Tourism Policing

The COVID-19 pandemic has impacted tourism policing around the world in a myriad of ways. Below is a short review of selective locations around the world. It should be noted that due to the fact that the pandemic causes rapid changes and readjustments in the world of tourism, what is true on ONE day might be incorrect on another day. The reader then is cautioned to check the material in this chapter against the reality of the locale at the time of reading.

### *The United States*

Most policing and tourism policing in the United States, as opposed to that of many other nations, is on a local basis rather than being part of a national police force. This local control has both advantages and disadvantages for tourism policing. On the positive side, it allows for tourism locales such as Miami or Las Vegas to invest resources in tourism security on a scale well above a national average.

On the negative side, policing in general, and tourism policing specifically, are subject to local politics. Because COVID-19 has created a lull in tourism revenues, many locales have defunded (often for political reasons) police agencies, which in turn have sacrificed both training and specialised units such as TOPPs groups as a way of dealing with budget problems. Curtailing revenues nationwide have forced local governments to make cuts in spending across the board, which includes spending on public safety. However, it is important to not forget that safety and security are critical factors determining the competitiveness of a country's travel and tourism industry, with a key measure being the extent to which police services can be relied upon to provide protection from crime (World Economic Forum, 2019). Previous studies have shown the evidence-based benefits of partnerships between law enforcement and the tourism sector in the United States (Wilks, 2011) so it is important that tourism policing units be maintained in the medium term until international travel resumes.


**Fig. 2** Street sign—Tourist Police in Bogotá, Colombia. (Image courtesy of Dr. Peter Tarlow)

## *Latin America and the Caribbean*

Each nation in the region has its own distinct problems and idiosyncrasies. There are, however, certain commonalities across the region. Among these are:

1. High levels of crime
2. Issues of gangs and illegal drug exports
3. Low pay for police officers
4. Issues of corruption and bribery
5. Poor health care facilities

It must be emphasised that not every nation suffers from all of the above problems. Additionally, the region is blessed with some very committed leaders and police specialists (Fig. 2). Here are a few examples of countries that are using the pause in tourism to create a stronger sense of tourism surety.

## Costa Rica

Costa Rica's economy is highly integrated with its tourism industry. The COVID-19 crisis has caused a great deal of economic harm and high rates of unemployment. Interestingly, travel advice issued by the United States Embassy in Costa Rica (U.S. Embassy in Costa Rica, 2020) places the country at *Level 3: Reconsider travel to Costa Rica due to COVID-19 and exercise increased caution in Coast Rica due to crime*. The Country Summary says:

> While petty crime is the predominant threat for tourists in Costa Rica, violent crime, including armed robbery, homicide and sexual assault, occurs in Costa Rica. The Costa Rican government provides additional security resources in areas frequented by tourists. (U.S. Embassy in Costa Rica, 2021, para. 4).

One way that Costa Rica is attempting to deal with crime is by strengthening its tourism policing force. Salaries have been increased, additional officers have been assigned to locations such as San José's airport, and the police work collaboratively with local authorities and government agencies. One continuing problem is the lack of support given by the private sector, especially regarding hotel and attraction security.

## Jamaica

Jamaica is another country that is working to change its negative tourism image. Until recently the country suffered from poor levels of tourism security. This fact was recognised by its Tourism Minister Edmund Bartlett who stated: "… while the destination is powerless against the issuing of travel advisories it is important to show international partners that the nation is working to improve measures to protect visitors from harassment." Bartlett then went on to say: "We must leave the world with a feeling that we are doing something about it and that we are willing to battle. If our neighbours and our family and our market feel that this battle is overwhelming us, they will not come to us" (Hines, 2018, para. 4).

Recently the government under the leadership of the Minister of Tourism worked with Dr. Peter Tarlow and a team of local police to do a year-long full inventory and assessment of the state of tourism safety and security at its hotels, private lodgings, attractions, fairs and festivals. The data provided a road map for the development of new policies dealing with tourism security and pinpointed those areas and issues that need special attention. The appointment of a new Director of Visitor Safety and Experience further demonstrates the government's commitment to tourism safety and security (Bartlett appoints New Director of Visitor Safety and Experience to further Review Security Audit Report, 2019, para. 1).

**Fig. 3** The author running a TOPPS training program for Mexican police officers. (Image courtesy of Dr. Peter Tarlow)

## Mexico

Mexico is one of the world's great tourism centres. Unfortunately the nation's image has been hurt due to gang violence, drug cartels, high murder rates, and issues of kidnapping. To counter these problems a new tourism security team has been established in Mexico City. The team has created a city-wide (Mexico City is one of the world's largest cities with a population larger than that of many nations) tourism security and surety program. Negotiations are currently being established to take this program to other major Mexican cities.

Figure 3 shows the author running a training program for police officers in Mexico City. The officers underwent an intensive one-week (40 h) TOPPS training program that included both classroom lessons and out-of-classroom projects. The course required them to learn about issues ranging from crime and terrorism to public health and tourism. Each officer had to learn about the location and history of Mexico City's principle tourism attractions. Although Spanish was the language of instruction officers understand that they are required to study English and preferably at least one other foreign language. Officers were provided with a full range of literature to read outside of class and about which they were examined. Each officer also learned to work within a small group of fellow officers so that they could provide services to the public on both the macro and micro levels.

## Europe

Europe is the heartland of tourism. Nations such as France, Italy and Spain in the past suffered from over-tourism and some local populations have called for tourism limitations. Europe, despite its great number of visitors has often paid scant

attention to tourism surety issues. For example, the *Maastricht Treaty* (Council of the European Communities, and Commission of the European Communities, 1992) has facilitated travel between European nations but it has also proven a police obstacle when it comes to acts of terrorism or international crime. Below (Table 1) is a listing of just some of the terrorism attacks that have occurred in Europe (Tarlow, 2018, p. 269):

A more recent trend in Europe is the experience of collaborative, community-based, problem-oriented policing. Rather than defunding the police force entirely some jobs the police currently do can be done instead by trained social and mental welfare experts (Chu, 2020). In Germany, officers of the *ordnungsamt*, or Office of Public Order, do not carry lethal weapons but are trained to handle a range of community issues such as noise and crowd control, as well as social and mental health issues in the community. This adoption of "problem-oriented policing" is now widely embraced throughout Europe, especially Scotland and the Nordic countries (Chu, 2020). At the same time, destinations like Azerbaijan (Mannadli, 2019) and Vladivostok (Tass, 2020) are developing new tourist police units.

## Africa

The African continent is so large that it is hard to generalise but the continent is known for high levels of violent and petty crime. Although often crime is located in specific neighbourhoods the perception that much of Africa is not safe persists (Zijlma, 2020).

For example, in writing about tourism safety in one of Africa's major tourism centres, Cape Town, Bambo (2021) notes:

> …there have long been problems in this coastal city. The reputation for safety in Cape Town has been one marred by theft, muggings, assaults, carjackings, gang violence—often, if not always, fuelled by poverty. Years of Apartheid have contributed to current social issues (2021, para. 2).

**Table 1** Terrorist actions in Europe

| Year | Location | Consequences |
|---|---|---|
| 2004 | Madrid, Spain | 192 murdered and about 2000 injured |
| 2005 | London, United Kingdom | 53 people murdered |
| 2012 | Toulouse, France | Soldiers and children murdered |
| 2014 | Brussels, Belgium | 4 dead |
| 2015 | Île-de-France, France | 17 dead |
| 2015 | Nice, France | Soldiers attacked with knife |
| 2016 | Brussels Airport, Belgium | 32 people murdered and 320 injured |
| 2016 | Nice, France | 86 people murdered and 450 injured |
| 2016 | Berlin, Germany | 12 people murdered and 56 injured |
| 2017 | Manchester, UK | 22 murdered |
| 2017 | Barcelona, Spain | 14 murdered and at least 130 injured |

Police pay in many African nations is low and the scarcity of resources means that it is hard to attract skilled police officers and security professionals. There are no official tourist police in South Africa and many travel websites warn of fake tourist police requesting baggage searches, especially at airports (Senyapongse, 2021).

### Asia

The Asian Continent is so large and diverse that in reality we can divide it into subgroupings, such as China, the Pacific Rim, South East Asia and the Indian subcontinent. Each of these areas is a tourism world unto itself. Tourist police operate in many Asian countries, including: the Philippines (Qin, 2019), Nepal (Discover Nepal, 2021), Sri Lanka (Sri Lanka Police, 2021), Malaysia (Diskin, 2014), Thailand (Amazing Thailand, 2020) and South Korea (Hindustan Times, 2013). In response to the COVID-19 pandemic the Philippine tourist police have recently been reactivated and tasked with ensuring that tourists comply with health protocols (Caliwan, 2020).

## The Future of Tourism Policing

Tourism policing is a subcomponent of the tourism industry. Currently around the world tourism policing faces not only a lack of funding and understanding of its role but also the fact that tourism has ceased to exist in many parts of the world. On the other hand, it is human to want to travel and although tourism will face continual challenges from potentially new pandemics, from new forms of terrorism, from drug cartels and climatic changes, we can expect that at some point the industry will rebound.

The world in 2018 and 2019 looked very different from that of 2020. In 2018 writing on the future of tourism policing Tarlow stated:

> If the experts are correct and different forms of travel vastly increase over the next 50 years then we may question if the current tourism infrastructure from transportation centers to accommodation centers (hotels, motels, private homes, etc.) may reach unsustainable levels. These changes will impact not only how we "process" our visitors but also how we protect them. From airports to private homes tourism security professionals will need to find creative solutions not only due to the fact that the numbers of travelers may well outpace the number of security officers, but also because the demographics of tomorrow's traveler may well be very different from those of third wave travel. These changes mean that tourism security specialists will have not only to rethink the way they do security but also they will need to find new technologies to create security for travelers in a robotic age (2018, p. 296).

See also *Part V Government and Industry Activity: Creating a Safer Journey: Exploring Emerging Innovations in the Aviation Sector*.

While tourism's growth may take years to recover, indeed the UNWTO Panel of Experts expects it could take two-and-a-half to 4 years for international tourism to return to 2019 levels (UNWTO, 2021), travellers will still require protection, safety, security and a healthy environment. To deliver this the tourism industry will need security professionals and collaborative working relationships with law enforcement at destinations.

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# Food Safety and Hygiene

**Donna Pendergast**

**Abstract** This chapter investigates the importance of food safety and hygiene as a pillar of the tourism industry in the recovery and reconstituting of the *new normal*, following the initial impact and rapid response which required a dramatic pivot for the food sector. Food and water security as a mainstay for sustainable tourism is highlighted, linking this to global frameworks that serve as enablers to achieve this goal. The already well-established causes of foodborne disease are briefly revisited and the ways in which both food handlers and travellers can play a part as agentic, informed members of the food community in order to maximise prevention, ensure safety and build trust in the food system is considered. Finally, the chapter takes a speculative glance at the ways in which the global pandemic has, and is likely to continue to shape the new way forward, pointing to some possible legacies and benefits by strengthening food safety and hygiene practices in tourism as we move to COVID-normal. The importance of information sharing and educating tourists to reduce anxiety and empower their decision-making related to food safety and hygiene will assist in developing confidence in the transition to the new normal.

**Keywords** Food safety and hygiene · Sustainable development goals · Foodborne disease · Food security · New normal · COVID-19

## Introduction

It is important to state from the outset, that "there is currently no scientific evidence suggesting that food is associated with transmission of the COVID-19 virus" (World Health Organization [WHO] and Food and Agriculture Organization of the United Nations [FAO], 2020, p. 4). Coronaviruses need a live human or animal host to multiply and survive. However, the food system, including safe food production,

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_6

access, availability and stability, is strongly impacted by the pandemic and provides multiple spaces for virus transmission. Food consumption and the environments in which this occurs during typical tourist experiences provide ideal situations for the transmission of the virus. It is from this clear position this chapter is presented, looking to the potential changes in behaviours associated with food as a pillar of tourism, and importantly how shifts in response to the COVID-pandemic have the potential to strengthen food safety and hygiene in the tourism industry we are transitioning towards.

## Food and Tourism

One of the great joys of travel is the cuisine experienced as part of the journey. Food is typically associated with customs, traditions and rituals that enrich the tourist experience. The often exhilarating aspects of the food experience enhance memories and can be a central part of the tourist story, leading to decisions about return visits to destinations and, in this era of influencers and the power of opinion, the posting and sharing of food photographs and food experiences has the capacity to shape future travellers decision-making. Indeed, as Morris et al. (2020, p. 99) note "food is a critical tourism resource".

Food may be the reason to engage in travel, with food tourism a magnet for many. Local food experiences are now well-established as an important factor in the tourist experience and as a key determinant in tourist destination choice (Cohen & Avieli, 2004). There is a growing interest in food tourism, also known as culinary tourism and gastronomy in the tourism literature. The United Nations World Tourism Organization (UNWTO) describes gastronomic tourism as "an emerging phenomenon that is being developed as a new tourism product …. The cuisine of the destination is an aspect of utmost importance in the quality of the holiday experience" (UNWTO, 2012, p. 6). Indeed, there is a positive relationship between tourist attitudes to local food, travel motivation and satisfaction, with tourists seeking authentic, local food experiences where they can be actively involved (Morris et al., 2020).

It is very difficult to measure the value of food tourism, however it is estimated that between 15 and 33% of the tourist budget will be spent on food and beverages, with an average of 25% (Wolf, 2020). Food tourism is about what, where, with whom and why tourists make particular food choices. The study of gastronomy focuses on the relationship between food and culture, with some tourists keen to consume local foods in their own unique cultural context, and often this is the purpose of the travel—however there is a clear range of tourism behaviour associated with gastronomy. Özdemir and Seyitoğlu (2017) examined tourist behaviours related to local gastronomic experiences from the perspective of authenticity, identifying three categories: authenticity seekers (favouring new destinations with strong local food images in authentic settings); moderates (attracted to familiar destinations with local food attraction, familiar foods and authentic atmosphere); and comfort seekers (prefer completely familiar destination and food and avoid

authentic settings). This latter group do not regard local food and food experiences as an essential aspect of their holiday but regardless will still expend a considerable sum on food and beverages they regard as familiar. There is scope to provide for this full range of tourist expectations, and for each of these categories of gastronomic experiences, the impact of the pandemic in the *new normal* will require differing responses. For each, there are also particular food safety and hygiene considerations based on the range and nature of the risk taken, however for all, there are consistent elements that underpin all aspects of food safety and hygiene.

Just as these positive experiences of food become central to the tourist experience, so too do negative experiences, especially those as a consequence of food safety and hygiene problems—with the effects damaging both for the traveller, and for the industry. When food safety and hygiene practices do not meet standards to avoid contamination leading to foodborne disease (FBD), the consequences for the individual can range from being mildly irritating, such as feeling nauseous and experiencing travellers' diarrhoea (TD), to presenting with significant morbidity such as fever, toxic shock, meningitis and other debilitating, long-lasting consequences such as cancer and organ failure, permanent disability and disease, and in some cases, death. At a systems level, FBD incidents can shut down businesses and sectors literally overnight, and recovery may be long-term or impossible, with many examples of FBD such as food poisoning incidents resulting in insurance claims that may damage reputation and even bankrupt businesses. Hygiene standards, health considerations, tourist expectations, communication challenges, and the lack of knowledge tourists have to make decisions about culinary choices are among the many complications and challenges typically experienced in this very often taken-for-granted aspect of the tourist experience (Cohen & Avieli, 2004).

The COVID-19 pandemic has illuminated our collective passion for food as a key feature of our tourist experience. Regardless of being globally grounded with reduced access to domestic and international travel and even to food outlets, there has been a renewed interest in cuisine and cooking, with sourdough and jam-making popular pursuits for many who were unable to travel outside their homes (Sponagle, 2020). The kitchen and other parts of the home have been parodied by clever folk who have repurposed the globally appreciated *Lonely Planet Guides* around destinations such as: the kitchen, the bathroom, the patio, the backyard, as tourist destinations during the home lockdown periods. And while we don't definitionally accept that we are tourists in our own homes, this return-to-basics is unsurprising as at times of stress and uncertainty our innate motivation to survive focuses first on the fundamental aspects ensuring our survival—food, water and shelter and a desire to stay close to home. For many, the bonus of greater time gained by a reduction in work-related and cancelled tourist travel plans have been an opportunity for such pursuits. By way of example, research (McCrindle, 2021) reveals that Australians are simplifying what travel might be possible, driven by nostalgia and unfulfilled travel dreams as we move into the recovery phase after the main response phase to the pandemic has taken effect. Travel is closer to home and includes open environments, outdoor activity and simpler food. This trend has awoken a potential giant in the food tourism market, with a recentring to the basics and a tighter clinging to the home base. And this can be explained by considering human needs.

## Food, Safety and Maslow's Hierarchy of Needs

Most would be familiar with Abraham Maslow's Hierarchy of Needs, a highly influential conceptualisation of priorities driving human motivation based on the fulfilment of needs (McCleod, 2020). The model is depicted in Fig. 1. The bottom tier—physiological needs—specifies food and water, along with warmth and rest, as a foundation for all other needs. The base of the pyramid is essential for life, and when under duress this becomes our focus for survival. Once the needs in this tier have been met, the next tier is the motivator—those needs relate to safety. The third tier is a sense of belonging, the fourth esteem needs, and the highest order need is self-actualisation.

Regardless of the impact of the pandemic and the evolving future scenarios, this model succinctly points out that humans require our basic needs to be met first. The model highlights the relevance of food and water as fundamental considerations for all humans, thus making it a key pillar for tourism. Alongside this, the second tier of safety needs being met is crucial to appreciate as this is also an important lever for tourism and ensuring the safety of food and water, including that related to FBD. The connection between food and water and safety will be paramount for reawakening tourists' passion and confidence to travel, and will be a factor shaping tourist behaviours, especially in managing anxiety (Bratić et al., 2021). The pandemic has

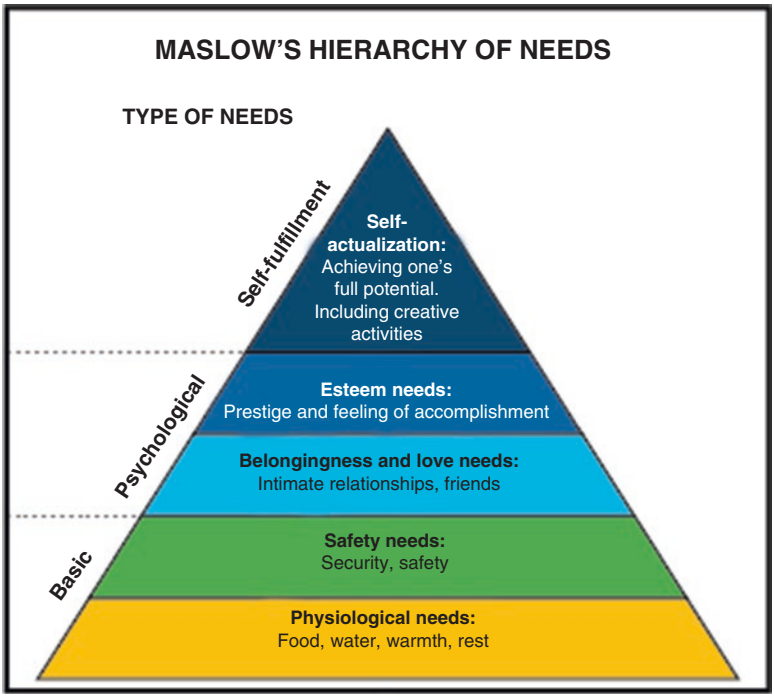


**Fig. 1** Maslow's Hierarchy of Needs

highlighted this to be a key consideration in our future efforts and offers a hint as to how our renewed relationship with food—coupled with safety—will play a central role in future shaping tourism.

## Food and Water Security—A Pillar for Tourism

The various components of the food delivery system are critical to the tourism economy and many tourist ecosystems depend on food tourism to survive, thrive and achieve sustainability. Ensuring our food and water is safe is important for everyone, and the interplay with COVID-19 and travel risk perception is unavoidable. No matter where we are, we need safe food and water to survive and this must be effectively communicated to prospective guests.

This means that food security which is visible as safe food production, access, availability and stability, is a mainstay of the tourism industry. The Committee on World Food Security (CFS) defines food security as "all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life" (2012, p. 5–6). So, food and water security applies regardless of our location—including whether we are at home or if we are a tourist. Framing food and water security will be key elements to reinvigorating tourism demand and driving confidence to travel. This includes not only the technical components of security, but the perceptions related to food safety and hygiene, especially given the focus on cleanliness and hygiene that is a feature of the COVID-normal contexts.

## Food Safety and Hygiene

According to the WHO (2015), the global burden of illness and deaths caused by foodborne disease is difficult to accurately quantify, however in their report published in 2015, some insights have emerged that highlight the extent of the challenge. WHO (2015) estimates that annually:

- 1 in 10 people worldwide will experience illness after eating contaminated food
- 420,000 people die from eating contaminated food, including 125,000 under the age of 5
- Diarrhoeal diseases, the most common illnesses resulting from the consumption of contaminated food, causes 550 million people to fall ill and 230,000 deaths every year.

It is very difficult to get a clear indication of the extent to which foodborne disease leads to deleterious effects in the tourism industry, but it is certain, given these estimates from the WHO, that the incidence of illness and deaths caused by foodborne disease is experienced either during or subsequent to tourist experiences, and

this is avoidable. It is well-established that TD is the most common travel-related illness affecting between 30 and 70% of travellers either during their holiday or after returning home, depending on the destination and season, with travel to developing countries and warmer months producing more instances (Centers for Disease Control and Prevention [CDC], 2020). And more young adults than older adults are impacted. Between 80–90% of TD is caused by bacterial invasions (CDC, 2020). TD may be classed as mild, moderate or severe. Both moderate and severe cases interfere with planned activities, with the latter being incapacitating. Mild cases may cause discomfort but planned activities can proceed. Some travellers are at a high risk of experiencing complications, such as those with compromised immune systems, diabetes, and a range of existing health challenges (see also *Part I Health: Vulnerable Groups and Travel Health Considerations*). A person with TD is estimated to lose on average 3.5 days of a 7-day trip and the average costs of a TD event is estimated at CAN$1460 (Lundkvist et al., 2009). Case studies in the box below provide insight into firstly a typical experience with TD and the relevant insurance claim process. However, false claims are a challenge for insurance in the travel industry, as can be seen by Case Study 2 and Case Study 3, though with the increased likelihood that tourists record their experiences and share this with others, it is possible to test the veracity of their claims.

**Travellers' Diarrhoea and Insurance**

**Case Study 1 A Family Claim for Reimbursement as a Result of Traveller's Diarrhoea**

A family of three travelled to London from Australia on a two-week holiday, including a pre-paid daylong bus trip to Stonehenge, Windsor Castle and the historic town of Bath. On the morning of the bus trip the young child awoke with stomach cramps which soon progressed to vomiting and diarrhoea. The excursion hosts were advised the family was unable to join the tour and were instructed to rebook, however the family could not build this into their itinerary. The bus tour company then advised the family to claim a refund via their travel insurance. A medical visit was arranged and documentation obtained. After the holiday the claim was lodged and a full refund for the cost of the excursion for all three people, along with medical expenses, was provided to the family.

Source: Case study supplied by author

**Case Study 2 Couple who Faked Holiday Sickness are Jailed**

A greedy couple has been jailed after making fake compensation claims about food poisoning on holiday. In a landmark case Liverpool Crown Court heard Deborah Briton, 53, and partner Paul Roberts, 43, tried to claim compensation by stating they and their two children had fallen ill on holidays to Majorca in 2015 and 2016.

(continued)

But the couple's social media showed posts where they boasted of holidays full of "sun, laughter and fun", reports the *Daily Mail*.

Briton sobbed as she was sentenced to nine months in prison after admitting four counts of fraud in the private prosecution, brought by holiday company Thomas Cook. Roberts was sentenced to 15 months after admitting the same offences.

The court heard the couple tried to claim nearly £20,000 (AU$33,800) for the fake gastric illnesses and would have also cost the holiday firm a further £28,000 (AU$47,323) in legal expenses had their claims been successful.

Sentencing Judge David Aubrey QC said their claims had been a "complete and utter sham".

Source: News Corp Australia Network (2017)

**Case Study 3 Pair Cop Record Fine Over Food Poisoning Compensation Fraud**

A young couple who demanded compensation after claiming they fell ill on holidays were caught out thanks to their social media photos. Chelsea Devine, 21, and Jamie Melling, 22, from Liverpool in the UK, went on a 10-day all-inclusive holiday to Benidorm, Spain in September 2015. The holiday was booked with travel and tourism company TUI, and they stayed at the Levante Beach Apartments during their trip.

In May 2016, the couple both claimed they had contracted serious food poisoning from food and drinks consumed during their stay, and each demanded AUS$4500 in compensation from TUI.

The pair claimed they were seriously ill during their holiday, and that the sickness lasted for weeks. However, Liverpool County Court heard their social media accounts revealed a variety of happy, poolside selfies, which caused judge Sally Hatfield QC to brand them both as "fundamentally dishonest". They received a record fine of more than AUS$27,000 for their fraudulent claim.

Source: Carey (2018)

## *Prevention of Foodborne Diseases*

There is a plethora of advice about how to avoid FBD (see Pendergast, 2006). Much depends on the nature of the food and on the food handling processes employed at the various stages of food production, beginning with ingredient production, harvesting, storage, preparation, display, temperature control and consumption. And these are affected by factors such as the temperature, having access to a continuous supply of electricity, access to toilets and handwashing facilities, running, clean water supply for utensil cleanliness and food preparation—to identify a few key items—the list is extensive. It is complex and there are many variables that together

**Table 1** Classification of the forms of contaminants leading to foodborne disease

| Form of contamination | Examples | Examples of how it might occur and what effect it has | Examples of strategies for prevention |
|---|---|---|---|
| Chemical | Cleaning products, fuel, pesticides and herbicides | Using cleaning products that leave a residue can lead to food contamination. So too can fuels that are used to heat food and leave a residue or are accidentally spilt into containers or on utensils. The build-up of chemicals in foodstuffs is magnified and can lead to illness when a toxicity level is reached. The effects are diverse depending upon the chemical, the quality, the nature of the contaminant and its toxicity. | Wash hands prior to handling foodstuffs to remove chemical residue. Ensure chemicals are stored away from food handling sites; monitor chemical spraying to avoid biological magnification of chemicals; wash utensils and cooking appliances before use; do not drink from bottles with broken seals |
| Foreign matter | Insects, glass, vegetation, faeces, fingernails | Usually an unintended inclusion in the food. Band-Aids, insects, faeces and other foreign objects may cause the food to be tainted and dangerous to consume, possibly leading to a choking hazard, intestinal damage with internal bleeding, for example. Furthermore, the foreign matter may cause microbial growth in time, leading to more complex contamination. | Washing hands, equipment and foods as part of food preparation. Keeping food appropriately covered at all times minimises the likelihood of foreign matter contamination. Working with hair nets, aprons and gloves also reduce the risk of contamination. |
| Natural toxin | Ciguatoxins, algal toxins, lectin | These toxins are naturally produced by living organisms and are not harmful to the organisms themselves, however they may be toxic to humans when eaten. For example, toxic algal blooms in water might lead to diarrhoea, vomiting, paralysis and death. | Avoiding the natural toxins is the most effective prevention. This might not always be obvious hence ensuring foods are handled with appropriate cooking temperatures is essential. |

(continued)

**Table 1** (continued)

| Form of contamination | Examples | Examples of how it might occur and what effect it has | Examples of strategies for prevention |
|---|---|---|---|
| Microorganism | Viruses, fungi, parasites, bacteria | These are prevalent and often invisible. Some microorganisms cause food to decay and it may be the microorganism itself that cause harm or the waste they produce. Depending on the microorganism, the effects are diverse, ranging from diarrhoea, fever, severe cramps and vomiting to kidney damage and death. | Wash hands to remove microorganisms and cover wounds. Do not work with food if you are unwell. Some, but not all, toxins are temperature sensitive and hence effective refrigeration and high cooking temperature can reduce both the microorganism and the waste it might produce. Ensuring foods are used by stipulated expiry dates, are not reheated, and are refrigerated assist to control microbial growth which thrives in many foodstuffs. |

increase the risk of food spoilage leading to FBD. The old adage "boil it, cook it, peel it, or forget it" is a useful reminder of some of the major risks, however, there are no guarantees of escaping FBD by only implementing those principles.

At a global level, the *Codex Alimentarius* (FAO and WHO, 2021) is a collection of standards, guidelines and codes of practice that have been developed since 1963 to create an umbrella of international food standards. It is directed by a joint intergovernmental body of the FAO WHO with 188 Member Countries and one Member Organisation (The European Union). The Food Code is responsible for shaping many of the prevention guidelines produced globally and works on the premise that most FBDs are preventable with appropriate actions.

According to the WHO (2006) the Five Keys to handling food safely are:

1. Keep clean
2. Separate raw and cooked
3. Cook thoroughly
4. Keep food at safe temperatures
5. Use safe water and raw materials

These principles remain relevant and unchanged today, and the impact of the global pandemic does not change these vital aspects of food safety and hygiene. The WHO provides a manual to accompany the model that can be used for training purposes.

## *Managing Foodborne Diseases When Travelling*

Given that most travellers will experience FBD and in all likelihood TD during their travel experience, there are some useful strategies to employ, all of which place the traveller as agentic and informed, which means they must take some responsibility for active avoidance of elements that might make then vulnerable. These strategies include:

1. Actively work at prevention at all times—every food and water decision matters, there are no exceptions
2. Consult a travel medicine specialist to prepare for the more likely risks associated with the travel destination prior to travel (see *Part I Health: Pre- and Post-Travel Medical Consultations*)
3. Consider the timing and weather conditions to reduce the risk of FBD, especially when travelling to high-risk destinations
4. Always carry a first aid pack that includes medical treatment for TD and oral rehydrate salts to address the risk of dehydration
5. Avoid high-risk foods such as: tap water, ice, milk, fresh fruit and vegetable, seafood, rare meat dishes, chicken, undercooked meat, eggs
6. Choose well-patronaged eating venues as this means the food turnover is greater and food is less likely to be vulnerable to contamination or microbial attack. Look for establishments that have regular power, running water, sanitation services, handwashing facilities for staff and guests
7. Choose cooked dishes that are cooked on demand. Buffet-style foods may be exposed to temperatures that favour microbial growth and should be avoided unless there is a large volume turnover
8. Request beverages are opened and poured in your presence. The best option is a sealed drink container.

The increased vulnerability for travellers comes about as they are more likely to be consuming food and drink in unfamiliar locations, and often have diminished agency to determine the efficacy of the foods they are consuming and lack insight about the handling of the food on its journey to their plate. This is explicitly where food security which is evident by food production, access, availability and stability directly impacts the tourism industry. Poor food handling practices are the most common cause of TD and where intentional food handling courses have been provided, the risk for TD has been demonstrated to decrease (CDC, 2020). Having a strong foundation and understanding of food safety and hygiene therefore applies to everyone involved in the food production process, all of the time—there are no exceptions. This remains relevant at all times, especially in the COVID-normal environment where food providers are likely to be under tighter scrutiny than previously given heightened tourist anxiety, indeed, it is that case that our sense of fear has been reshaped by the global pandemic (Palmer, 2021), including anxiety provoked by proximity to others, being indoors in enclosed spaces, and sharing utensils, choosing food from buffets, touching furniture and so on.

## *COVID-Normal and Food Safety and Hygiene*

The global pandemic has heightened awareness of the possible transmission through contact with surfaces in food venues and through human proximity. As clearly stated at the outset of this chapter, there is no evidence the virus is transmitted through food and it cannot multiply in food (Food Standards Australia New Zealand, 2021; WHO and FAO, 2020) hence it is not a FBD. However, COVID-19 is transmitted through respiratory droplets formed when coughing or sneezing and these droplets landing on objects and surfaces. Hand transmission to surfaces in food venues is easy to imagine—on tabletops, door handles, shared condiment containers, menus and so on, enabling easy transference to others during food and beverage consumption.

According to van Doremalen et al. (2020), the COVID-19 virus can remain viable on plastic and steel surfaces for up to 72 h, and is actively transmissible in aerosol form in droplets for at least three hours, dependent upon factors such as humidity and air temperature. It is spread through respiratory droplets when a person sneezes, coughs and talks and these droplets remain airborne for 8–14 minutes in confined spaces (Stadnytskyi et al., 2020).

It is a requirement that food businesses take all practicable steps to prevent contamination of their food service or processing environment (see for example Food Standards Australia New Zealand, 2021). Food safety and hygiene requires particular action with respect to the transmission of COVID-19 because of the persistence of the virus and hence cleaning and hygiene practices are the key to managing the possible spread of the virus via food venues and experiences.

The WHO and FAO of the United Nations (2020) have provided safety guidelines for food establishments including guidelines for:

- the effective use of Personal Protective Equipment (PPE), including disposable gloves
- cleaning of surfaces
- use of alcohol-based hand sanitisers
- disinfecting of work and serving surfaces and touch points such as door handles
- physical distancing of staff and possible staggering of work tasks to achieve social distancing
- management of ill workers
- space requirements for guests
- directional signage
- queue control
- making regular announcements to remind customers to practice physical distancing
- providing hand sanitiser and wipes
- the permeation of cashless transaction
- recording of contact details through processes such as QR codes.

These guidelines are typically used to inform local practices with legislation shifting quickly to accommodate increased understanding and to be responsive to the pandemic as clusters, shutdowns and closures are enforced and hence the need to adjust practices. This has highlighted the need for effective communication to convey information, and for agility and adaptability when proactively implementing practices.

Challenges regarding privacy and human rights have emerged as contentious issues at the intersection of the need for information for public health reasons and to make contact tracing possible, and for individual and collective rights and this is likely to present ongoing challenges for the tourist industry as it reshapes this space.

The World Travel & Tourism Council (WTTC) (2020) has developed *Leading Global Protocols for the New Normal*. This protocol has four pillars aimed at facilitating the shift of the hospitality industry from crisis management to the new normal, these being: operational and staff preparedness; ensuring a safe experience; rebuilding trust and confidence; and implementing enabling policies. While each of these pillars provides a range of procedures of relevance to the food safety and hygiene aspects of the new normal, the most pertinent are those incorporated in the safe experience pillar and specifically with a focus on enhanced food safety and hygiene at restaurants by:

- Avoiding guest handling of food at buffets
- Regular cleaning of machines and where possible operated by staff member
- Offering room service as a solution ideally in a no-contact delivery method
- Enhancing cleaning, including disinfecting tables immediately after guests have left
- Implementing social distancing through table spacing and guest seating with suitable reinforcement
- Considering minimising what is placed on guest tables and provide mono-packaged items if feasible (World Travel & Tourism Council, 2020, p. 4).

## The Future for Tourist Food Safety and Hygiene

As we work towards shaping the future, food and water security will continue to be a key to success, hence, establishing food security as a pillar of tourism recovery is crucial. The impact of COVID-19 on food and water security, especially as it relates to people's livelihood, health and food systems has been profound, and puts at risk food security, and this is magnified by the impact of travel anxiety, which will require behavioural adjustment (Bratić et al., 2021). This is captured in a joint statement by the International Labour Organization (ILO), the Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD) and the World Health Organization (WHO), who assert:

> [T]he pandemic has been affecting the entire food system and has laid bare its fragility. Border closures, trade restrictions and confinement measures have been preventing farmers

> from accessing markets, including for buying inputs and selling their produce, and agricultural workers from harvesting crops, thus disrupting domestic and international food supply chains and reducing access to healthy, safe and diverse diets. The pandemic has decimated jobs and placed millions of livelihoods at risk. As breadwinners lose jobs, fall ill and die, the food security and nutrition of millions of women and men are under threat, with those in low-income countries, particularly the most marginalized populations, which include small-scale farmers and indigenous peoples, being hardest hit (WHO, 2020a, n.p.).

As a key component of tourism, meeting our basic needs and specifically food and water security, at this time is relevant and increasingly of concern, leading to tourist anxiety.

Ironically, one of the unintended consequences of the global pandemic may be a raised awareness and implementation of intentional practices to reduce transmission of the pandemic virus that serves as beneficial, strengthening food safety and hygiene practices. One of the pervasive issues with food safety and hygiene is that the conditions causing problems are typically invisible to the person affected, regardless of their vigilance and knowledge base. So, the wiping down of surfaces, provision of hand sanitisers, wearing gloves and increased hand washing and sanitation by food workers, along with a range of personal hygiene practices employed by tourists, will directly improve food safety and hygiene and reduce FBDs. The sight of bustling streets of food vendors and tables groaning under lavish buffets seems a distant memory, and not only because of the need to manage transmission issues. The challenges of food security are much more complex than end-point consumption. The entire food security ecosystem is impacted, with the four components: safe food production, access, availability and stability; all vulnerable and all compromised by the pandemic effects.

According to Bratić et al. (2021) there is a global need to adjust the tourism industry in response to the COVID-19 pandemic, which is estimated to have caused $22 billion in economic damage to the global tourism market (Zhu & Deng, 2020). The extent of the impact and the risks associated with COVID-19 are, according to Bae and Chang (2020), the greatest in human history, especially as tourism is highly sensitive to safety and health impacts, both real and perceived. The impact has been seen in the form of travel risk perception, travel-related anxiety, including a shift away from business as usual and no expectation of a return to pre-pandemic ways of operating. Bratić et al. (2021) point to the need for adaptations structurally, in terms of tourism infrastructure; and functionally, in changes such as service offerings. The risk appetite will also be reduced, so low-risk choices will likely lead the way in a recovery. This means relatively small scale, increased outdoor activities and food experiences, and a focus on greater sustainable tourism. To that end this chapter now turns to the United Nations Sustainable Development Goals as a framework to inform recovery and food safety and hygiene applications.

## *The United Nations Sustainable Development Goals*

In 2015 the United Nations (UN, 2015) unveiled the 17 *Sustainable Development Goals* (SDGs). The SDGs incorporate 17 aspirational Global Goals with 169 targets between them. The agenda has an intentional approach involving the 194 member states of the United Nations. The SDGs pre-existed the global pandemic by almost half a decade, and were built on the Millennium Development Goals, and hence the World Tourism Organization had previously established key engagement principles to contribute to the achievement of the SDGs.

Of the 17 SDGs the first three are particularly pertinent to food security: Goa1 1 No poverty; Goal 2 Zero hunger; and Goal 3 Good health and wellbeing. Goal 6 Clean water and sanitation is strongly aligned with water security. Table 2 provides some of the most valuable strategies developed by the UN World Tourism Organization relevant to food and water that are intended for tourists to employ so they can be agentic in this space.

Utilising the SDG's and the transformative potential underpinning this approach, the UNWTO has advocated for the need "to rethink how tourism interacts with our societies" (UNWTO, 2020, p. 1) and urges the prioritisation of health and safety for workers, travellers and communities, and to harness innovation and digitisation.

The Grattan Institute, a think-tank organisation in Australia, predicts COVID-safe hospitality practices will be an ongoing benefit, and the pandemic disruption affords us the opportunity to "build back better" if we allow for creative, imaginative solutions (Wood, 2020). Taken together, the following might be seen as some of the key features of the new normal, all key elements which will assist to "maintain trust and consumer confidence in the safety and availability of food" (WHO and FAO, 2020). Importantly, already well-evolved food safety practices should be in place that provide a firm foundation on which to build, with the implementation of key hygiene controls at each stage of the food processing, manufacture, and marketing stages to ensure the prevention of food contamination. So these additional features should strengthen this foundation and thus the following will be achieved: food workers and customers can be protected from contracting COVID-19; exposure to or transmission of the virus can be minimised and ideally prevented; and food hygiene and sanitation practices will be strengthened. Some of these initiatives include:

- improved food handling hygiene
- a shift to outdoor food venues with smaller numbers
- a shift from self-serve buffets and open food displays to food handler service and single boxed servings
- increased use and acceptance of robotisation in the food services industry
- increased focus on small scale sustainable tourism
- communication and education about how to reduce COVID-19 risks in the tourist context

**Table 2** Strategies identified by the UN World Tourism Organization relevant to food and water to contribute to the achievement of the Sustainable Development Goals

| Sustainable development goal | Strategy relevant to food and water security suggested by the World Tourism Organization | Sustainable development goal | Strategy relevant to food and water security suggested by the World Tourism Organization |
|---|---|---|---|
|  | Buy locally made handicrafts and products |  | When choosing a guide, place to stay or eat, do not discriminate against any person and be open to consider different options. |
|  | Do not waste food. Try to order or fill your plate with the amount of food you can actually eat and avoid having left overs. If you have a fruit or snack you don't want, don't throw it out. |  | Reduce your water and energy consumption whenever possible |
|  | Use already existing resources on health for guidance. Vaccinate yourself, you would be protecting yourself from diseases but also aiding public health |  | Buy locally made handicrafts and products. Buy minimally packaged food. |
|  | Educate yourself about appropriate water behaviours, global water quality and scarcity issues, and adjust your consumption accordingly. Work with others such as community groups, companies and fellow travellers on water projects to address identified challenges |  | Reduce your environmental impact by being a guardian of natural resources, especially water and forests |
|  | Conduct online research and give preference to staying at places buying only from companies that you know have sustainable practices and don't harm the environment |  | When ordering at a restaurant, make sure they have sustainable seafood. |

Source: Developed from UNWTO (2018)

By way of example, the ocean cruise industry has a proactive approach to educating cruisers about gastrointestinal diseases and their prevention and this could be used as the basis to extend knowledge about COVID-19—see box below.

Zeng et al. (2020) add a further dimension, pointing to the opportunity for the increased adoption of robotics as a means of reducing human contact, disinfecting public spaces and so on and hence reducing the potential spread of the virus, see the following box.

**Robotisation of Food-Related Services in Tourism**

Tourism is an industry that relies on high levels of human interaction. However, social distancing practices have been an important strategy in the management of the spread of COVID-19, creating challenges for the tourist industry on many levels. Dramatically, it has led to the shutdown of the global international tourism industry, including the entire tourism flight industry. Yet, it is at times of massive disruption that the opportunity for innovation emerges and it is expected that COVID-19 will be a driver to technology innovation in tourism. Zeng et al. (2020) have explored this opportunity from the perspective of robotisation of the tourism industry, including food and hospitality-related services, pointing to the opportunity for a new paradigm to emerge out of the pandemic. Prior to the pandemic there has been a general

**The Ocean Cruise Industry, Gastro-Intestinal Diseases and COVID-19**

The pandemic has devastated the cruise tourism industry (Holland et al., 2021). Prior to the pandemic the cruise ship sector had been on a growth trajectory, being one of the fastest growing segments of the industry. However, some of the earliest exposure the public had to the ferocity of the pandemic was the experience of cruisers who became hostage to the virus on their cruise liners as the virus took hold or of those allowed to disembark their ship already infected with the virus, with many deaths associated with both circumstances.

Cruise holidays have long been associated with FBD. Close living quarters, shared dining facilities, contaminated surfaces, and poor basic hygiene are all causes (Stock et al., 2015). In order to address this and to position cruisers as agentic in prevention, the CDC (2019) developed the *Vessel Sanitation Program* to educate the public about the prevention and control of gastro-intestinal diseases. This included the development of factsheets, prevention podcasts and videos on specific activities such as when why and how to wash hands effectively.

The education program also provided information about the frequency of gastrointestinal illnesses, including noroviruses associated with cruise ships revealing:

> From 2008 to 2014, 74 million passengers sailed on cruise ships in the Vessel Sanitation Programs jurisdiction. Only 129,678 passengers met the program's case definition for acute gastrointestinal illness and only a small portion of those cases (1 in 10) were part of a norovirus outbreak (Centers for Disease Control and Prevention, 2019, n.p.).

(continued)

The model of the *Vessel Sanitation Program* has been identified by Holland et al. (2021) as a strategy for educating prospective travellers, recommending this be extended beyond the current focus on gastro-intestinal diseases to include COVID-19 and other onboard risks for the cruising tourist.

Figure 2 provides a deeper analysis of some of these trends, examples of how these are operationalised, and the way it strengthens food safety and hygiene beyond accommodating the response to the COVID-19 pandemic. Taken together, these strategies are likely to have a positive impact on the public health not only of tourists, but of the service providers and workers across the wider industry. Dependent upon the duration and nature of the persistence of these trends, the benefits could be very significant.

## Conclusion

Food safety and hygiene in the tourism industry has been affected irreversibly, both structurally and functionally, by the global pandemic. The need for rapid responses has seen innovation in a range of practical ways, some of which have the potential to positively impact the public health of both the tourism sector and the wider community. As a basic need for all humans, including tourists, food and water security is fundamental to reinvigorate the industry. There is no doubt that gastronomic experiences of those seeking authenticity, along with the moderates and the comfort seekers, will be impacted to varying degrees. Many of the interventions designed to reduce physical contact, surface and aerosol transmission of the COVID-19 virus have the added benefit of strengthening known, effective food safety and hygiene practices, which, we can expect, will lead to the positive effect of a reduction in foodborne illness and disease. The enduring benefit to the sector will depend on the retention of these practices and the ways in which the new normal is reconstituted. It is increasingly apparent that widespread vaccination programs will not eliminate the virus but will reduce the likelihood of infection and ameliorate the potency of the symptoms for those who have been vaccinated. It is probable then that the strategies to reduce spread of the coronavirus will need to be integral to reconstituting the new normal. Tourists are expected to experience anxiety associated with risks in the industry, and this behavioural shift is best addressed through education and proactive strategies and practices which empower tourists and enable them to make informed choices to reduce risks, including in the food safety domain. Guided by the Sustainable Development Goals, there is an opportunity to rebuild tourism with health and food safety as not just a pillar, but as a transformed component of the tourist ecosystem.

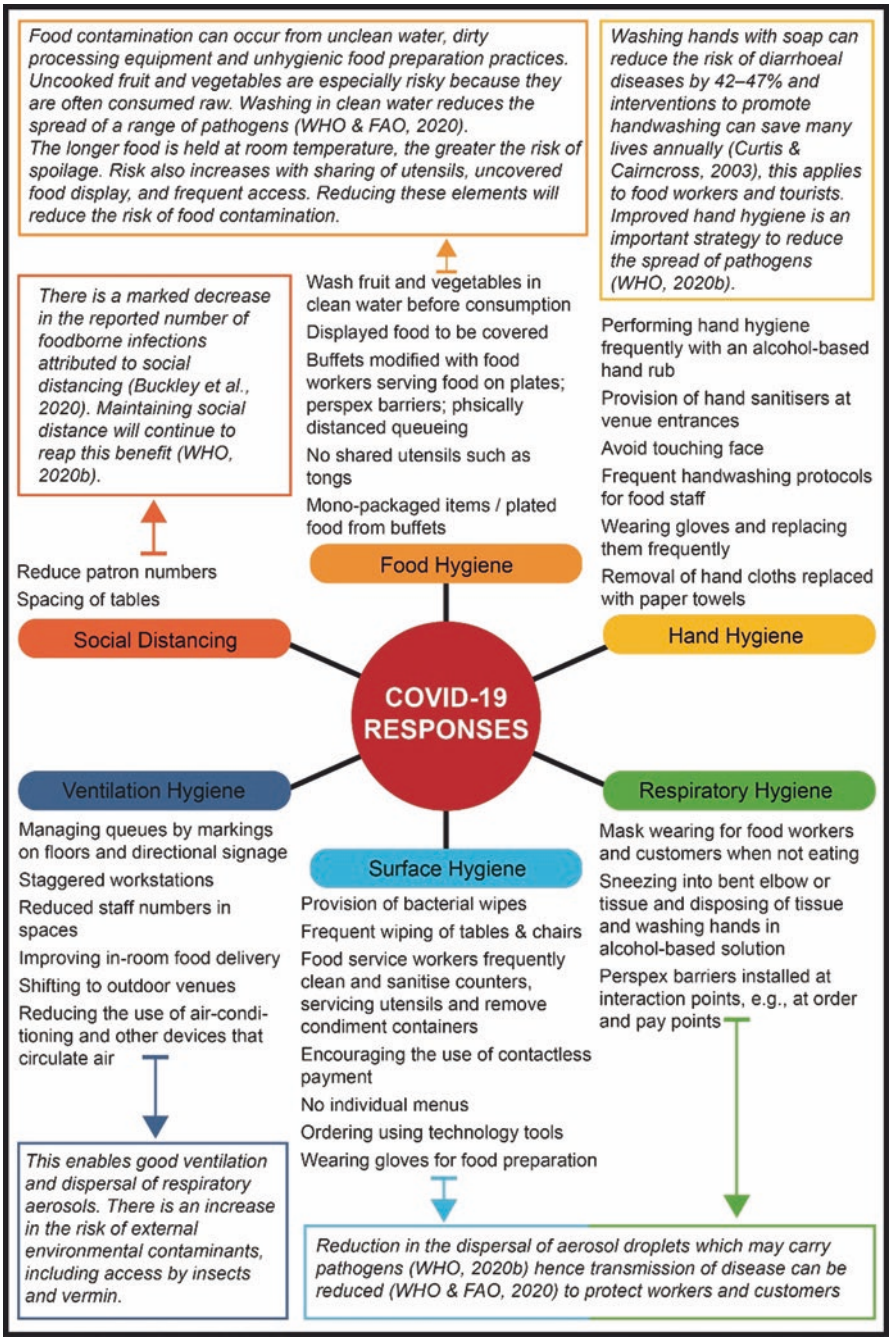


**Fig. 2** Trends impacting food-related aspects of tourism and how this strengthens food safety and hygiene. (Source: Adapted from Curtis and Cairncross (2003); Buckley et al. (2020); World Health Organization (2020b))

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# Travelling Safely in an Unsafe World–A Shared Responsibility


**Yetta Gurtner and David King**

**Abstract** Tourism is one of the world's largest industry drivers of growth, development and employment. The industry has in the past displayed an inherent sensitivity to adversity but has gradually taken on Disaster Risk Reduction (DRR) principles that increasingly focus on collaboration and partnerships to minimise hazard and disaster impacts. Although more common and visible, potential hazards however extend beyond the geophysical and meteorological exposure of natural hazards. The world was to an extent unprepared for the sweeping impacts of COVID-19. DRR strategies developed to protect lives and ensure safety, have had unplanned consequences of destroying livelihoods and economies globally. In mitigating disasters, we face the implications and responsibility to avoid causing secondary disasters.

**Keywords** Disaster Risk Reduction (DRR) · Disaster management · Resilience · Tourism · COVID-19

## Introduction

### *Principles of Disaster Risk Management in Tourism*

The tourist industry is disrupted by crises and disasters that may put the lives and safety of tourists at risk, and harm the viability of destinations in maintaining tourism activities and attractiveness. Laws et al. (2007) use the term crisis to cover a broad range of disruptions to tourism. These cover threats, infrastructure breakdowns and travel disruptions, through to natural and human instigated disasters. Minor crises may be managed by tourism operators and host communities, but major disasters require intervention of agencies from the broader community, and can impact the host community external to tourist operations. Consequently, crisis

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_7

management and Disaster Risk Management (DRM) are required to anticipate, protect and deliver both tourists and tourist destinations from a disaster. This presents the central issue of this chapter, which is to understand the principles of DRR and DRM in relation to tourism.

From the perspective of disaster management there are three elements to tourism: the tourist industry, considered the world's largest industry/employer, the tourists themselves, and the tourist destination inclusive of the host community. The tourism industry may be perceived as robust and resilient in its capacity to shift to new or alternative destinations in the face of a specific disaster or crisis. This has been evidenced in a multitude of events from the Indian Ocean tsunami, terrorism, volcanic eruptions and financial crises. While particular destinations or locations are significantly impacted, tourism has continued to prosper and develop at the global/macro level [World Travel & Tourism Council (WTTC), 2020]. This characteristic of the tourism industry has been challenged during a global pandemic that has severely restricted travel, internationally, nationally and regionally, closing down or isolating tourist destinations. The WTTC (2020) estimated a 43% decline in travel and tourism jobs due to COVID-19 in 2020 with an estimated economic loss of US$3815 billion. The industry only appears to be resilient when there are viable, "safer" alternatives on the local, national or international scale.

Even as the tourism industry has historically proven resilient, individual tourists have always been considered vulnerable to crises and disaster because they are away from home, out of their local knowledge zone, and generally in a more hedonistic mindset that precludes or limits hazard awareness (Robertson et al., 2006). Many tourists are directly dependent on a tour operator, host, or venue for their activities and their safety, even as there are significant numbers of travellers such as backpackers who act independently of venues and tour operators (Hoogenraad et al., 2004). Whether as lapse in responsibility/duty of care, risk-taking behaviour, lack of familiarity, or even language limitations, in the advent of a significant hazard or crisis tourists necessitate targeted risk management and a protective approach to minimise exposure and adversity.

When faced with a threat, real or perceived, most tourists have the opportunity to choose a different holiday experience or venue. In direct contrast, substitution or proxy is not viable for an adversely impacted destination which remains vulnerable to local hazards and disasters, and co-dependent upon its host community. The community may recover quickly from any disaster event, but the destination is left to contend with the crisis associated with loss of tourists and tourism industry confidence. Even with full recovery of local infrastructure, service capacity and aggressive rebranding and marketing strategies, consumers often continue to associate an impacted location with adversity well after any event. Tourists, travellers, and the tourism industry itself, appear comparatively resilient to disasters, while tourist destinations are vulnerable.

Thus, in reviewing DRR and DRM for tourism we are confronted with levels of complexity. Tourism is not a single entity, but comprises tourists (who may themselves be sub-categorised), the destination and its host community, which involves the societal community, the built environment and infrastructure, as well as the

tourism industry, which is flexible and resilient until faced with a global crisis, such as the COVID-19 pandemic.

Such levels of complexity further interact with concepts such as vulnerability, resilience, preparation, disaster or emergency management, response and recovery. These constitute aspects of the practice of DRR and DRM and may be considered as part of an underlying theory or principles of DRM. Both DRR and DRM exist as strategies and processes to reduce risk and loss, increase safety, enhance recovery after a crisis or disaster, and inform preparations for future events. These strategies are aimed at all communities, governments and nations, or locations and disaster scenarios, and all groups within society (i.e., all-hazards, all stakeholders). Practical DRR strategies however, also recognise diversity, with the need to target different hazard environments, social, demographic, ethnic and economic groups (Anderson-Berry & King, 2005). Tourist destinations and tourists are two such subgroups with needs and approaches that are subject to timing, phases and contexts.

To address the challenges of making all facets of tourism safer and more sustainable, we are confronted with the need to examine a theory of disaster and crisis with its purpose of defining and structuring Disaster Management principles and practice. The immediate problem for the researcher is a perception that disaster studies do not constitute a disciplinary area. Ritchie and Jiang (2019, p. 5) refer to a "lack of conceptual and theoretical foundations" and the "lack of framework testing" (Ritchie & Jiang, 2019, p. 6), especially in relation to tourism risk. Cardona (2004) posits that there is no coherent theory of disaster studies. Researchers in the disaster area (DRR, DRM and hazards) are frustrated by a lack of a neat disciplinary field of research code (a problem that is common to Australian, New Zealand, UK and US research). A partial explanation for this lack of discipline recognition may be the newness of the research focus in DRR and DRM, but as we discuss below, an interdisciplinary approach is a positive advantage.

## *The Evolution of DRM and DRR*

Before the 1990s the emphasis of DRR was scientific knowledge of natural hazards. The focus was primarily on understanding naturally occurring hazards and consequent disasters. While subsequent multi-hazard and multi-sectoral developments have seen the incorporation of complex humanitarian disasters, these tend to remain under different jurisdictions or operations, as do disasters such as pandemics, terrorism and climate change-related catastrophes.

In this early era, response and recovery agencies were heavily focused on providing rescue aid and support for communities devastated by disaster, but mitigation and preparation were constrained by the lack of an overall strategy and resources. The emergence of Ecologically Sustainable Development (ESD) in 1987 along with a number of significant natural disasters in the 1980s, prompted a progressive shift away from the dominant scientific approach of measuring natural hazards, to the incorporation of both natural and social aspects of the environment (Gurtner &

King, 2021; Haddow, 2004; Seddiky et al., 2020). It may be argued that this changed emphasis on the wholeness and integration of society and environment provided the framework within which DRR became possible.

The International Decade for Natural Disaster Reduction (IDNDR) was established by the United Nations (UN) to focus DRR and with it, the efforts of DRM organisations throughout the 1990s. Emergency managers were given a broader range of responsibilities that challenged the pre-1990 top-down hierarchical command and control approach. DRM was mainstreamed to be the responsibility of all organisations and institutions, from local communities to all levels of government, NGO's and private enterprise. However, while initiated in 1990, these changes in approach have taken decades to implement into practice. IDNDR was the starting point to the UN International Strategy for Disaster Reduction, (ISDR), and incorporation of its principles into all countries and communities.

Prior to 1990, considerable valuable research into natural hazards described and analysed processes and predictions of disasters, especially in disciplines such as Geography, Environmental and Earth Sciences and Meteorology. Disciplines such as Anthropology and Psychology also made significant contributions in disaster impact analyses with communities and individuals. While the connection between hazards and social impact was recognised and explored in disciplines such as Geography, the incorporation of science and social science around disasters was relatively limited before the IDNDR.

Following the integrative nature of ESD, the IDNDR brought together disciplinary backgrounds to its focus on DRR. Seddiky et al. (2020) summarise the International stages of the ISDR from IDNDR through the midterm Yokohama Strategy, then the Hyogo Framework in 2005, and the Sendai Framework for DRR in 2015. The Yokohama midterm review of the International decade (Seddiky et al., 2020) placed emphasis on community involvement as well as calling for the integration of warnings, awareness and preparedness across all sectors. For many governments, this was a starting point that required new approaches in governance, as well as requiring enabling legislation. The Hyogo Framework of 2005 built on progress made during the IDNDR and strengthened DRR in areas of prevention, mitigation and preparedness (Morakabati et al., 2017; Seddiky et al., 2020). Research and communication have also been strong themes of the Hyogo Framework. The framework instigated devolution of responsibilities and policy response globally and at all levels of government.

Demonstrative of this policy progression and increased responsibility at the stakeholder level is the changing role and focus of land-use planners from the 1990s (evident in places like Australia through new planning acts that were much more comprehensive in their processes). These changes enabled a new generation of strategic plans and the need for comprehensive mapping of hazards and their risks that subsequently enabled DRR to be incorporated into local strategic plans. This process took 20 years in Australia and is still ongoing in many other countries (King et al., 2016). In the tourism context, hazard-related planning constraints on new tourist developments have taken a long time to be universally applied. For the entirety of the built environment, which includes tourist facilities and host

communities, engagement of all agencies in DRR has taken place against a background of the legacy of pre-disaster risk and management decisions that had enabled development in many hazard-prone locations (Beirman, 2011; King et al., 2016).

The Sendai Framework in 2015 began with a review of Hyogo (King et al., 2016) which acknowledged the time-consuming and often challenging process of putting actions in order to achieve DRR outcomes. The Sendai Framework reinforces whole of government approaches and engagement of all stakeholders (including and specifically the tourist industry). Sendai also takes on board emerging hazard threats, such as those which may be ascribed to climate change. The framework prompts the engagement of all sectors and industries as well as inclusion of subgroups of the population. Seddiky et al. (2020) mention children and the disabled as examples of subgroups, but the intent of the framework stresses the targeting of many more subgroups, which significantly extends to tourist education and awareness and the specific vulnerability of tourists in an unfamiliar environment and host community (Campiranon & Scott, 2007; Schmidt & Berrell, 2007).

DRR and DRM has shifted from distinct and separate emphases of hazard science and command and control of the emergency management response, to a multiphase, multi-targeted responsibility across all sectors, governments and stakeholders. In practice DRR and DRM are firmly societal processes of education and preparedness to enable safe and appropriate responses to a hazard event or crisis, and resilient recovery to normal operations. Consistently, all stakeholders at all levels have a role and shared responsibility to proactively reduce hazard risk and potential adversity. The operational phases of DRM have been expressed slightly differently around the world. In Australia the phases of the emergency management cycle were prevention, preparedness, response and recovery, or subsequently mitigation, preparedness, response and recovery (see Fig. 1). Influenced by Hyogo and Sendai there has been a shift from a rigid separation of tasks to ongoing educational and preparatory processes alongside an acknowledgement of the unequal speed or occurrence of each phase. Inevitably however these activities are the prerogative of separate agencies and research activity, such that the phases are not seamless, and the focus is frequently disconnected. Each realm of activities draws on different disciplines and theories and each incorporates core concepts of vulnerability and resilience, which are similarly shaped by diverse disciplinary approaches.

In extensively applying the terms hazard, vulnerability and resilience it is useful to establish standardised meanings. Hazard is defined in the Hyogo Framework for Action as: “A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards)” Resilience is defined as:

> The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions (United Nations Office for Disaster Risk Reduction [UNDRR], 2015, pp. 9–10).

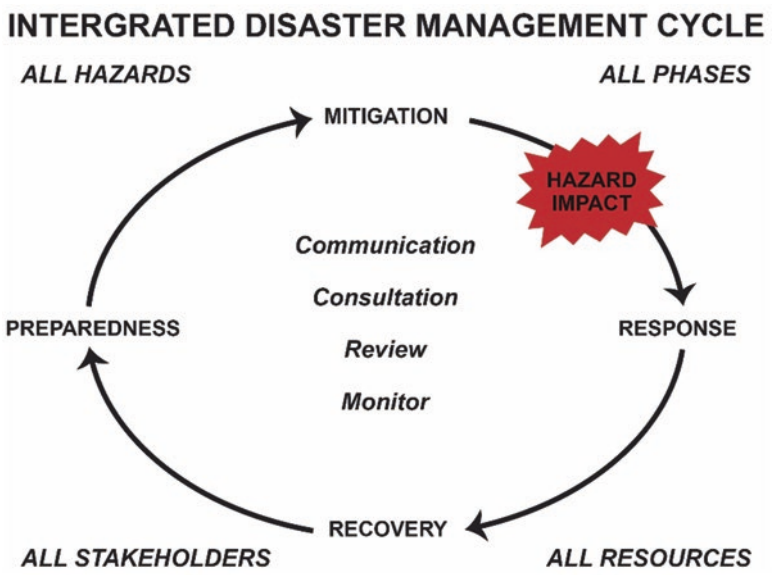


**Fig. 1** Integrated disaster management cycle. (Source: Dr. Yetta Gurtner (2014))

Vulnerability is defined in the Hyogo Framework for Action as: "The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards" (UNDRR, 2015, pp. 9–10).

As we consider the concepts and principles of DRM that could be applied to tourism, it has to be acknowledged that despite the significant progress made in this area there is not an encompassing discipline of DRM or disaster studies. While this presents frustration for researchers in fitting into a field of research system, the dominant theme in DRR and DRM literature is that disaster study is, and benefits from, being multidisciplinary (Aliperti et al., 2019; Beirman, 2011; Clark-Ginsberg, 2017; Howes et al., 2013; Ingham et al., 2012; Ritchie & Jiang, 2019; Seddiky et al., 2020; Wisner et al., 2012).

The ISDR, IDNDR, Yokohama, Hyogo and Sendai Frameworks all advocated an interdisciplinary or multidisciplinary approach to the problem of DRM with the intended outcome of DRR. This is clearly summarised by Wisner et al. (2012) and Clark-Ginsberg (2017). Models and network analyses place disaster as the focus of research and practice from multiple disciplinary perspectives. The multidisciplinary approach for tourism and disasters brings methods and theory from existing disciplines in order to apply these to a specific problem of disaster, and to the subgroups of tourists and tourist destinations—inclusive of host community (Morakabati et al., 2017). The lack of a single overarching discipline is an advantage in enabling a targeted focus on DRR and DRM, to formalise their incorporation into tourism planning and preparedness (Aliperti et al., 2019; Becken et al., 2014; Beirman, 2011; Ingham et al., 2012; Ishiwatari et al., 2020; Nair & Dileep, 2020).

Many tourist destinations are in tropical and sub-tropical environments that are susceptible to natural hazards, such as cyclones/hurricanes, floods and wildfire/bushfire. Tourists have also been targeted specifically by terrorists as well as being highly vulnerable to disease epidemics and pandemics. Disasters such as earthquakes and tsunamis impact tourists indiscriminately with the rest of the host community, but the Indian Ocean tsunami of 2004 reinforced the locational vulnerability of tourist resorts (not least because tourists captured and shared so many graphic images of the tsunami). This event also occurred only a month before the world disaster conference at Kobe which resulted in the Hyogo Framework. The extreme vulnerability of tourists in that tsunami clearly influenced the development of the framework to bring together all agencies. Another significant tsunami/earthquake disaster occurred in the Sendai area shortly before the next scheduled decadal UN disaster conference. These events, although not being narrowly about tourist locations, helped direct the focus of vulnerability.

In addition to any direct impacts or damage, disasters and crises are inherently bad for tourism enterprise and consumer confidence. There has long been a tendency in the tourist industry to avoid the issues of warnings, preparedness and evacuation, although numerous businesses and organisations have performed well when a disaster has struck. Becken and Hughey (2013) in advocating a stronger link between tourism and emergency management cite a long-standing lack of engagement. Beirman (2011) described a lack of collaboration and integration between tourist agencies and businesses and emergency management, DRM. He suggests this failure extends from Australia globally. Similarly, Morakabati et al. (2017) claim that emergency management and tourism have not been adequately addressed, presenting a view that emergency management continues to be command and control. This may reflect the dominant UK paradigm from which the research originates, as the need to collaborate across agencies has opened up a partnership approach that is increasingly adopted globally and counteracts command and control.

Aliperti et al. (2019) suggest that tourism and disaster researchers are still at an early stage of engagement with risk. In their review of the literature they state that "the lack of studies on preparation could stem from the frequent adoption of Faulkner's (2001) definition of disaster as a phenomenon over which the managers have little control and that is therefore potentially less tempting to investigate" (Aliperti et al., 2019, p. 3). They go on to partially refute this assertion, but it has long been a practice of tourism operators to leave emergency management to emergency managers and to avoid responsibility for education and awareness activities that they perceive as counter to a positive tourist experience. We can attest to this lack of engagement over many years of involvement in local and state disaster coordination groups. To be fair to the tourist industry, most private enterprise organisations (not just tourism operators) fail to engage with governments and non-governmental organisations (NGOs) in disaster planning.

Following the Indian Ocean tsunami the proposed integration of tourism organisations, government agencies and emergency managers in safeguarding tourist destinations was actually formalised by the United Nations World Tourism Organization

(UNWTO) (Beirman, 2011). New issues have subsequently emerged from pandemics. Swine flu, H1N1 (Beirman, 2011) and COVID-19 have been widely spread by tourists, and in 2020 the spread of COVID-19 resulted in severe shutdowns of the tourist industry. This experience of COVID-19 illustrates the long-standing deferment on the part of tourism operators to engage with emergency managers. The lockdown of communities and political boundaries has severely harmed the tourism industry such that there have been strongly voiced calls throughout 2020 to relax border restrictions to enable people to travel. Business has been damaged so badly that many operators are willing to ignore the risk of the virus.

Initiating responsibility to participate in education and awareness of tourists and operators has been a lengthy process. In the case of land-use planners, responsibility was enabled through legislation (King et al., 2016). Placing greater responsibility on tourist destinations and operators through duty of care and safety regulations ensures that DRM is incorporated into business plans. In 2020 restrictions and safe behaviour have been forced upon hospitality and tourist facilities by government public health rules. Compulsion is a strategy to achieve DRR, but collaboration and cooperation are ultimately more productive in bringing about behaviour change.

## Disaster Impact of COVID-19

As a research organisation the Centre for Disaster Studies at James Cook University has been carrying out post-disaster studies and social surveys of community awareness, preparedness and experience of natural hazards since the late 1970s. The Centre's purpose in studying people and disasters was progressively extended to human generated disasters such as wars, terrorism, pandemics, industrial and technological catastrophes. A primary aim of the research has been to gather information from people and communities that is analysed and interpreted for government and non-government agencies and institutions to contribute to policy and best practice. This role has also involved Centre researchers in local disaster management groups and in State and Commonwealth level meetings and workshops. Consistent with such engagement, following the Severe Acute Respiratory Syndrome (SARS) epidemic in 2009, researchers from the Centre participated in local government level workshops (held in venues throughout Australia) to tentatively plan for the impacts of a pandemic, in the context of a range of scenarios. Strategies that were developed at that time anticipated the responses that were put in place at the beginning of 2020 as the virus began to spread rapidly.

## *Community Study COVID-19*

Early in the COVID-19 pandemic in April 2020, the Centre for Disaster Studies (CDS) carried out an online household survey (James Cook University, 2020) of over 1000 respondents (recruited through traditional and social media in Australia), to determine level of community awareness and pandemic prevention/preparedness behaviour. While not specific to tourism or travel behaviour it investigated issues of individual vulnerability and exposure, symptoms, transmission, available information, personal preparation and response behaviours, and impacts. Findings had significant implications in respect of individual protective actions, government control directives, and livelihood impacts. While pandemic plans may have been well-developed at the government and health sector level there was limited local community level knowledge or integration.

The survey indicated good general knowledge of pandemics and COVID-19 within the Australian community—with the majority of respondents able to appreciate this virus is different from a cold or seasonal flu, recognise the most common symptoms, and identify those community members who are considered at greater risk and vulnerable to the virus. Less than 1% prescribed to prevailing conspiracy theories regarding 5G, genetically engineered biological warfare or a government plot to control society.

There was piecemeal understanding of the high co-morbidity risk particularly associated with chronic conditions such as hypertension, diabetes and obesity. Issues of gender, ethnicity (beyond indigenous), poverty and overcrowding, and occupation were not investigated. There appeared at the early stage of the survey to be a high degree of variability/lack of clarity/miscommunication regarding testing protocols for those who were symptomatic and this was generating high levels of community frustration.

Although the majority of respondents understood the virus was mainly spread through an infected individual coughing or sneezing, the survey results suggest that there has been a greater emphasis on reducing personal exposure through social distancing and hygiene than promoting good cough etiquette throughout the community. Disturbingly, from a viral transmission perspective, almost 1 in 10 (8.6%) respondents indicated that they are not undertaking any form of voluntary, recommended or mandated control measures to reduce transmission.

With the prevalence of asymptomatic, unconfirmed and low-grade symptoms cases, expert advice suggests that cough etiquette and personal masks are the most effective measures of preventing continued transmission of the virus. The most widely employed measures of community control (social and physical distancing), environmental control (surface cleaning, disinfecting, sanitising, limited external activities) and individual control (hand washing/sanitising) are designed more to prevent an individual contracting the infection rather than reducing the potential spread or transmission at the source. The average number of people that a person with COVID-19 is likely to directly infect (based on R naught—RO) has been estimated to be 2–2.5 (World Health Organization [WHO], 2020).

While 25% of respondents indicated that they were unsure or did not believe current measures/strategies were effective, most felt that it was primarily the responsibility of individuals and households to reduce transmission in the community. Commonwealth and State governments were also considered as major stakeholders in pandemic management. Although widely portrayed as a health issue, only half of the respondents believed the health sector/services had a significant responsibility in pandemic control and management.

Information regarding COVID-19 had been sourced predominantly from government websites (78.5%), recognised official sources and the media (traditional and online sources), with the majority of content accessed online/via the internet. While traditional media such as TV, radio and print media were identified as sources of information for up to half of respondents, the dominance of online/web-based sources highlights issues of access to information and the increasing potential for marginalisation. Although this was effectively prejudiced as a web-based survey, it highlights the need to continue to provide alternative/less technology dependant means of communication to reach all members of the community.

Over 20% of respondents indicated that they did not feel adequately prepared for a pandemic—for example in terms of availability of certain retail items, limited finances and uncertainty about what and how to prepare were prevailing concerns. Although most Australians are familiar with preparing for more common hazards such as bushfire, floods and cyclones there is limited knowledge and experience with pandemics. Most information available has focused on health and community transmission rather than how individuals or households should prepare—particularly if mandated quarantine or full community lockdown was to be enforced. Standard hazard household disaster kits/preparations are unlikely to include sufficient resources (particularly food) to support a household for up to 14 days. In a pandemic lockdown situation community shelters of last resort and services are also unlikely to be feasible. This has implications on supporting the more vulnerable members of the community.

If required to self-isolate or quarantine for 14 days most (>80%) believed that they would have sufficient supplies of the basics needs of toiletries, food, water, clothing and entertainment, yet more than 25% indicated they would not have sufficient prescription medication. A similar percentage indicated they did not have adequate basic first aid supplies. More than 30% of respondents did not appear to have either a mobile phone and/or an AM/FM radio to maintain communication during a pandemic event. Guns and home security measures were considered necessary for two respondents.

Based on the open-ended responses it is evident that most respondents assume that basic utilities (gas, water, sewage, electricity, telecommunications) and essential services (supermarkets, hospital/pharmacies, fuel stations, finance, etc.) would remain operational in a pandemic situation—with plans based around this premise. If a subsequent hazard such as bushfire, cyclone, flood or even severe weather event were to occur during a pandemic these services would be impacted in addition to possible damage to dwellings and infrastructure. In this context there is limited community multi-hazard awareness or capacity.

Despite ranking negative consequences such as loss of social opportunities, social isolation, cancelled or changed holiday plans, loss of regular leisure activities and emotional stress as some of the main lifestyle impacts associated with lockdown circumstances, less than 30% of respondents had relevant contact numbers or details of mental health services and networks. Over 80% indicated they rely on family (87%) and friends (83%) for support. Just over 4% of respondents reported that they felt that they had limited or no support networks.

Open-ended responses indicated high levels of uncertainty, frustration, isolation, financial anxiety, emotional and psychological stress, with one respondent reporting suicidal tendencies. While there has been a strong focus on physical health (associated with transmission/infection) and economic support, less than a third of respondents appeared prepared to access mental health support. A number of households reported positive consequences such as increased personal time, greater family cohesion, new hobbies and activities and increased exercise. However for the majority of respondents lifestyles have been adversely impacted with potentially long-term consequences.

Over 20% of respondents indicated either a loss of employment, a reduction in working hours, a wage cut or are undertaking a leave/holiday arrangement. Less than 1% had found new employment. For those who had maintained employment most reported a changed working environment with a large number working from home. More than 25% of the survey participants indicated they had no form of relevant insurance (health, life, income protection and/or mortgage protection).

While the survey shows that the community had reasonable awareness and understanding of COVID-19, the high degree of uncertainty and lack of familiarity with pandemic planning and management meant that the majority of respondents were underprepared. Communication and messaging in particular, needs to be more consistent, focusing on the idea that while this may be an emergent crisis with many unknowns—ultimately it is shared responsibility.

Throughout 2020 a number of studies have added to our knowledge of the impact of the COVID-19 pandemic. Many research groups carried out household-level surveys of people's experiences during the earlier period of the pandemic. All illustrate the impact of the pandemic and more significantly the government preventative responses on individuals and households. While the CDS survey was oriented towards our long-term research experience in gauging awareness, preparedness and sources of information, different surveys emphasised a range of impacts. Some examples include Mogali et al. (2021) who looked at transport and travel in Nigeria; Hensher and Beck (2020) on household travel in Australia; Bottan et al.'s (2020) extensive surveys in a number of developing countries examining inequalities of impacts, job losses and economic impacts; Suryahadi et al. (2020) who analysed the increase in poverty in Indonesia; Dietrich et al. (2020) who carried out household surveys measuring economic impacts; and Li et al. (2020) who looked at awareness and engagement with analyses of demographic characteristics and internet use. It is clear from these studies that travel and use of hospitality venues have been severely affected, but much research into the impact on tourism has tended to be economic and at a larger scale (Gossling et al., 2020).

## Impact of COVID-19 on Tourism and Focus of DRR on Tourist Safety

This chapter is primarily concerned with how we apply the principles of Disaster Risk Reduction to the safety and wellbeing of tourists, travellers and the tourism and travel industry. When we consider the impacts of disasters on the general community and the means to ameliorate or mitigate hazard risk, we are concerned not only with preservation of life and safety, but also with loss of property, livelihood and infrastructure. Crude measures of economic impacts of disasters encompass the broader loss of jobs, homes, buildings, businesses and supporting infrastructure. After the immediate impact of a disaster, recovery is dominated by the restoration of these things; rebuilding homes and business premises, recovering jobs and rebuilding the economy, as well as the restoration of infrastructure. The economic impacts of hazards exacerbate hardship, poverty and lost opportunities.

The effect of the pandemic on people has been enormous. By early February 2021, over 104 million people worldwide had contracted the illness (with 58 million having recovered) and 2.64 million had died (WHO, 2021). There is no breakdown or estimate about numbers of tourists who contracted the illness or who died, although there has been significant media coverage of travellers being carriers of the disease and specifically high death rates early on in the pandemic occurring on cruise ships (Mallapaty, 2020). However, the impact of the pandemic has been less upon the safety of the tourists and travellers than on the tourist industry itself. Pre-pandemic planning, going back more than a decade, envisaged lockdowns and border closures (we as members of the Centre for Disaster Studies, were involved in local pandemic planning workshops over a decade ago following the SARS outbreak, as part of a national strategy). The response to the COVID-19 pandemic was already strategised. The protection of life through isolation and protection was an obvious response. Border closures and lockdowns have protected people, including tourists. What has subsequently emerged is the equal reality (admittedly envisaged during pandemic workshops) of the shutdown of the economy and especially of the vulnerable sectors of hospitality, travel and tourism.

It is the long-term extended impact of the global COVID-19 pandemic that has brought the greatest loss: loss of livelihoods, jobs, businesses and hardship to millions of people who depended upon the tourist industry. The economic impact of the COVID-19 pandemic on the global tourism industry has been devastating. According to the WTTC (2020) the direct and indirect contributions of tourism and travel in 2019 accounted for: “USD 8.9 trillion contributed to the world’s GDP, or 10.3% of global GDP, 330 million jobs or 1 in 10 jobs around the world, USD 1.7 trillion in visitor exports (6.8% of total exports, 28.3% of global services exports), and USD 948 billion in capital investment (4.3% of total investment)” (WTTC, 2020). By November 2020, WTTC (2020) estimated enormous losses and decline compare to 2019: “Travel & Tourism Jobs Lost in 2020—142.6 Million and down 43%, Travel & Tourism GDP Loss in 2020—$3,815 Billion USD and down 43%, and Global

Arrivals Assumptions—International down 65%, Domestic down 33%" (WTTC, 2020).

Gossling et al. (2020) analysed COVID-19 at smaller scales, national and organisational, and in greater detail. Their rapid assessment was carried out early in the pandemic but the impacts that were observed have extended to the end of 2020 and are very likely to continue until the end of 2021 and probably beyond. Tourist workers as well as destinations are extremely vulnerable to the downturn in travel which has also negatively affected airlines, cruise ships, restaurants and hospitality, accommodation providers and events at all levels from the very local to national and international (Gossling et al., 2020). Gossling et al. (2020) discuss the implications of global change wrought by the pandemic and draw a relationship to climate change. They challenge the growth model, and anticipate changes in demand and consumption that may bring positive attitudes to the environment and climate change (Gossling et al., 2020).

As vaccinations begin in a limited number of countries in 2021 the global projection is that it will take at least 4 to 6 years to vaccinate the population of the world (Baraniuk, 2021). Once significant numbers of people have been vaccinated the spread of the virus is projected to slow sufficiently to enable some kind of return to movement and travel, but probably not at the scale before the pandemic (Gossling et al., 2020). Wealthy countries, such as Australia, have been able to cushion the economic impact on tourism and hospitality within the country through subsidy strategies such as Job Keeper, but even this has a phase out early in 2021. In contrast developing countries, which received most of their tourists from the wealthier countries, do not have the resources to protect their workers and businesses. While tourism may begin to recover in the developed world, it will lack international tourists as long as travel restrictions remain in place, while the developing world faces long-term loss of visitors.

## DRR Strategies for Tourism

Against this impact of the pandemic it is important to step back and reflect on the strategies of DRR that are most directly appropriate for tourists and their tourist destinations. Following a reflection on the best practice approaches to DRR we return to re-examine their effectiveness in the light of the impact of the pandemic.

The Sendai Framework is the most recent international strategy for DRR. The goal of the framework is broadly to

> prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience (UNDRR, 2015, p. 12).

Throughout the evolution of DRR, and reinforced in the Sendai Framework, has been the necessity to involve all stakeholders. This requires education and partnerships, inclusive of the individual tourist responsibility, within the contexts of the private sector, government and civil society. From national to local levels the goal is to promote and integrate disaster risk management approaches throughout the tourism industry, especially given the often heavy reliance on tourism as a key economic driver (UNDRR, 2015).

The aim of Sendai for all sectors and all hazards is to bring society to meet all four priority goals:

Priority 1: Understanding disaster risk
Priority 2: Strengthening disaster risk governance to manage disaster risk
Priority 3: Investing in disaster risk reduction for resilience
Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction (UNDRR, 2015).

Guiding principles emphasise that all sociological units, from international agencies down to each individual, have a shared responsibility beyond the traditional roles and expectations of governance and Corporate Social Responsibility. The individual must accept and understand risk assessment and hazard awareness, how and where to access information in order to practise informed decision making. Prevention of hazard risk applies to movement of people as well as household and community assessment, education and communication. For organisations and businesses, both within, as well as beyond just the tourism sector, there is the need to be engaged and participatory: insurance, legal, transport, medical. Government involves all levels—local, regional, state, national and international. Seyfi et al. (2020) call for an alignment of ideas, approaches, sanctions and embargoes. There must be an integration of all tourism stakeholders into disaster management, shaping and influencing DRR, as facilitators and drivers of good governance.

Edgell (2020) provides annual assessments of priorities for the tourism industry. At the beginning of 2021 these are identified as the *Ten Important World Tourism Issues For 2021* with a specific emphasis on COVID-19, safety, disasters and hazards:

1. Responding to the global 2020 COVID-19 pandemic virus that has caused international stress in the tourism industry
2. Determining the best international approach to regaining the economic contributions of tourism to the world economy
3. Identifying and addressing transportation issues, especially those of airlines and cruise ships, related to the COVID-19 virus
4. Investigating concerns for long-term impacts on the tourism industry of overtourism, climate change and global warming
5. Concern for safety, security, and health remains an important issue to address within the global travel and tourism industry
6. Necessity for increased local, regional, national, and international leadership in tourism policy and strategic planning

7. Educating travellers/businesses toward better management in the application of new technologies, in the tourism industry
8. Maintaining a sustainable, engaged, skilled and experienced workforce in order to deliver quality tourism experiences
9. Effect on travel from natural and human-induced disasters, health issues, humanitarian crises and political disruptions
10. Utilise tourism as a vehicle for bringing indigenous and rural populations out of their state of oppression and marginalisation (Edgell, 2020, paras. 1–10).

Edgell's review of priorities has altered from year to year according to current issues. As 2020 progressed, COVID-19 became the paramount issue for the tourist industry, such that four of the priorities listed above relate directly to the pandemic, which after 12 months has not been controlled or ameliorated. The beginnings of mass vaccinations, alongside controls on movement and interactions suggest that amelioration may occur progressively throughout the year, but WHO (2021) warns that the virus will remain a threat beyond 2021. Tourism and hospitality do not face a quick solution.

Edgell's four priorities that related to hazards may be considered as supporting principles for DRR in tourism. Number 9, the effect on travel from natural and human-induced disasters, health issues, humanitarian crises and political disruptions incorporates the pre-existing DRR principles around warning, information and response, specifically applied to travel. Number 5 rationally supports DRR from the perspective of the individual, group or business—concern for safety, security, and health remains an important issue to address within the global travel and tourism industry. Number 3 links the needs of both the travel providers and tourists—identifying and addressing transportation issues, especially those of airlines and cruise ships, related to the COVID-19 virus. These, however, are very general principles that rely upon existing DRR strategies around warnings, education, awareness and response. Edgell (2020) identifies these as priorities, so it falls upon emergency managers, governments and businesses to apply strategies and processes that are clearly defined at international and national levels (Australian Institute for Disaster Resilience, 2019, Haddow, 2004; Haddow et al., 2008; UNDRR, 2015). Priority 1, responding to the global 2020 COVID-19 pandemic virus that has caused international stress in the tourism industry, is clearly of paramount importance, but is very generic and goes far beyond the focus of DRR strategies. There are inherent contradictions, not of Edgell's making, between these priorities of disaster prevention, the safety of the tourist, and the livelihoods and viability of tourist destinations, and travel and tourist businesses.

In appreciating the challenges, there are also questions concerning the appropriateness of responses to the COVID-19 pandemic. Traditionally Disaster Management/Disaster Risk Reduction (DM/DRR) had a natural hazards focus. This has expanded to include terrorism, accidents and complex humanitarian crises, which often incorporated war. Despite Hyogo and Sendai recommendations there has been a slow uptake and appreciation of all hazards which includes pandemics and especially COVID-19. As DRR evolved, its emphasis shifted from science to

social science and from top-down authoritarian command and control to community engagement, partnerships. The contemporary consensus approach, agreed by researchers, advisors and policy makers is community engagement, collaboration and partnership, community-led awareness raising and ideally empowerment for resilience building (Anderson-Berry & King, 2005; Beirman, 2011; Becken et al., 2014; Cardona, 2004; Howes et al., 2013; Ingham et al., 2012; Morakabati et al., 2017; Nair & Dileep, 2020; Robertson et al., 2006; Seddiky et al., 2020; UNDRR, 2015; Wisner et al., 2012). These approaches of engagement and partnership have extended from general community resilience building to fully incorporate the tourism sector—residents and tourists, businesses, organisations, and infrastructure providers (see Figs. 2 and 3).

While the emphasis on DRR has been local hazards and community vulnerability and resilience, large scale disasters, like the pandemic, face the complications of geopolitics and international economics (local, state/provincial and national governments are involved with the roles of organisations like WHO, United Nations International Strategy for Destruction Reduction [UNISDR] and the medical sector). The COVID-19 pandemic has seen the adoption of strategies not common in confronting natural disasters. These include controversial responses such as border closures, travel bans, suspension of visa exemptions, as well as internal mobility restrictions, including full lockdowns and quarantine for incoming passengers. At

**Fig. 2** Tourism recovery on Patong Beach, Phuket 2009 (5 years after the Indian Ocean tsunami). (Image courtesy of Dr. Yetta Gurtner)

**Fig. 3** Backpackers and divers returning to Gili Trawangan 2019 (one year after the Lombok earthquake). (Image courtesy of Dr. Yetta Gurtner)

the same time there is enormous global awareness, communication and risk critique from all levels and sectors of society. Pandemic strategies are inconsistent between nations and even between internal states and jurisdictions. There is no universal approach or even consistent terminology (Aliperti et al., 2019). Nations and policy makers face an opportunity to re-evaluate not only pandemic response strategy but its relationship to the theoretical foundations of DRR and application to the needs of specific sectors such as tourism.

For the tourist industry DRR strategies aimed at controlling the pandemic disaster have proved to be the greatest component of the disaster impact. Our DRR consensus models of collaboration, community engagement and resilience building have been disregarded in preference for top-down authoritarian control. There is always an element of command and control during the response phase of a disaster. It is important to keep the public safe out of harm's way. As it is not feasible to directly intervene with people and households during the passage or impact of a hazard, education is aimed at preparing people to know what to do, to seek shelter and avoid risk. Consequently both the preparedness and recovery phases of the emergency management cycle emphasise community engagement and collaboration. Immediately after the hazard has passed, the first responders are members of the impacted community. Thus the top-down command and control is limited in time and is accepted by the public as necessary for safety.

COVID-19 lockdowns and travel restrictions have received some level of acceptance because people recognise that it has been for their safety and that on that level it has been effective. However, it has amounted to a state of pseudo martial law, varying between nations and jurisdictions, over most of 2020, with a probability of some level of restriction continuing for another year. Baum and Nguyen (2020) argue that restrictions on people's mobility and travel are an infringement of human rights. Whether or not this is legally, or ethically arguable, it is an attitude that is held and expressed by large numbers of people. There have been many demonstrations and protests against the COVID-19 restrictive measures and the power of government to impose them. The restrictions on movement, travel, gatherings and behaviour (social distancing, wearing masks and being tested) as well as quarantine are enforced by law, with many people having been arrested and fined for infringements. Consequently, the restrictive measures have become politicised and polarised. In the midst of this controversy the tourism and hospitality industry has become a primary victim (notwithstanding the million people who have died).

It is the purpose of DRR to avoid or lessen or mitigate the impact of a hazard—to reduce the risk. Hazards that impact on humans and their communities bring death, injury and destruction, which include loss of livelihood. In the case of the COVID-19 pandemic, DRR strategies have tackled death and illness, but in doing so have been the cause of economic destruction and loss of livelihood. In past decades, at worst DRR was in some cases ineffective or inadequate. The response to this pandemic disaster is unprecedented in that it has been the DRR strategy itself that has caused and exacerbated the destruction wrought by the disaster. While it is facile for academic researchers to criticise difficult decisions in the face of a very different type of disaster, we were part of our small local disaster management group that gave local approval for the pandemic policy of isolation and restriction. We share in the responsibility, and in the consequences for emergency management and disaster risk reduction in the future.

## Conclusion

This chapter has outlined the evolution of approaches to disaster risk reduction and emergency management. The focus shifted from top-down command and control to community engagement, collaboration and partnerships. Awareness raising, hazard education and information built upon community capacities and strengths contributed to the building of community resilience. The tourism industry—operators, businesses, managers and less directly the tourists themselves—participated in this shift in emphasis. Tourist safety and the sustainability of destinations have been best practice outcomes, not only in the face of natural hazards but also terrorism and accidents. The COVID-19 pandemic called for a novel approach to risk mitigation, in which safety was placed as the priority to the exclusion of livelihoods. The response also shifted DM/DRR to a command and control approach primarily driven by the medical sector. The isolation and restricted movement strategies that

have shown some effectiveness in mitigating deaths and slowing the spread of the virus had a negative effect of causing economic dislocation and loss of livelihoods, especially in the tourism industry. It is demonstrated that the impact on the tourist industry has been catastrophic. The DRR strategy is consequently contested and has become politicised. Fortunately, as the pandemic has progressed some lessons have been learned such that restrictions can be much more targeted and less disruptive. Planning for future pandemics needs serious reflection on DRR practice in order to reappraise and, as needed, to change strategies, adapt to a hazard risk that is radically different, and recalibrate disaster management practice.

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# Tourist Injury

**Richard C. Franklin, Lauren Miller, Kerrianne Watt, and Peter A. Leggat**

**Abstract** Injury is a leading cause of death for tourists and a common complication of travel. Advice for travellers predominantly focuses on infectious diseases. Injury is contextually specific (e.g., environment, age, gender), and consequently, prevention strategies to reduce injury should also be context-specific. There are few recent global studies on tourist injuries; indeed, it is impossible to measure tourist injuries on a global scale (and even at a country-specific level), due to various challenges. Some visitor safety information is accessible to tourists, but a broad, multi-modal approach encompassing novel approaches is required to reach those most at risk. This chapter describes the risk factors and prevention strategies for the most common injuries sustained by tourists. This includes the common mechanisms such as motor vehicle crashes, drowning, envenoming, injury from alcohol use, burns, falls, and violence.

**Keywords** Injuries · Tourists · Prevention · Safety · Risk-factors · COVID-19

## Introduction

Travel broadens the mind through introducing us to new cultures and experiences. Some experiences can take us out of our comfort zone and inspire us to do things we would not normally do in our home environment. However, with travel comes risk. Exposure to different food and food standards, traffic conditions, aquatic environments, and extreme adventure activities can lead to injury. While people who travel are often concerned about risk of infectious diseases (such as food poisoning, malaria, dengue fever, tuberculosis, typhoid, hepatitis, etc.), it is injury that is the most likely cause of preventable travel-related death (Franklin & Leggat, 2015). The magnitude of injury deaths varies substantially by country, however, globally

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_8

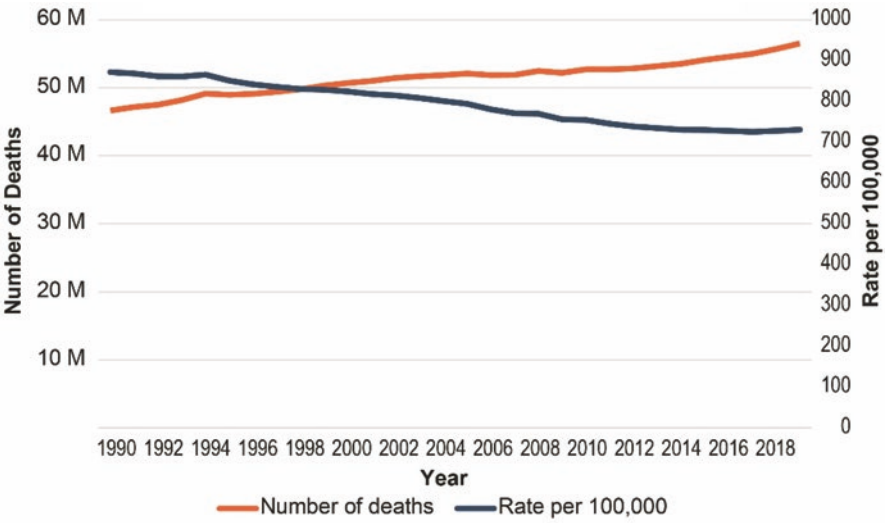


**Fig. 1** Trend over time for global injury incidence rate and number 1990–2019. (Source: Data from Institute for Health Metrics and Evaluation (IHME), 2021)

injury deaths have increased over the last two decades (from 4.3 million in 1990 to 4.5 million in 2017) (James et al., 2020a). When population size is taken into account, injury mortality has decreased during this period—rates have decreased from 1079 per 100,000 persons per year to 738 per 100,000 persons per year. Conversely, morbidity due to injury has increased; incidence of injury has increased from 354 million in 1990 to 520.8 million in 2017 (per 100,000 persons per year) (James et al., 2020a). These data provide context for the global burden of disease due to injury, but do not distinguish travellers who become injured (Fig. 1).

## What Is an Injury?

Injury occurs when there is an exchange of energy (mechanical, chemical, thermal, electrical, radiant, and includes lack of essential agents such as oxygen or heat) that impacts a person beyond their tolerance, and results in physical damage (Gibson, 1961; Haddon, 1963). More recently, this definition has been expanded to include psychological trauma, although the focus of this chapter is physical injury. Injuries are usually categorised as intentional (where the injury is the result of intentional use of physical force or power by self or others) or unintentional. This is a fundamental distinction in injury prevention, because the process of preventing intentional versus unintentional injuries requires vastly different strategies.

Injuries are most frequently described by the mechanism through which damage is sustained (e.g., motor vehicle crashes, falls, drowning, burns, poisoning/chemical

exposure/envenomation, etc.), and can also be described according to the type of damage sustained to the body (e.g., fracture, head injury, superficial injury), and the severity incurred during the injury (fatal versus non-fatal; major versus minor). While this chapter will have a major focus on death from injuries in tourists, there are many other possible outcomes following an injury, including permanent or temporary disability (ranging from minor to severe), minor damage to the body and no injury. For those who sustain a permanent disability, this may include varying degrees of spinal/brain damage/other organ damage, the loss of limbs, eyesight, hearing and cognition.

## Common Causes of Injury in Travellers

Common causes of morbidity and mortality for tourists include road traffic crashes and water-related incidents (such as drowning), often with alcohol and drugs contributing (Wilks & Coory, 2002). Tourists of course experience injuries due to other mechanisms (commonly these are falls, burns, cuts, violence, envenomation, poisoning).

### *Road*

Driving, riding, and walking are great ways to explore novel places; however, they are not without risk. Road-related fatalities and injuries are common across the globe with 1.35 million deaths annually and a further 20–50 million suffering non-fatal injuries on the world's roads (WHO, 2020).

Road-related deaths as a traveller are unfortunately all too common with people being injured while driving or as passengers in cars, riding motorbikes or bicycles, walking and less commonly as passengers in other vehicles (bus/train/tram) (Wilks, 1999; Wilks et al., 1999). While many tourists are concerned about road-based crimes, such as car jackings (Spencer, 2013), it is the more common road-related incidents that the traveller needs to be aware of to ensure the safety of all who travel (including infants who require a child-specific restraint).

There are a range of common reasons that travellers are involved in road-related incidents, including: lack of familiarity with the location; different road rules and infrastructure compared to home (e.g., driving on different sides of the road, see Fig. 2); different (and often, lack of) safety standards including poor quality vehicles; the mix and volume of traffic (from pedestrians to rickshaws to cars and heavy vehicles), lack of enforcement of road rules; alcohol and drugs; inexperience with vehicles (e.g., hire cars), especially motorcycles, mopeds, and scooters; poor visibility, lighting, road conditions; and distraction from devices, passengers in the vehicle, and travel (new sights/sounds) (Franklin & Leggat, 2015; Page & Meyer, 1996; Stewart et al., 2016; Wilks, 1999).


**Fig. 2** Driving in unfamiliar conditions is a challenge for tourists. (Source: Photo by Thandy Yung on Unsplash, used with permission)

## *Water*

Travel to aquatic locations is common, as there are a plethora of activities near, on and in the water for tourists to enjoy. Travel also occurs on the water in a range of vessels. For those travelling on the water common risks include drowning, slips, trips and falls, violence, cold water exposure, and trauma (Peden et al., 2016). Drowning is by far the most common cause of death around water and occurs across all age groups and swimming abilities; however, by far those at greatest risk are young children, non-swimmers and those who are intoxicated (Cornall et al., 2005; Franklin et al., 2020; Peden et al., 2020a; Reijnen et al., 2018).

Strategies to ensure the safety of people in on or around water are appropriate for all, not just tourists (Barnsley & Peden, 2018). However, there is a need for different strategies to ensure the safety of tourists. This need for differing strategies is due to a wide range of reasons; common reasons include language (this impacts on capacity to interpret safety warnings), previous experience with water including swimming skills, a relaxed attitude to safety due to being on holidays, drinking alcohol/consuming other substances, and lack of supervision (Peden et al., 2016; Peden & Franklin, 2020).

### *Alcohol and Drugs*

Travelling involves meeting new people, and for many, meeting new people can involve the consumption of alcohol and/or illicit drugs in a social setting. Alcohol/drugs can increase the risk of injury through the resulting cognitive and psychomotor effects (Eckardt et al., 1998), including perception, judgement, balance, vision, co-ordination, speech, attention span, reaction time, vigilance, tracking, responding to visual/auditory stimuli, and mood (Jaaskelainen et al., 1995; Perrine, 1974). Importantly, the impairment induced by alcohol/drugs exists for some time after the substance is metabolised and excreted (Anderson & Dawson, 1999; Farnham et al., 2017; Hughes et al., 2011). Not all injuries involve alcohol and not all destinations may have the same risks of alcohol/drug involved injury when visiting.

Alcohol is considered a contributing factor in fatal and non-fatal injury events, however the true magnitude of alcohol-related injury is not well-understood on a global scale. Many studies do not even report if alcohol was involved in an injury (McInnes et al., 2002), and often researchers do not have access to toxicology reports (Flaherty & Caumes, 2018; Ho et al., 2009; Peden et al., 2016). Certainly, there is no standard requirement for routinely collected data sets to record alcohol involvement in any injuries. Despite these limitations, alcohol is a known contributor to injuries in tourists, and has been identified as of particular concern in motor vehicle crashes (Hughes et al., 2011; McInnes et al., 2002), and drowning (Peden et al., 2016).

## Why Is Injury and Tourism Important?

Before COVID-19, the ease of travelling to different countries and immersing ourselves into diverse cultures made the world feel a little smaller. Travelling inspires people to experience new things different from their normal life, which usually involve unfamiliar activities in unfamiliar environments (Wilks & Coory, 2002). Before COVID-19, visitors were venturing increasingly away from the well-known tourist locations and visiting untouched areas that even local residents were unfamiliar with. With new adventures and experiences come risks depending on the activity, destination and behavioural choices. Tourism for some countries has an important economic factor, therefore eliminating the tourism industry is not a feasible (or desirable) option to prevent travel risk. Yet tourists do experience injury while travelling, and this can impact negatively on the tourism industry.

## *Increase in Risk-Taking When Travelling*

Before COVID-19, the world was travelling much more. The travelling experience extends to actively choosing to participate in activities in which inherent risks exist, and for many, these activities are unfamiliar. These include water sports (diving, swimming, snorkelling, boating, water-skiing, jet-skiing, etc.), off-road driving, hiking, extreme sports, ecotours, drinking, or visiting beaches. The need to experience new things outside our comfort zone is becoming more of a lifestyle while travelling, with social media leading the way in influencing how and where people "should" travel (International Consultants for Education and Fairs [ICEF], 2020). Driving on the opposite side of the road and swimming in unfamiliar waters are the most common activities that result in injury or death. Drinking excessively and illicit drug use are also contributing factors and are known to occur in young travellers (Farnham et al., 2017; McInnes et al., 2002; Nield, 2011; Reid, 2017; Sanford, 2004). Key factors involved in risk-taking behaviour, specifically in transportation crashes, included the length of travel and previous travel experience. Travelling longer may construct a more complacent attitude, with recent literature showing 90% of a travel study cohort to have ignored specific health advice (Farnham et al., 2017).

## *Considerations for Travel Post-COVID-19*

Travelling post-COVID-19 will place more emphasis on the prevention of disease transmission than injury prevention. COVID-19 transmission prevention has become common, with populations enforcing the need to wash hands, to not stay too close to others and to wear masks when in highly populated public areas. However, COVID-19 has also increased the desire to travel, especially in populations that have experienced lockdown. Border closures increase the demand for travel, not only for economic reasons but also for the ability to get away from being in isolation. An overall increase in travel will re-introduce the risks in travelling to countries and unfamiliar locations.

## *Aim*

So far, the definition of injury and common causes of injuries in tourists, have been briefly summarised. The remainder of this chapter explores the common injury risks and strategies to ensure the safety of travellers, at both an individual and a system level.

## Review of Literature and Theoretical Frameworks

There is a large volume of research exploring injuries to tourists. Topics range from all mechanisms to focusing on specific mechanisms such as road-related (Bellos et al., 2020; Wang et al., 2016; Wilks, 1999; Wilks et al., 1999) or drowning (Clifford et al., 2018; Gomez et al., 2018; Moran & Ferner, 2017; Peden et al., 2016; Reijnen et al., 2018) to injuries due to unique situations such as taking a "selfie" (Jain & Mavani, 2017). Tables 1, 2, 3, 4, 5 and 6 set out a selection of published research on injuries experienced by tourists, including for overall injury (Table 1), and then by mechanism of injury (Tables 2, 3, 4, 5 and 6). A systematic method was used to search literature from MedLine. Manuscripts taking a global perspective on tourist injuries, published from 2010 to 2020, were included. Papers on injuries to tourists specific to one country or mechanism of injury were also included but due to the volume of work only papers from 2016 to 2020 were included.

Overall, most studies were descriptive in nature (case-series or descriptive epidemiological), and focused on injury rather than specific mechanisms of injury. Data sources included national or regional incident registries followed by death registries. There were some studies on falls, animal-related injuries, violence, substance use and selfies, indicating potential areas that will require further investigation. Falls were also identified as a common injury in tourists. Differences in travel behaviour have been identified recently, such that there has been a trend to visit more "non-touristic" areas; with travellers venturing to more isolated or remote places in order to see and experience picturesque environments. These places include secret waterfalls, unexplored caves, isolated water bodies, or unfamiliar hiking trails not really known to the public. Falls commonly occur in such locations, especially when venturing too close to cliffs or on top of a waterfall, either to get the perfect view or to take the perfect picture for social media (Flaherty & Caumes, 2018; Flaherty & Choi, 2016; Jain & Mavani, 2017).

Much of the existing literature on injuries overall is based in Europe, however these studies have identified that tourists residing in Europe travel overseas and experience injuries in sub-tropical to tropical countries. In addition, those from Europe were identified as experiencing high rates of death from injury overseas, potentially identifying a specific visitor group of interest when looking at visitor injuries outside the European Union (EU) (Leggat & Wilks, 2009). Regardless of travel location, road traffic crashes and drowning were the main mechanisms of injury identified within the studies on tourists injury overall. Risk factors across all mechanisms of injury were being male, aged 20–35 years, and alcohol was cited as a contributing factor, but not investigated thoroughly. Other risk factors for injury included travel experience, days spent travelling, driving on the opposite side of the road, previous swimming experience and partaking in risky behaviours, such as alcohol and drug consumption.

**Table 1** A summary of global papers on overall injuries in tourists, 2010–2020

| Overall injuries | | | | | | |
|---|---|---|---|---|---|---|
| Author(s)/ reference | Country | Years covered | Data source | Study design | Sample | Risk factors/ findings |
| Reid (2017) | Global | 2013–2015 | Media | Case-series | 3121 tourist fatalities | Swimming and boating were the leading causes of mortality ($n$ = 1035, 33.2%) |
| Behrens and Carroll (2012) | Global | Up to 2011 | WTO, WHO and professional literature | Review | | Injuries account for a high proportion of deaths—road injuries are the major cause. High-risk groups included older travellers and immigrants visiting friends and family. Causes of mortality and morbidity when travelling included road crashes, high-risk and sporting activities. |
| Mansanguan et al. (2016) | Thailand | 2015 | Questionnaire/ survey | Cross-sectional | 420 backpackers enrolled in study | Unintentional injuries comprised 7.1% of health problems in tourists. Most travellers were European. Risk factors for injury included, age, gender, nationality, purpose of travel and pre-health travel advice. |

(continued)

**Table 1** (continued)

| Overall injuries | | | | | | |
|---|---|---|---|---|---|---|
| Author(s)/ reference | Country | Years covered | Data source | Study design | Sample | Risk factors/ findings |
| Oldenburg et al. (2016) | Germany | 1998–2008 | Death data | Case-series | 135 German shipboard deaths | Average crude death rate was 1.8 per 100,000 German passengers. Three injury deaths were recorded (3.5%)—2 drowning cases and 1 fall |
| Farnham et al. (2017) | Switzerland (travelling to Thailand) | 2015 | Questionnaire/ survey | Cross-sectional | 101 travellers were recruited; 75 completed the study | 22.7% ($n$ = 17) experienced an injury. Of these, 40.0% ($n$ = 30) incurred a wound/ cut and 14.7% ($n$ = 11) a bite from an animal. Risk factors/ predictive factors: days spent travelling, age, previous travel experience, and reporting a sports injury. 53.3% reported becoming intoxicated due to alcohol, 5.3% taking marijuana, and 2.7% using other substances. |
| Kim et al. (2019) | South Korea | 2013–2017 | Hospital data | Case-series | 33 patients were repatriated during the study period | Most common mechanism of trauma in order: pedestrian incidents, motor vehicle crashes, falls; water sports-related; and drowning. |

(continued)

**Table 1** (continued)

| Overall injuries | | | | | | |
|---|---|---|---|---|---|---|
| Author(s)/ reference | Country | Years covered | Data source | Study design | Sample | Risk factors/ findings |
| Heggie (2018) | Lake Powell, Arizona, US | 1959–2005 | Death data | Case-series | 351 incidents resulting in 386 deaths during the study period | 282 of the 386 deaths were unintentional injuries (73%) and, 18 were intentional (13 self-harm and 5 were homicides). Out of all unintentional injury deaths, boating (29%) and swimming (22%) were the most common pre-death activities. |
| Gstaettner (2020) | Australia | 2011–2017 | Incident register Western Australia | Case-series | 459 visitor incidents were recorded | 77 ± 11 incidents per year. Most incidents (58%, $n = 264$) involved visitors from WA, 16% ($n = 75$) were international visitors, and 11% ($n = 50$) visited from out of state. Minor incidents accounted for 48%, 43% were major, and 8% were fatal. Trip/ slip incidents were most frequent. Fatalities were mostly falls from a height or water-related incidents. |

**Table 2** A summary of papers on transport-related injuries in tourists, 2016–2020

| Road traffic crashes | | |
|---|---|---|
| Author(s)/ reference | Bellos et al. (2020) | Wang et al. (2016) |
| **Country** | Greece | US |
| **Years covered** | 2011–2015 | 2006–2012 |
| **Data source** | Incident register | Incident register |
| **Study design** | Case-series | Case-series |
| **Sample** | Total of 39,720 crashes from police reports | 1092 crash drivers |
| **Risk factors/ findings** | Risk factors include: nationality, season, purpose of travelling, and region. Tourism as the purpose of road travelling was found to be high in road crashes compared to other purposes of travelling. | Risk factors include: older tourists, not using safety restraints; environmental factors (dim light conditions, road surface and unfamiliarity with route) |

## Travel-Related Injury

There are a range of risks when travelling, some more obvious than others, which is why pre-travel information and travel advice is essential in preventing injuries while travelling to new places (see *Part I Health: Pre- and Post-Travel Medical Consultations*). The following sections explore the different travel-related injury risks, and prevention strategies that are current or require further exploration. Common travel-related risks include road risks, drowning, envenoming, burns, alcohol and selfies.

### *Epidemiology*

The epidemiological features of tourist injuries are dependent on travel location and duration, visitor demographics, travel activities, alcohol or drug consumption, and overall risk awareness.

### *Exposure*

Exposure is an important consideration for injury prevention strategies as it aids in determining those who are more at risk, or who are more likely to partake in risky activities. For example, not everyone who travels may go to the beach or go swimming, therefore risk exposure for drowning is not high in these people. Risk exposure varies by location, activities, and purpose of travel. Education about risk

**Table 3** A summary of papers on drowning in tourists, 2016–2020

| Drowning | | | | | | |
|---|---|---|---|---|---|---|
| Author(s)/ reference | Country | Years covered | Data source | Study design | Sample | Risk factors/findings |
| Peden et al. (2016) | Australia | 2002–2012 | Death data | Descriptive epidemiology | 2870 drowning deaths reported | 123 international tourists drowned over the 10-year period. Average yearly rate of drowning was 0.22 per 100,000. Most common drowning locations were: beaches (39.0%); ocean/harbours (22.0%); inland waterways (17.1%). Risk factors were being male (78.9%), aged 25–34 years (22.8%), and being European (45.5%). |
| Reijnen et al. (2018) | Amsterdam, Netherlands | 2011–2015 | Incident register | Descriptive epidemiology | 88 fatal drownings and 515 non-fatal drownings | 67% of drowning events involved tourists. Risk factors were: being male (82%); alcohol (up to 55%). 19 drowning events were suicide. |
| Clifford et al. (2018) | Australia | 2017 | Questionnaire/ survey | Cross-sectional | 254 international students participated in a survey on water safety | Nearly all students received no beach safety information before visiting Australia (92%). 85% did not know the Australian beach safety flag system and only 24% were able to identify or describe dangerous rip currents. |
| Gomez et al. (2018) | Spain | 2013–2018 | Incident register | Case-series | 3758 drowning incidents involving 4736 people (819 cases extracted) | 581 (59.23%) fatal drowning events, of which 448 (45.67%) were men. Water conditions (rip current, dumping waves,) were identified as the cause in 20.61%, fall or dive in 16.04%. |

**Table 4** A summary of papers on envenomation in tourists, 2016–2020

| Envenomation | | | | | | |
|---|---|---|---|---|---|---|
| Author(s)/ reference | Country | Years covered | Data source | Study design | Sample | Risk factors/findings |
| Suan et al. (2016) | Malaysia | 2012–2014 | Hospital data | Case-series | 759 patients presented with jellyfish stings during 3-year period | Average age: 26.7 years, 59.4% were males, 68.1% were tourists. No deaths were reported. |
| Henn et al. (2016) | France | 2008–2013 | Incident register—tropical disease unit | Case-series | 3315 travellers | 43 potential marine envenomation (37 confirmed) Median age: 42 years (range: 25–68). Main travel destinations were South-East Asia followed by islands of East-Africa. Most cases were caused by corals ($n$ = 11) followed by stonefish ($n$ = 10) and jellyfish ($n$ = 8). |
| Mghili et al. (2020) | Morocco | 2018 | Hospital data | Case-series | 1321 patients presented with *Pelagia noctiluca* stings | 61% were Moroccan tourists, 29% were local, and 9% were foreign tourists. The majority were aged 11–20 years; most were males. |

perceptions and potential exposures is therefore important in preventing injury and should be provided to travellers and incorporated when making travel plans.

## *Risk*

There are a range of risks identified in the literature that may increase injury in tourists. A summary is provided below by area.

**Table 5** A summary of papers on selfie-related injuries in tourists, 2016–2020

| Selfies | | | | | | |
|---|---|---|---|---|---|---|
| Author(s)/ reference | Country | Years covered | Data source | Study design | Sample | Risk factors/findings |
| Jain and Mavani (2017) | Global | 2014–2016 | Review | | 75 people died while attempting to photograph themselves in 52 incidents | Average age 23.3 years, range 14–66. 82% were males. Largest age group was 0–25 years. Falling was the most common cause followed by drowning. |
| Bansal et al. (2018) | Global | 2011–2017 | Media | Case-series | 259 deaths while clicking selfies in 137 incidents | Average age was 22.94 years. 72.5% occurred in males. The highest number were reported in India, followed by Russia, the US, and Pakistan. Top mechanisms of injury resulting in death were drowning, transport, and falls. The largest number of deaths were in the 20–29 year age group. |
| Flaherty and Choi (2016) | Global | 2015 | PubMed and Scopus databases | Review | | Lack of situational awareness and distraction exposes the traveller to hazards. Mechanisms of injury include falls, attacks from wild animals, electrocution, and road traffic incidents. |

## *Road*

Studies identified in the literature relating to road injuries in tourists are summarised in Table 2. Travelling to different countries may require visitors to drive on the other side of the road, compared to their home country. Driving on the other side of the road was consistently identified as a risk factor in motor vehicle crashes (Franklin & Leggat, 2015; Page & Meyer, 1996; Stewart et al., 2016). Road rules also differ by country, signs may be in different languages, subjecting visitors to try and navigate themselves to their unfamiliar destination without guidance. Speed differences may also add risk—the speed limits on highways and other roads differ markedly between countries, which can result in tourists driving faster or slower than the rest of the traffic. Renting vehicles (different models, sizes) and different types of vehicles (such as scooters, mopeds, or quad bikes), also has risks. Safety issues include inexperience in driving/riding, inattention, and lack of protective clothing/footwear and/or equipment (seatbelts/helmets) (Blackman & Haworth, 2013; Wilks,

**Table 6** A summary of papers on child injuries in tourists, 2016–2020

| Drowning | | | | | | |
|---|---|---|---|---|---|---|
| Author(s)/ reference | Country | Years covered | Data source | Study design | Sample | Risk factors/findings |
| Han et al. (2010) | Global | 2008 | Questionnaire/ survey | Cross-sectional | Of 1704 respondents, 131 had travelled recently, the majority were between 14–18 years of age ($n$ = 75, 57%) and female ($n$ = 78, 59%) | 16.7% sought out pre-travel medical care, and 20% experienced an illness or injury during travel, 83% of which were travelling with their parents. Most common injury experienced was motorised vehicle crash. |
| Pye (2011) | Global | Up to 2010 | Review | | Recommendations | Road travel: Second leading cause among young people (5–14 years) in the world—car seats for under the age of 4, seatbelts and insurance. Drowning: Second leading cause of death in child travellers. Attributed to playing in water and falling into water—with boys higher than girls. |
| Nield (2011) | Global | 1991–2011 | | | Recommendations and health advice | Injury prevention, including for adolescents: avoid driving on unfamiliar roads, avoid drinking and partaking in illicit drug use, and to partake in water sports, hiking, biking, and other activities with others. |

1999). This includes lack of or inappropriate child seats and restraints. Scooters or mopeds may be the main form of transportation in some countries, encouraging visitors to drive these unfamiliar vehicles on unfamiliar roads (Blackman & Haworth, 2013; Wilks, 1999). Environmental factors such as inadequate roadways, spending more time in vehicles to get around from location to location, also contribute to motor vehicle crashes in tourists (Wilks, 1999; Wilks et al., 1999). Other risk factors include:

- Road design
- Poor maintenance of roads
- Different road rules (and tourists not following them)
- Lack of safety equipment on roads (e.g., guardrails)
- Alcohol use
- Lack of seatbelts or seatbelt use
- Dangerous weather conditions
- Lack of emergency care

## *Drowning*

Drowning is a common cause of death in travellers, due to their unfamiliarity with the host country's water conditions, swimming and drinking alcohol, and swimming ability and inexperience (Leggat & Wilks, 2009; Peden et al., 2016). Recent studies have shown oceans/beaches followed by inland waterways were the most common drowning locations, with the majority of victims being male (Peden et al., 2016; Reijnen et al., 2018). Knowledge of beach and water safety were key factors in studies, indicating the lack of knowledge by visitors on certain water-safety factors before visiting destination countries, such as Australia (Clifford et al., 2018; Wilks, 2019). Risk of drowning in travellers can occur in all ages. Travelling to countries where water-related activities or sports are popular, or wanting to swim in pristine lakes, rivers or tropical oases can be dangerous if visitors are not aware of their surroundings, water conditions or swimming in monitored areas (see also *Part IV Contexts: Safety in Coastal and Marine Tourism*). Travellers may know how to swim, but may overestimate their ability in waters they have never swum in before.

## *Envenomation*

The risk of being envenomated for anyone is low, with 1.06 (0.7–1.32) deaths per 100,000 for males and 1.0 (0.5–1.35) deaths per 100,000 for females in 2019 globally (Institute for Health Metrics and Evaluation (IHME), 2021). Despite the overall low global risk, many international visitors are concerned about this as a potential risk, depending on travel destination (see Fig. 3). The misconceptions about being

**Fig. 3** Lifesaver with jellyfish. (Image courtesy of Surf Life Saving Australia, used with permission)

bitten or stung when travelling to high-risk envenoming countries can mislead visitors on what they should be concerned about. However, there are risks when visiting locations with venomous creatures and not all travellers are familiar with these risks, nor are they familiar with the seasonality of some venomous creatures, particularly marine organisms (Harrison et al., 2004). Such lack of awareness and knowledge on the subject before and during travel identifies an area in which educational prevention strategies should be implemented. Risks of marine and onshore envenoming should be explicitly communicated to tourists visiting these areas (Mohd et al., 2016). The global burden of envenoming in tourists is difficult if not impossible to quantify.

## *Campfires and Burns Risk to Children*

Burns have received little focus in studies of tourist injuries. Some studies have focused on children, and the risk of burns around campfires and post-campfires (i.e., while the ground is still hot). Burn-related injuries are often significant, requiring multiple surgeries to repair. Burns in Australia are known to increase during school holiday months for both adults and children.

### *Selfies*

The act of taking a selfie has become common when visiting exotic locations and is encouraged via social media to influence others and promote travel locations. However, through the desire for the perfect photograph comes risk and reduced awareness of one's immediate environment (Flaherty & Choi, 2016). Travellers partaking in adventurous activities are more likely to be vulnerable when taking selfies such as while climbing a waterfall, standing on or near a railway line, and on or around a moving vehicle. Alcohol also contributes to the dangers when taking a selfie under the influence, increasing a lack of awareness of their surrounds. Selfie-related deaths have occurred from falls, drowning, rail accidents, gunshot, electrocution, and contact with an animal (Bansal et al., 2018; Jain & Mavani, 2017). Most selfie-related deaths occur in those aged less than 25 years (Jain & Mavani, 2017).

Females have been found to take more selfies; however, risk-taking behaviour related to selfies is more common in males, resulting in a higher number of deaths (Jain & Mavani, 2017). One suggested reason for an increase in selfies over time is that people want to be recognised as leading an exciting life (Bansal et al., 2018; Jain & Mavani, 2017). Deaths from taking a selfie suggests a rising addiction in wanting to take the perfect photo to post on social media, making people go to the extreme by risking their lives to take such a photo (Jain & Mavani, 2017). Further research is needed to explore the role of selfies in tourist injuries to fully understand the potential risk of selfies when travelling (Flaherty & Choi, 2016).

## Prevention

Prevention strategies have not changed significantly over time; but they have had to adjust and explore diverse ways in which to inform travellers on the types of injury risks. With new activities, such as taking selfies, comes the need to find new ways in which to warn and prevent visitors from injuring themselves. The following discusses prevention strategies (whether old or new) by mechanisms of injury and where safety strategies may need to expand outside the tourism industry and healthcare centres.

### *Road*

Strategies for the prevention of road-related injuries include seatbelts and child safety seats, fatigue management, helmet use, not driving under the influence of alcohol or drugs, avoiding night driving, not speeding, reducing distraction, knowing the local road rules, avoiding crowded/overweight/top-heavy buses or minivans, using cross walks, checking before crossing the street, watching what locals do,

using official taxis especially if intoxicated and especially avoiding night trips on mountainous terrain particularly in the wet (Leggat & Klein, 2001).

When travelling to unfamiliar destinations, tourists should familiarise themselves with the local laws, make sure when renting a vehicle that there are seatbelts and airbags and be vigilant to local road hazards (Stewart et al., 2016). Signage may also differ therefore familiarising oneself with the local road signs, prior to driving, will help improve safety (Stewart et al., 2016). Prevention strategies such as pre-travel advice, and personal research on destination, should be encouraged prior to travel if not prior to leaving home country, and not just on arrival.

## *Drowning*

Prevention strategies for the aquatic environment depend on setting and age; however there are some general principles that should be followed to prevent drowning. These include making sure you familiarise yourself with the local conditions before entering any body of water (i.e., check depth, temperature, water flow, submerged objects, etc.), understand your own ability, when was the last time you went for a swim and not just a play in the water, how far can you swim in a pool remembering that this is flat still clean water. Alcohol and water do not mix and if you are planning on drinking make sure that you do it after being in or around water. (Peden et al., 2017, 2018).

For children under the age of five supervision is essential, this means that you can see and hear the child, they are within arm's reach so you can respond quickly if something goes wrong, you are with them all the time they are in or near the water and you are prepared, this includes making sure you have all the equipment that you need (towels, sunscreen, water, etc.) ready and that if you do need to leave the location then you take the child with you (Peden & Franklin, 2020). You may be going to an area where there are many other parents and children but don't assume that they will be keeping an eye on your child. Lifeguards are not babysitters and have responsibility for all people across the aquatic location.

If staying somewhere close to water make sure that if the child is playing, they are not able to access the water location, i.e., there is a barrier between them and the water such as a locked door, or gate to a pool. As the child ages their supervision will change, for children 5–9 years you still need to be watching the child, however you can move away from where they are noting that this is not an opportunity to read a book or look at your phone. You also need to set rules so that it is clear when they can go into the water. For a child over 10, check on them on a regular basis, make sure they know what the rules are and play safely (Peden & Franklin, 2020; Peden et al., 2020b; Wallis et al., 2015).

There are a range of other groups and activities which need to be considered when we are thinking about safety, these include older people, people who have been drinking, those whose swimming and water safety skills are poor, and those with underlying medical conditions including disabilities (Franklin et al., 2017;

Mahony et al., 2017). The prevention strategies remain the same. With consideration for underlying medical conditions there is a need to visit your doctor before travelling and finding out what the impact of your condition might be on undertaking physical activity, this is especially important for people who are undertaking snorkelling or scuba diving (Franklin et al., 2017; Mahony et al., 2017; see also *Part IV Contexts: Safety in Coastal and Marine Tourism*).

When undertaking boating or on watercraft where wearing a life jacket is an effective safety strategy (Willcox-Pidgeon et al., 2019), these should be size and condition appropriate as there are different rated lifejackets based on conditions and activity. People often forget about the risk of travelling on boats as a mode of transport, however there are risks involved, make sure the vessel is not overloaded, there are lifejackets for all the travellers, it is in good working order and the weather conditions are appropriate for travel. Emergency Position Indicating Radio Beacons (EPIRBs) are also an essential device to carry as these will alert the authorities if there is a problem and let them know where you are located.

## *Envenomation*

Prevention strategies target encouraging and implementing public awareness campaigns with variable effectiveness depending on the type of envenomation (i.e., snake or jellyfish) and are usually only available once in the country. Other prevention strategies include the use of stinger suits, to stick to the paths while bushwalking, staying in between the flags when swimming, and access to envenoming information. Previous management strategies, for example Australian jellyfish stinger prevention, included focusing on a four-factor model: Anticipation, Calculation, Preparation and Attention (Gershwin et al., 2010). These factors incorporate the understanding of what visitors anticipate when travelling in Australia and how strategies will implement safety procedures without completely taking away from the adventure experience. Calculations are to assess the burden and risk of being envenomed, whereas preparation includes Personal Protective Equipment (PPE), access to medical care and the accessibility of information. The final factor includes attention in which there is a risk when swimming in the ocean, such strategies include signage, lifeguard/lifesavers and overall communication of the risks (Gershwin et al., 2010).

Other envenoming creatures such as snakes are not as popular in the awareness campaign area in comparison to jellyfish. Although information is accessible to the local public of endemic regions, visitors may not be as aware especially when having to identify the lethal snakes from the harmless. Tourists in countries with high snake bites cases, particularly India, are not necessarily treated right away, or are treated by a non-health professional, resulting in death (Dandona et al., 2018). Antivenoms are normally in short supply or are not located or accessible when required. Although snake bites are rare, encountering one while camping or hiking is likely, depending on the country and region in which travellers choose to venture.

Envenoming is preventable and normally treatable through public education, accessible anti-venoms and training healthcare workers and health professionals (The Lancet, 2017). A greater emphasis on community education and tourist awareness should consider focusing on pre-travel information and safety awareness campaigns in the visiting country, such as being able to identify deadly snakes and the use of appropriate clothing and/or equipment when swimming or hiking.

## *Burns*

Burns should be considered a risk from campfires or bonfires and also a potential risk in buildings or housing accommodation. Not all countries have building codes or have appropriate emergency services to address fires. This needs to be considered when choosing accommodation before or while travelling. Risk prevention strategies towards burns from building fires include: staying on lower levels of your accommodation to make escape easier, staying in accommodations with smoke detectors and fire alarms, familiarising yourself with exits once in your accommodation and being familiar with local emergency service numbers in case of an emergency (Stewart et al., 2016).

Other risks involving burns come from the increase in adventure tourism, particularly geo-tourism, which involves visiting natural sites such as volcanoes. These types of burns are rare, however visitor numbers to these natural events have shown to increase over time (You Lim & Flaherty, 2020). In this case, it is important to be familiar with tour company safety briefings, and importantly to go with a tour and not on your own. Protective clothing and equipment should be available for visitors who are visiting a volcano and should be a necessity to anyone who wishes to approach a volcano.

Burns from bonfires and campfires are common risks when travelling to beaches or camping and have been found to be a high risk for children (Choo et al., 2002; Okon et al., 2018). Consumption of alcohol is a significant contributor to campfire/bonfire burns and therefore should be avoided when around fires of any kind. Recent and previous prevention strategies have included public education campaigns, posters and discussions, public service announcements, and brochures. Children being a high-risk group are found to not really benefit from public service announcements or education campaigns, relying on adults to supervise children when around fires and to extinguish fires completely (Okon et al., 2018). Specifically, it was found that although fires may be extinguished using sand, they can still be hazardous for up to 8–12 hours. This is the same for fire pit casings (Fraga et al., 2010). Casings can remain very hot despite not seeing any flames, requiring adults to be aware of potential dangers for children. Depending on the country, campfires/bonfires may be banned during specific seasons in order to prevent forest fires. Knowledge of local laws and seasonal restrictions should be considered when staying in certain countries.

## *Poisoning*

There are many forms of poisoning when travelling such as alcohol poisoning, illicit drug use and overdose, psychedelic drug use and other poisonings such as being "roofied" also known as "date rape drugs". Travelling for some can be about experiencing the night life in popular party areas, which can lead to the potential over consumption of alcohol and/or drug use. Prevention strategies over time have always encouraged people, especially women, to watch their drink, to be aware of their surroundings and to be accompanied by others they know.

Some people prefer to experiment with certain psychedelic or hallucinogenic drugs, to experience something completely different or something more meaningful. In some cases, visitors seek out experimentation with certain drugs, such as trying a hallucinogenic cactus called San Pedro in Peru or the Bedouin experience through consuming opium in the Sinai desert (Uriely & Belhassen, 2005). These experiences can have fatal consequences, especially when new to trying certain drugs. Prevention strategies must address risk-taking behaviour, as travel can be considered as an opportunity to partake in experimenting with drugs, and usually coincides with wanting to experience a high through fear, pleasure, and excitement (Uriely & Belhassen, 2006). Pre-travel health advice is useful but may not be enough, and education campaigns may have some benefit if they focus on risk perceptions and drug hazards/knowledge. The need for legal understanding and information on a country of interest should be accessible (see *Part V Government and Industry Activity: Government Travel Advisories*). Other forms of information on drug usage while travelling such as through websites, travel agencies, travel supply stores, and information centres designated to backpackers are some of the prevention methods available to travellers (Uriely & Belhassen, 2006). However, they are not available everywhere.

## *Children*

Children are more vulnerable when it comes to injury, coupled with their curiosity and a desire to experience new things. Road traffic crashes were found to be the second leading cause of death globally for children from 5–14 years of age (Pye, 2011). Prevention strategies have included the use of car seats, provided at any car rental service, and the use of seat belts. Injury prevention strategies during air travel with a child under the age of two have focused on the importance of securing infants to the parents during travel and making sure the appropriate seat and seat belts are used during flight for older children (Pye, 2011). Some planes will allow for some car seats to be used to secure the child during flight. Fallen objects from the overhead bin and trauma to extremities by the service cart or aisle traffic are also factors in child injuries during air travel, emphasising the importance of monitoring children, especially when they are not in their seats.

Supervising children is seen as beneficial across all domains in child risk exposure. Drowning was found to be the second leading cause of deaths in paediatric travellers (Konop & Kamat, 2001), with children being more at risk when swimming or playing in water, and children that fall into water unintentionally (Pye, 2011). Supervision of children around bodies of water is crucial in preventing child drownings and is still found to be the most successful prevention measure. The use of appropriate flotation devices such as lifejackets, especially when on boats, is also a necessity in drowning prevention. Encouraging children at a young age to wear personal flotation devices can help instil better water-safety practices when they're older. Community-based knowledge and support can create the use of lifejackets and flotation devices, as being a social norm, promoting better safety strategies in the long run.

Burns from either sun exposure or campfires are common risks when travelling to beaches or camping and have been found to be high-risk for children, as stated before (Choo et al., 2002; Okon et al., 2018). Although community prevention strategies, incorporating public awareness campaigns are not successful in preventing burns in children, such public health interventions can encourage public awareness in adults, improving child supervision around fires and practising appropriate sun protection application.

## *Falls*

We mention falls as this is often an area that people do not consider a risk, as it happens often with a wide range of outcomes from no injury to death (James et al., 2020b). Falls can occur anywhere and at any time, however there are some risk factors to consider, these include limited mobility or impaired gait, balance or sight, poor muscle strength, alcohol consumption, poor reaction time, underlying medical conditions, being older or younger, footwear and also the walking surface, being on medication especially multiple medications (Ambrose et al., 2013; Boehm et al., 2014).

Steps to prevent falls include: having a check-up and especially a review of the medications you are on prior to travel; exercise such as walking, tai chi or dancing which help improve balance, flexibility and core strength; having appropriate footwear for the task you are undertaking and ensuring that you have worn them prior to travel; take care in poorly lit environments and if required take a torch or head lamp with you to light the way; minimise your alcohol intake; hold onto the hand railings when using stairs; and supervise children.

## *Violence*

While violence was not a focus of this chapter, as we were exploring unintentional injury it would be remiss not to mention injury due to violence, which is an ever-present risk when travelling (Pizam, 1999). There are three general categories of violence, these include self-harm, physical violence (of which sexual violence is a sub-group) and psychological or emotional violence including verbal abuse and financial abuse, noting that the World Health Organization (WHO) groups physical and psychological into interpersonal and adds a third group of collective violence, which is about social, political, and economic violence committed by larger groups (WHO, 2021).

Strategies for the prevention of violence include understanding your destination and avoiding areas of high crime or "seedier" areas, travelling in groups, not telling strangers your travel plans, not hitching rides, avoiding travelling at night as well as walking the streets alone at night, asking the hotel or place where you are staying about safe and unsafe venues to visit, using automated teller machines during the day, not wearing expensive clothes or accessories, try and avoid accommodation on the ground floor or near to exists and lifts, close and lock windows, use designated safe modes of transport (don't share taxis with strangers), have a fake wallet with a little money to give in case you are robbed, do not resist when being robbed, have the details for your accommodation and embassy, try and blend in with the locals, use credit cards with low limits and don't get into fights. (Leggat & Klein, 2001)

## *Selfies*

Selfie behaviour resulting in mortality has increased the need to make individuals more aware of the risks when choosing to take photos in certain environments. Overall phone usage has also increased over time, indicating the need for better risk awareness campaigns. These types of messages may be required to be implemented outside of travel health clinics or through other travel resources (Flaherty & Choi, 2016; Leggat & Franklin, 2013). Recent literature has identified countries of high selfie deaths to have implemented, by government authority, "No Selfie Zones" and large signs to warn people what not to do when wanting to take a selfie (Bansal et al., 2018; Jain & Mavani, 2017). These signs included icons of bad selfie ideas and slogans such as "A cool selfie could cost you your life" and "A selfie with a weapon, kills" (Jain & Mavani, 2017). The "want" and "need" for people to receive positive comments, likes and followers on social media is becoming more a social necessity, particularly for those who are lonely, insecure, or isolated (Jain & Mavani, 2017). Prevention strategies may need to consider the mental health implications of taking selfies, and how to encourage better self-esteem in individuals (Jain & Mavani, 2017). Marketing strategies should also try to encourage being more in the moment rather than on the phone when travelling.

## Conclusion

Travel has made the world smaller, with the increasing ease to visit different countries and experience different cultures. Although COVID-19 has slowed down travel, the reopening of international borders will re-introduce travel-related risk. Road-related injuries and drowning are still the most common mechanisms of injury for travellers. However with the advancement of technology and social media, new risks have emerged, such as selfie-related injuries. Travel misconceptions on what travellers should actually be concerned about when travelling is another factor that needs to be addressed according to destination. Child injury prevention strategies have mainly focused on supervision; however, adolescents experience injuries and partake in risky behaviour such as alcohol and drug use. Alcohol is known to be attributed to travel-related injuries; however its role is yet to be quantified in the majority of the literature. Future research should incorporate data linking in order to understand the true burden of alcohol-related injuries. There are ways to go about travelling safely while partaking in activities and experiencing new things when travelling, the importance is to be mindful and aware of certain risks and dangers, and to not ignore the signs when they're right in front of you.

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# Part III
# Wellbeing

# Health Psychology, Positive Psychology, and the Tourist

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**Abstract** The COVID-19 pandemic has drastically changed the way in which people think about and engage with the tourism and travel industry. Understanding how people may respond to this new and changing landscape will be vital if tourism and travel operators hope to recover from the pandemic fallout that has shattered this once vibrant industry. This chapter brings together theory and research from the fields of health psychology and positive psychology to provide insight into the psyche of the individual tourist and explore ways in which the tourism industry can adapt to, and manage, the ongoing presence of COVID-19. This chapter will discuss topics including theories of tourist motivation, tourist resilience and wellbeing, and the psychological processes underpinning the performance of COVID-safe behaviours.

**Keywords** Travel · Tourism · Health psychology · Positive psychology · COVID-19

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_9

## Introduction

The pandemic caused by the novel coronavirus disease 2019 (COVID-19) has undoubtedly had a significant impact, influencing people of all cultures, religions, and socioeconomic statuses around the globe. For the tourism sector, much of the impact from the pandemic can be seen in the significant reduction in travel behaviour that was brought about by the implementation of widespread travel restrictions. Although such restrictions were introduced in an attempt to slow the spread of the virus, they have likely contributed to unprecedented changes in the way in which tourists choose their travel destinations, interact with other travellers, and respond to an ever-changing travel landscape. Consequently, it is important for tourism scholarship to explore the psychology of the individual tourist to better understand what motivates people to travel and how peoples' travel behaviour might change in response to a global pandemic like COVID-19.

Drawing on theory and research from the fields of health psychology and positive psychology can help to understand the tourist psyche. In recent decades, there has been a growing body of research employing psychological theories to better understand topics such as tourist motivation (Ahn, 2020), tourist decision-making (Pearce, 2014), tourist wellbeing (Filep, 2014), and travel-related health behaviours (Sánchez-Cañizares et al., 2021). Such work is important as it can provide valuable insights into ways in which the tourism sector can be modified to not only benefit the tourism industry, but also the individual tourist.

The current chapter will begin by discussing theories of tourist motivation and will highlight the utility of adopting a needs-based theoretical approach to tourist motivation. This section will focus on identifying ways in which the tourism environment can be modified to enhance people's travel motivation while also promoting their psychological wellbeing during travel. The chapter will then explore themes from the positive psychology literature to better understand individual characteristics of the tourist that may help them cope with the uncertainty and anxiety of travelling during a global pandemic. Finally, the chapter will explore theory and research from the field of health psychology and behaviour change to better understand peoples' engagement in *COVID-safe behaviours*, which can prevent and reduce transmission of the virus, during travel. The chapter will conclude with some final comments on how the tourism and travel industry can draw from the health and positive psychology literature to successfully adapt to the on-going changes to tourism brought about by the pandemic.

## Theories of Tourist Motivation: Understanding Why People Travel

For the tourism industry to successfully recover from the COVID-19 pandemic, both government and tourism operators will need to identify ways to encourage people to travel in a safe, yet meaningful way. To do this, a greater understanding of what motivates people to travel is needed. Unfortunately, however, the answer to the question "Why do people travel?" is not one that is easily identified.

Despite numerous theoretical models having been proposed (e.g., Boorstin, 1962; Crompton, 1979; Dann, 1977), there has been little consensus in identifying the primary motivators of peoples' travel behaviour. For instance, Gray (1970) proposed that people travel for either *sunlust* or *wonderlust* reasons. Those who are considered "sunlust travellers" seek out destinations that provide amenities that may not be available to a person where they would typically live (e.g., the beach or tropical rainforests), whereas "wonderlust travellers" seek out destinations and activities that are new or unfamiliar to the individual (e.g., exploring different cultures). Plog (1974, 1987) suggested that tourists' behaviour can be linked to individual differences in the personality trait of anxiety. Specifically, those high in trait anxiety, also known as "psychocentrics", would be less likely to travel or would travel to destinations that are familiar or close to home. By contrast, those low in trait anxiety, known as "allocentrics", tend to be more willing to travel to destinations that are further away or where fewer tourist support services (e.g., hotels, sight-seeing activities, restaurants) may exist.

Alternate approaches to tourist motivation emphasise the specific needs, wants, and desires of the individual (e.g., Pearce & Lee, 2005; Pearce & Panchal, 2011). Dann (1977) proposed that travel motivation can be considered the influence of various *push* and *pull* factors. Push factors are individual motives of the individual that drive their motivation to travel, such as the desire to escape, prestige, rest and relaxation, and social interaction. Pull factors are features of the travel destination that may attract the individual to that particular location such as cost, convenience, and the availability of facilities and attractions. When deciding *if* and *where* to travel, many individuals will therefore likely base their travel decisions on whether or not their travel experiences are expected to satisfy their own individual wants and needs.

## Self-determination Theory

This more recent view of travel motivation, which emphasises the needs of the individual, is consistent with models of motivation typically discussed in the health and positive psychology literature, such as self-determination theory (SDT) (Deci & Ryan, 2000). SDT is an organismic theory of human motivation and is based on the assumption that people are motivated by the satisfaction of three fundamental and

universal psychological needs: *autonomy*, *relatedness*, and *competence*. The need for autonomy reflects the need to feel a sense of agency and ownership over one's own actions. The need for relatedness reflects the need to develop a sense of closeness and attachment to other people. Lastly, the need for competence reflects the need to feel as though one has a sense of mastery over their actions and has the required ability to develop new skills. The satisfaction of each of these needs is essential for optimal and healthy psychological development (Roark & Ellis, 2009). Outside tourism, there is ample evidence demonstrating the satisfaction of these basic psychological needs is predictive of greater life satisfaction, positive affect, and general wellbeing (Ng et al., 2012; Ntoumanis et al., 2020).

Integrating SDT into tourism scholarship can be useful as the theory provides insight into the origin of human motivation and attempts to identify the driving forces of behaviour. If an individual believes that a travel destination will satisfy their psychological needs, they will feel intrinsically motivated, in that their decision to travel to that destination will originate from within. Intrinsic motivation reflects an individuals' desire to perform an activity because they have a genuine interest in that activity or because they believe that the activity will be enjoyable. For example, an individual may choose to travel to a remote village in the Philippines because they have a genuine interest in that village's culture or local cuisine. In contrast, if a destination is not expected to satisfy a person's needs, their motivation will likely emanate from external or controlled forces. For instance, another individual might travel to that same village but may do so due to social pressure or coercion from others, rather than genuine interest. Travel behaviour that stems from intrinsic reasons rather than from controlled reasons can lead to more fulfilling, authentic, and enjoyable travel experiences (Cini et al., 2013).

## *Tourist Motivation and COVID-19: A Needs-Based Approach*

During the COVID-19 pandemic, many peoples' ability to satisfy their needs for autonomy, relatedness, and competence may have been temporarily hindered due to the various restrictions implemented by local and national governments (see *Introduction: Issues in Tourist Health, Safety and Wellbeing*). These restrictions often included measures such as the temporary closure of non-essential businesses and activities (e.g., amusement parks, gymnasiums, music concerts and festivals), working from home orders, and social distancing requirements (Gostin & Wiley, 2020). The effect of these restrictions on the tourism industry was compounded by the fact that a majority of countries also restricted international and inter-state travel, ultimately reducing the number of much-needed visitors to tourist hot spots. As a result of these restrictions, many were not able to experience freedom in their actions (autonomy), had limited social contact (relatedness), and were not able to perform activities that contributed to their self-development (competence). It is therefore important to identify ways in which the tourism environment can be modified to support psychological need satisfaction.

When individuals satisfy the need for *autonomy*, they feel a sense of agency and control over their own actions. Travel destinations can create autonomy-supportive environments by providing guests freedom in their ability to choose the destination activities they wish to engage in, and even if activities might be limited due to pandemic restrictions, choice can still be given over those activities available. Allowing choice during travel is important, as individuals seek out destinations which align with their personally held values and interests (Chung et al., 2018; Han et al., 2017). To facilitate autonomy, accommodation venues could provide guests with suggestions and recommendations about various attractions and activities which may be of interest to them, such as dining at a particular restaurant popular among locals or visiting a nearby theme park, museum, or scenic spot. Autonomy can also be promoted by allowing guests the opportunity to communicate and engage with a travel brand through providing feedback or reviews (Roark & Ellis, 2009). Satisfying the need for autonomy can help foster positive emotions toward a tourist environment and positively influence a person's experience with that brand. In turn, these positive emotions can have a positive influence on a tourist's intention to re-visit that destination and they will be more willing to spread positive word-of-mouth reviews (Ahn, 2020; Ahn & Back, 2018; Deng et al., 2013; Jung et al., 2015).

The need for *relatedness* reflects the desire to develop and experience meaningful connections with other people. During the pandemic, *social* (or *physical*) *distancing* became a primary preventative strategy (i.e., a COVID-safe behaviour) for slowing the spread of the virus. This had an unprecedented impact on peoples' ability to physically connect with others as physical movement was restricted, and many forms of social interaction were moved online. When travelling, experiencing social connections with others has important benefits on the tourism experience (McCabe & Johnson, 2013; Morgan et al., 2015). In addition, positive social interactions not only benefit the individual tourist (Wei et al., 2019), but are also important for the working relationship between staff and customers (Ball & Johnson, 2000) and can positively impact local communities of the travel destination (Tokarchuk et al., 2017; Volo, 2017).

Supporting relatedness needs can be achieved through tourism service providers providing opportunities for guests to interact with other fellow travellers as well as with locals of the travel destination. For example, encouraging participation in social events such as shows, attractions, concerts, and dining experiences provides guests with the opportunity to develop meaningful connections with others and facilitates interpersonal interactions (Buzinde, 2020; Sheldon et al., 2011). Relatedness can also be supported by providing opportunities for guests to reflect on their travel experiences with others. For instance, providing facilities such as *Wi-Fi* and communal lounge areas so guests can share their travel experiences with other people can encourage guests to *savour* their recent experiences and in doing so, promote positive emotions and increase motivation for future travel (Yan & Halpenny, 2020).

Modifying the tourism environment to be need-supportive can also help tourists feel *competent* in their actions. Individuals experience competence when they participate in activities that enhance their sense of self and promote self-development.

For example, travellers to health and wellness destinations, like meditation or yoga retreats, travel to these destinations to enhance their wellbeing or to find purpose and meaning in their lives (Bowers & Cheer, 2017; Moufakkir & Selmi, 2018; Norman, 2011). Similarly, travellers with concerns about the environment seek out travel destinations that are likely to satisfy their desire to engage in pro-environmental behaviours (Han et al., 2017). Tourists may also satisfy their need for competence by participating in activities that provide them the opportunity to learn or develop new skills (Ahn & Back, 2019). For example, creative experiences such as pottery, crafts, and art exhibits might attract tourists who are actively seeking new knowledge or experiences during their travel (Huang et al., 2020; Tan et al., 2013). Providing guests with a variety of activities that cater to a range of interests will therefore not only facilitate autonomy but will allow guests the opportunity to engage in activities through which they can demonstrate competence and mastery in their ability (Table 1).

**Case Study 1: Motivating Tourism During the COVID-19 Pandemic in Queensland, Australia**

To help the tourism industry recover in Queensland, Australia, the Queensland state government, in partnership with Tourism & Events Queensland (TEQ), rolled out the domestic *Good to Go* campaign. This campaign was designed to promote intrastate tourism by encouraging Queenslanders to see the sights of their own backyard and to reconnect with their close family and friends. The primary message of the campaign was to inform Queenslanders that Queensland's tourism industry was good to go and ready to welcome visitors once again.

The campaign was run across multiple platforms including print, digital, television, and social media (see Fig. 1). Importantly, the messages provided in the campaign are congruent with the principles of SDT in fostering autonomous travel motivation:

- The campaign promoted *autonomy* by showing consumers a range of travel destinations in Queensland to choose from that were "good to go", such as Lady Elliot Island in the Southern Great Barrier Reef and Manta Ray Bay in the Whitsunday Islands.
- *Relatedness* was encouraged through the use of images depicting families and groups of individuals participating in various activities. The video component of the campaign also encourages viewers to reconnect with their family and friends via "family road trips and getaways with the whole crew".
- To promote *competence*, the campaign displays images and video footage of the various destination activities that could be engaged in while travelling to the different travel destinations, such as kayaking along Brisbane River or ocean rafting in the Whitsunday Islands. Consumers may view these activities as opportunities to demonstrate their ability or to learn new skills.

**Table 1** Supporting psychological need satisfaction during travel

| Need | Supporting factor |
|---|---|
| Autonomy | Autonomy needs can be supported by providing guests with choice and freedom in their travel-related decisions. Offering a variety of activities and suggestions will allow guests the opportunity to freely seek out activities that align with their values and will provide a sense of fulfilment and positive emotion |
| Relatedness | Relatedness needs can be supported by ensuring that guests feel a sense of connection and belonging with others. Tourism operators should provide facilities and opportunities for guests to interact and form strong social bonds with others during their stay |
| Competence | Competence needs can be supported by providing guests with opportunities to demonstrate their ability or develop new skills. Providing various travel activities will not only give guests autonomy over their actions but will allow them to choose activities that they can feel competent in performing or that will enhance their sense of self |

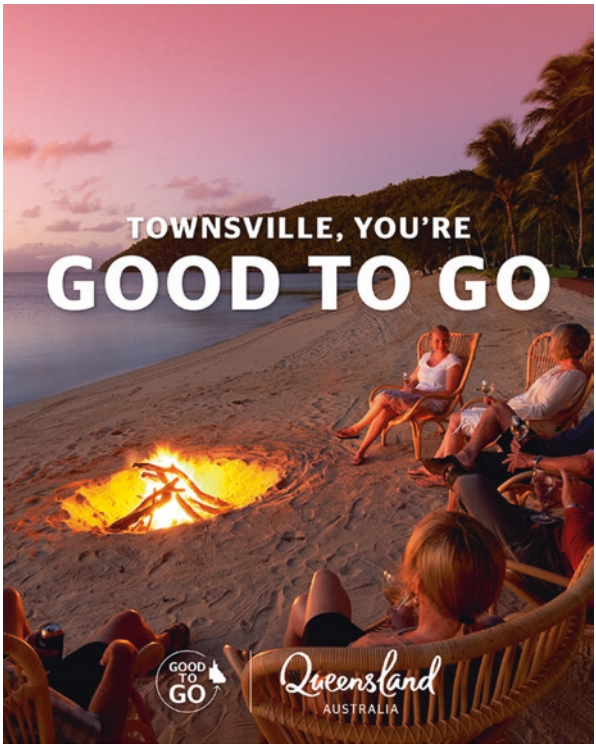


**Fig. 1** The *Good to Go* campaign that was implemented in Queensland, Australia to encourage people to travel and support the Queensland tourism industry. (Source: Image courtesy of Tourism and Events Queensland (2020), used with permission)

## Positive Psychology and Tourism: Supportive Characteristics of the Individual Tourist

The changes in lifestyle that have been brought about by the COVID-19 pandemic have not only had a major impact on the global tourism sector but have also had a significant impact on people's psychological wellbeing (Dawel et al., 2020).

However, various personal characteristics and principles commonly identified in the positive psychology literature may be effective in promoting personal wellbeing and enthusiasm for resuming one's usual travel activities. These principles are based on characteristics that travellers often already possess but which may have been affected by the experience of living through the pandemic-imposed limitations. Gaining personal insight into one's level of each of these factors may assist the individual in deciding whether it might be useful to engage in strategies that may enhance these factors and ultimately benefit their personal wellbeing.

## *Managing Uncertainty: Self-efficacy, Resilience, Hope, Optimism, and Gratitude*

One factor that can influence how a person evaluates and responds to unexpected changes during times of travel is their level of self-efficacy. *Self-efficacy* refers to a person's belief in their capability to perform an action that they set out to accomplish (Bandura, 1986). Individuals high in self-efficacy feel more capable in their ability to overcome challenging or difficult situations and are therefore more motivated to take positive change actions (Bandura, 2011). For instance, an individual with high self-efficacy may have plans to visit a local tourist destination (e.g., a park or museum) and feel confident in their ability to enact these plans even in the face of potential setbacks or challenges (e.g., changes to the physical venue layout due to social distancing requirements).

Despite the setbacks that may have been experienced by travellers due to various COVID-safe precautions, there are a range of questions and strategies which travellers can reflect on which may assist them to feel more confident about their future travel prospects and increase their travel-related self-efficacy beliefs (see Table 2).

### Resilience

*Resilience* is defined as the ability of an individual to emotionally and physically overcome the impacts of a challenging situation (American Psychological Association, 2014). It does not imply that an individual should not experience the impacts of a challenging event or circumstance, but rather that they experience a relatively brief reaction to a setback before recovering to their base level of wellbeing. Resilience is often recognised as the phenomenon of "bouncing back" from a challenging event, even when one has experienced something as personally disruptive as a trauma (Masten & Narayan, 2012; Orcutt et al., 2014; Ryff & Singer, 2003). During the COVID-19 pandemic, resilience was demonstrated by many travellers, including those who were faced with significant delays to their return home from visits abroad and had to remain in hotel quarantine, those who had travel plans abruptly cancelled, and people working in the travel industry who lost jobs. Whilst some travellers became depressed, anxious, and/or resentful and the situation ended

**Table 2** Reflective questions to enhance travel self-efficacy

| Issue | Strategy |
|---|---|
| Low confidence in ability to cope with future unexpected adjustments to travel plans | Consider past successes you have had in your travels:<br>What did those look like?<br>What steps were taken that led to this success?<br>Consider past failures that occurred in terms of your travel plans:<br>How did you overcome these?<br>What was the end result?<br>What can you take from that experience to apply to future scenarios? |
| Low self-efficacy in making travel plans | Consider your plans for travel in the near future:<br>What would be some of the pros of going ahead with making plans?<br>What would be some challenges involved in making plans, and how could you overcome these?<br>Consider how confident you feel in making plans for travel at the moment:<br>What is your rating of confidence from 0 (not at all confident) to 10 (totally confident)?<br>If your confidence is less than a 7/10, is there anything you can do to make it at least a 7?<br>If not, consider changing your plans to be simpler (e.g., try a shorter trip first). |
| Expectation that travel plans will not work out | Consider why you think that your plans may not work out:<br>What is the evidence that they will not work out (e.g., if travel is planned for after restrictions have eased, who is to say your plans cannot go ahead?)<br>Is there anything you can do to increase the likelihood of your plans working out? |

up grossly impacting their mental and physical wellbeing, the epitome of resilience was shown in the way that many travellers, after feeling disheartened and despaired, recovered from the setback and were proactive in moving forward with their lives. Importantly, while the direct sources of resilience remain largely unknown and is believed to be associated with personal characteristics involving genetics as well as environmental influences (Bowes & Jaffee, 2013), it is possible for individuals to increase their resilience.

One of the ways in which resilience can be enhanced is with the support of others (Matthews et al., 2020). Building one's social support network, which may involve connecting via digital platforms, including social media, email, and video conferencing, could be a useful strategy for connecting at a time when in-person contact is not possible, such as during the COVID-19 pandemic, or when travel restrictions are in place. Taking part in social media groups with peers has been shown to provide buffering effects against depression and can assist with promoting psychological wellbeing among individuals (Shensa et al., 2020). Peer group support can also provide a sense of connectedness that replaces the effects of isolation, loneliness, and despondency that is commonly felt when individuals are prevented from undertaking their planned activities (Tull et al., 2020). Therefore, attempting to connect

with those who have similar experiences can be highly beneficial to one's sense of relatedness and provide personal strength to facilitate resilience.

### Hope

*Hope* is another characteristic from positive psychology that lends itself to coping through stressful experiences and may assist travellers with navigating their way through personal and global crises. Hope can be operationalised as a positive cognitive state based on a sense of successful goal-directed determination and planning to meet these goals (Snyder et al., 1991), and it can vary between individuals as a characteristic and at different stages of life according to their circumstances. There are different types of hope that can influence our lives in various ways. For instance, *aim-* or *goal-directed hope* involves the hope that one will achieve a specific goal that they have set for themselves (Snyder, 2002). If one aims to fulfil the goal of becoming fit to undertake an adventure tour of South America, that can result in a feeling of aim- or goal-directed hope that they are able to fulfil this adventure. When we set goals to pursue desired courses of action, we inevitably start with a degree of aim- or goal-directed hope. This can provide the individual with extra willpower and motivation to reach their goal as well as increase people's motivation to travel even when challenges or setbacks may be present.

### Optimism

Another positive psychology-related concept that can be useful in times of challenge or stress is *optimism*. Optimism can be defined as the expectation that the future will bring more positive events than negative (Scheier et al., 1994). It is a broader concept than hope in that it concerns one's overall perspective, rather than necessarily being tied to specific goals, achievements, or events. People who are high in optimism have been shown to have better physical and mental health outcomes, including less likelihood of experiencing depression, and faster recovery from cancer, than people who are lower in optimism (Conversano et al., 2010; Hodges & Winstandly, 2012). An example of optimism in the travel context includes engaging in the belief that future travel plans will work out despite the restrictions imposed due to COVID-19 in 2020. Another example is considering the advance in digital technology use and education that resulted from needing to interact with family and friends online, which was a first-time experience for many individuals.

### Gratitude

Finally, *gratitude* refers to acknowledging good things that happen and recognising that the sources of goodness are external to oneself; they see life as a gift (Watkins et al., 2003). Practising gratitude consciously every day, even for a brief period, such as taking 10 min to write a gratitude journal, has been shown to increase one's

levels of happiness and wellbeing (Seligman et al., 2005). In the context of the COVID-19 pandemic, gratitude for being able to spend more time at home for various reasons, such as the opportunity to see family more, or to have a more flexible daily life schedule, could have contributed to positive wellbeing. Gratitude can make us more mindful by encouraging us to notice the benefits in our lives, and as such, this can encourage us to adopt a more positive mindset in general. For example, if we do not pay attention to positive aspects of our life, we can become disillusioned, or engaged in a more negative thinking pattern.

## Moving Beyond Tourist Wellbeing: Encouraging COVID-Safe Travel Behaviours

In addition to understanding tourist motivation and characteristics to support wellbeing, the travel industry will need to examine closely *how* people behave while they are travelling to prevent further outbreaks of COVID-19. Indeed, a large body of research in health psychology focuses on identifying the factors that influence peoples' performance of various health and risk behaviours (Hagger et al., 2020a). These unprecedented times call for attention to be given to the capability of individuals being able to effectively navigate this time of change and uncertainty, and when global travel is possible, individuals can do so while also being diligent about maintaining health, safety, and wellbeing through continued practice of COVID-safe behaviours. This is particularly relevant given research indicates that behavioural interventions such as contact tracing, hand washing, social distancing, and self-isolation are more likely to be effective than travel restrictions at mitigating the pandemic (Chinazzi et al., 2020). This means that until COVID-19 vaccination is rolled out on a global scale, the onus falls on individuals to comply with behaviours known to be effective in curbing the spread of infections (e.g., social distancing, hand hygiene practices). This is important even in the roll-out of pharmacological measures as vaccination should not be viewed as a panacea for resolving the pandemic crisis, especially in the short-to-medium term, and until sufficient widespread immunity against the virus resulting from mass inoculation is achieved, continued promotion of COVID-safe behaviours will continue to be the mainstay of virus containment in the current and future pandemic contexts.

### *Understanding Motivation to Perform COVID-Safe Behaviours*

The global action plan aimed at reducing the spread of COVID-19 infections produced by the World Health Organization (WHO, 2020) highlights the importance of adopting a range of COVID-safe behaviours including, for example, washing hands frequently, maintaining social distancing, practising respiratory hygiene, and self-isolating if feeling unwell. Despite documented reports of these key behaviours in

the prevention of virus transmission (e.g., Kim et al., 2020) little is known about how to strengthen individuals' capacity to practice and continue to practice these COVID-safe behaviours, particularly during travel. Recently, knowledge to inform practice guidelines has been gleaned from research applying theories of social cognition and understanding the determinants and mechanisms that underpin them in relation to COVID-safe behaviours (Hamilton et al., 2020a; Hagger et al., 2020b; Hagger et al., 2021; Lin et al., 2020). This research identifies potentially modifiable factors that have been shown to be reliably related to COVID-safe behaviours which, in turn, provides guidance to inform the development of behavioural interventions and broader public health messages aimed at promoting increased adherence to these key behaviours in the pandemic and beyond (Hagger et al., 2020a; Kok et al., 2016).

There has been a long tradition of applying social cognition theories to the prediction of behaviour (Hagger et al., 2020a). Such theories assume behavioural decision making is a conscious, deliberative process determined by beliefs such as attitude, social norms, and perceptions of control or self-efficacy. A prominent theory that encompasses these beliefs is the theory of planned behaviour (Ajzen, 1991). The theory posits an individual's intention to perform the target behaviour as the most proximal determinant of future performance of the target behaviour. Intention is proposed to be a function of three belief-based constructs regarding the future behaviour: attitude (beliefs about the positive and negative consequences of the behaviour), subjective norm (beliefs that significant others approve of performing the behaviour), and perceived behavioural control (beliefs in capacity to carry out the behaviour and to overcome barriers to behavioural performance, and also shown to directly predict behaviour when it closely approximates actual control). Research applying the theory of planned behaviour has found support for its predictions across multiple behaviours, contexts, and populations (e.g., Hamilton et al., 2020b; Hannan et al., 2015; McEachan et al., 2011), including travellers' post-pandemic tourism decision making processes for safer destinations (Han et al., 2020) and individuals' COVID-safe behaviours (; Hagger et al., 2020b; Lin et al., 2020).

While the theory of planned behaviour has been praised for its parsimony, it is not without limitations. For example, meta-analytic research has demonstrated that substantive variance in behaviour remains unexplained by the theory (Hamilton et al., 2020b; McEachan et al., 2011) and that the intention-behaviour relationship is imperfect (Rhodes & de Bruijn, 2013). To resolve these limitations, modifications to the theory have been proposed, such as introducing additional constructs (e.g., risk perceptions, anticipated regret; McEachan et al., 2011) or integrating constructs and related predictions from other theories (e.g., autonomous and controlled motivation from self-determination theory; Hagger & Hamilton, 2020a; Ntoumanis et al., 2020) within the theory (see Hagger & Hamilton, 2020b). For example, Hagger et al. (2020b) applied an integrated social cognition model to identify the determinants of social distancing behaviour, and the processes involved, in the context of the COVID-19 pandemic in samples of Australian ($N$ = 365) and US

($N = 440$) residents. Findings showed that for both samples, subjective norm, moral norm, and perceived behavioural control were consistent predictors of intention, and intention, action planning, and habit, at follow-up were consistent predictors of social distancing behaviour.

Other researchers have applied *dual-phase* models, such as the health action process approach (Schwarzer, 2008; Schwarzer & Hamilton, 2020) or integrated versions of the theory of planned behaviour with constructs from the health action process approach (de Vries, 2017), as means to resolve the limitation of the intention-behaviour "gap". A key feature of the health action process approach is the distinction the model makes between motivational (being in a deliberative mindset while setting a goal—forming an intention) and volitional (being in an implementation mindset while pursuing the goal) phases involved in behavioural performance. In the motivational phase, similar to the theory of planned behaviour, intention is posited as the most important determinant of behaviour and operates as a "bridge" between the motivational and volitional phases. Intention is proposed to be a function of three sets of belief-based constructs: outcome expectancies (beliefs that the target behaviour will lead to outcomes that have utility for the individual, conceptually akin to attitudes in the theory of planned behaviour), self-efficacy (beliefs in personal capacity to successfully perform the target behaviour and overcome challenges and barriers to its performance, conceptually akin to perceived behavioural control in the theory of planned behaviour), and risk perceptions (beliefs in the severity of a health condition that may arise from not performing the target behaviour and personal vulnerability toward it). In the volitional phase, planning (making plans to perform the behaviour and to cope with barriers to performance) and action control (monitoring and evaluation of a behaviour against a desired behavioural standard) strategies are important self-regulatory strategies that determine subsequent enactment of the target behaviour (Schwarzer & Hamilton, 2020).

Recent research applying an integrated health action process approach and theory of planned behaviour to COVID-safe behaviours found support for the pattern of effects among model constructs to be consistent with theory and identified salient determinants of COVID-safe behaviours; specifically perceived behavioural control, intentions, forms of planning, and maintenance self-efficacy (Lin et al., 2020). Another study examined the social cognition determinants of social distancing behaviour during the COVID-19 pandemic in samples from Australia and US, guided by the health action process approach (Hamilton et al., 2020a). The authors found intention and action control were significant predictors of social distancing behaviour in both samples, and intention predicted action and coping planning in the US sample. Self-efficacy and action control were significant predictors of intention in both samples, with attitudes predicting intention in the Australia sample and risk perceptions predicting intention in the US sample. In summary, the results indicate that COVID-safe behaviours are a function of motivational and volitional processes. This knowledge can help to inform public health campaigns and specific messaging regarding practising COVID-safe behaviours to keep individuals safe while travelling in times of the current pandemic and beyond.

## *Campaign Strategies to Increase Covid-Safe Behaviours*

A key question is what strategies can be used to promote continued practice of COVID-safe behaviours while travelling so that tourists can travel safely, while also finding satisfaction in their travels? In the early stages of the pandemic, organisations and government departments around the world launched different campaigns designed to promote engagement in COVID-safe behaviours, as shown in Table 3.

These campaigns used a diverse range of interventions to encourage people to practice COVID-safe behaviours, using strategies such as information provision and communication persuasion, incentivisation, coercion, environmental restructuring (see Fig. 2), and restriction. Given the rapid spread of the virus, these interventions were developed fast and were therefore often not informed directly by empirical evidence on these behaviours. However, around mid-2020, a small body of behavioural science research emerged (e.g., Hagger et al., 2020b; Hamilton et al.,

**Table 3** Case Study 2: Examples of Government campaign strategies to promote COVID-19 safe behaviours

| Campaign | Campaign message | Mode of message delivery |
|---|---|---|
| **United States of America (Centers for Disease Control and Prevention, 2020)** | | |
| *How to protect yourself and others* (Centers for Disease Control and Prevention, 2020) | "You can help prevent the spread of respiratory illnesses with these actions; avoid close contact with people who are sick; avoid touching your eyes, nose, and mouth; practice social distancing by putting space between yourself and others; and wash hands often with soap and water for at least 20 s" | **Posters** with key messages **Audio-recorded** public service announcements |
| **United Kingdom (Public Health England, 2020)** | | |
| *Hands. Face. Space.* campaign (Department of Health and Social Care, 2020) | "We must keep on protecting each other; hands; face; space." and "wash hands; cover face; make space." | **Posters** with campaign messages and infographics depicting: (1) hands with bubbles; (2) a mask; (3) two silhouettes with an unspecified distance between them |
| **Australia (Australian Government Department of Health)** | | |
| *Simple steps to stop the spread* campaign | "Help stop the spread and stay healthy" and "together we can help stop the spread and stay healthy" | **Posters** with infographics that encouraged people to "cough or sneeze into your arm", "use a tissue", "bin the tissue", and "wash your hands" **Short video advertisements** screened nationally as television commercials (Department of Health) |
| *Stay COVID free and do the 3* campaign | "Stay COVID safe by:<br>1. Washing your hands as often as possible; 2. Keeping your distance where you can; and 3. Downloading the COVIDSafe app"<br>"If you're feeling sick, you need to stay at home and get tested"<br>The infographics contained within the posters and videos also indicate that 20 s is required for hand washing, and 1.5 m is required for physical distance | |

**Fig. 2** An example of how environments (e.g., airports, movie theatres, restaurants) were modified to encourage people to engage in COVID-safe behaviours, such as social distancing. (Source: Image by Pixabay, used with permission)

2020a; Lin et al., 2020) that can help direct the design of current and future intervention strategies and promote adherence and maintenance to key COVID-safe behaviours. For example, as indicated in the section above, intervention strategies that map onto social cognition constructs, such as self-efficacy, social and moral norms, planning, action control, and habit, can inform future messaging around COVID-safe behaviours and help keep travellers safe.

Such strategies could include providing opportunities for mastery experience (i.e., practising a behaviour) and vicarious experience (i.e., observing a model performing the behaviour) and providing feedback on past or others' performance to promote self-efficacy (Warner & French, 2020). Tailoring of these strategies could target both the uptake of the behaviour (e.g., modelling appropriate social distance when in line to purchase a plane ticket, demonstrating ways to ensure effective hand hygiene techniques when touring and prompting practice) or the maintenance of the behaviour (e.g., having a rule of thumb on keeping an appropriate social distance when at airports, providing positive feedback on individuals' use of face masks when in public). Strategies could also focus on promoting moral obligation and control to promote greater intention to perform COVID-safe behaviours. For example, messages highlighting people's approval toward performing COVID-safe behaviours and messages making salient the risks and consequences of virus transmission for vulnerable others due to failure to perform COVID-safe behaviours may be useful.

Other strategies to consider are planning and monitoring, both of which are suggested to be effective in building habits. For example, it may be useful to explore the development of simple action plans in promoting performance of COVID-safe behaviours. Research has shown that effective plans are those that specify when,

where, and how to act on intended goals by using an IF-THEN format, also known as an *implementation intention* (Gollwitzer, 1999). The IF part of the plan identifies the critical situation that usually triggers the behaviour (e.g., IF it is after breakfast and I am about to leave the hotel to get on the bus tour); the THEN part specifies the action (e.g., THEN I will put on my facemask). It could also be useful to include mental imagery strategies with planning strategies—*implementation imagery* (Hamilton et al., 2019; Hamilton et al., 2021)—which prompts individuals to imagine the steps required to engage in a future motivated behaviour and form a concrete plan to implement the steps (for an example, see Hamilton et al., 2019; also see Case Study 3 in Table 4).

In addition, as action control has been shown to be a key determinant of COVID-safe behaviours, it might be important to consider strategies that enable the individual to consistently monitor if they follow through on their intentions for the target behaviour (Schwarzer & Hamilton, 2020). Monitoring helps identify discrepancies in behaviour (e.g., not being at an appropriate social distance when in line at airports), and noting a discrepancy can trigger taking additional action to ensure goals are achieved (e.g., adjusting the distance) (Webb & de Bruin, 2020). In order

**Table 4** Case Study 3: Mental imagery guide to promote performance of COVID-safe behaviours

| Part | Behaviour change method | Implementation strategy |
|---|---|---|
| 1. Education | Information provision | Provide information about the risks of not performing COVID-safe behaviours |
| 2. Formation of a goal intention | Personalise risk and provide scenario-based risk information<br>Provide opportunities for social comparison<br>Goal setting | Providing information about the personal risk<br>Providing reasons people should perform COVID-safe behaviours<br>Providing a strategy for overcoming barriers to performing COVID-safe behaviours |
| 3. Practice imagery exercise | Guided practice (imagery skill) | Tangy lemon guided imagery task |
| 4. Process mental simulation | Implementation intentions<br>Goal setting<br>Planning coping responses<br>Guided practice<br>Using imagery | Provide examples of things to do to perform COVID-safe behaviours<br>Imagining the steps to use to perform COVID-safe behaviours<br>Process mental simulation exercise |
| 5. Outcome mental simulation | Personalise risk<br>Provide information about others' approval<br>Provide contingent rewards using imagery | Encouragement to think about the things that can happen when not performing COVID-safe behaviours and when performing COVID-safe behaviours, including the risk and the benefits<br>Information about what important others will think<br>Outcome mental simulation exercise |
| 6. Conclusion | Cue altering | Instructing that if ever in the situation to remember goal |

Source: Adapted from Hamilton et al., 2019

to promote better action control, interventions may prompt self-monitoring (e.g., through self-observation of social distancing behaviour) or be monitored by others (e.g., flight attendant prompts an individual to increase their social distance when entering the plane).

## Conclusion

There is little doubt that peoples' beliefs, attitudes, and behaviours regarding tourism have changed since the beginning of the COVID-19 pandemic. Moving forward, however, it is important that the tourism industry continue to adjust and pivot to this ever-changing landscape. To do this, tourism scholars, industry partners, and tourism operators will need to reflect on these recent changes and *consider WHAT'S PAR for the course?* That is, what needs to change in the tourism sector moving forward to ensure that travellers can continue to travel and experience meaningful adventures, while also maintaining their health, safety, and wellbeing?

As covered in this chapter, there are various ways in which the tourism industry can draw from the health and positive psychology literature to successfully adapt to this *new normal*. Through examining tourist motivation, tourism scholars can identify theory-based ways of modifying the tourism environment to enhance people's motivation to travel, while also contributing to their psychological wellbeing. In addition, it is likely that personal characteristics and resources of an individual, such as self-efficacy and resilience, will influence how tourists will respond to the various changes and uncertainty that they may experience during their future travel. These individual characteristics along with social cognition beliefs that guide behaviour may not only impact their wellbeing during travel but would also be likely to influence their intentions to adapt to and perform various COVID-safe behaviours. Because of these challenges, it is important for the tourism industry to continue modifying their practices and think of new and creative ways to keep tourist safe, while also ensuring that they can continue to have meaningful and memorable travel experiences.

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# Wellbeing and Quality of Life in Tourism

**Adiyukh Berbekova and Muzaffer Uysal**

**Abstract** This chapter focuses on quality of life and wellbeing research in a tourism context. The research stream has gained significant attention and is likely to receive more consideration in the years to come. First, the chapter provides an overview of the extant literature relating to the topic along with various theoretical frameworks that are used in exploring the link between tourism activities and quality of life. Second, it further provides some examples associated with the implementation of quality of life practices aimed at improving the wellbeing of key tourism stakeholders. The chapter concludes with a discussion of challenges posed by the ongoing impact of COVID-19 and considers future research on the quality of life of tourists, residents, and industry employees.

**Keywords** Tourism · Quality-of-life · Wellbeing · COVID-19

## Introduction

The current pandemic caused by the novel coronavirus, COVID-19, has greatly affected many lives across the world, impacting major economic sectors. Unquestionably, the tourism industry is among the most affected. While the crisis caused by COVID-19 is not over and we cannot be certain how it will evolve, we observe colossal changes in tourism sectors in many countries. As estimated by the United Nations World Tourism Organization (UNWTO), with closed borders and travel restrictions the number of international tourist arrivals may decrease up to 78% in 2020 as compared to the previous year (UNWTO, 2020) leading to unprecedented consequences for the industry. In times of prolonged health crises like this, the question of wellbeing and quality of life (QoL) for all stakeholders involved in tourism becomes highly relevant. Indeed, for a long time, tourism scholars and

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_10

industry practitioners discussed the value of tourism strictly in terms of its monetary benefits and as a tool to boost destinations' economies and decrease unemployment. In addition to economic advantages, the discussion turned toward investigating tourism value in terms of environmental and socio-cultural impacts on the destination and its residents (Uysal et al., 2012b). Moreover, tourism value was analysed as an advocate for eliminating poverty and promoting peace at destinations (Uysal et al., 2016; Vanegas, 2012). However, for the past two decades or so, we witness the ongoing shift of research focus from the non-economic benefits of tourism to its intangible assets. This major conceptual shift has contributed to the emergence of research directions and areas that concentrate on discovering new layers of tourism value in terms of its contributions to the wellbeing of tourists, destination residents, and industry employees.

Since its inception, QoL research in tourism has grown considerably, embracing many aspects of tourism and hospitality. One of the most comprehensive works relating to the topic is the *Handbook of Tourism and Quality of Life Research: Enhancing the Lives of Tourists and Residents of Host Communities*, edited by Uysal et al. (2012a). The book provides an extensive discussion on QoL issues and tourism experiences and explores the potency of tourism to improve the wellbeing of those involved in tourism production and consumption. Other book examples, which cover some aspects of quality of life and wellbeing include:

- *Quality of Life Community Indicators for Parks, Recreation and Tourism Management* by Budruk and Phillips (2011)
- *Health, Tourism and Hospitality: Spas, Wellness and Medical Travel* by Smith and Puczkó (2014)
- *The Routledge Handbook of Health Tourism* by Smith and Puczkó (2016)
- *Sustainable Island Tourism: Competitiveness, and Quality of Life* by Modica and Uysal (2016)
- *Co-Creation and Wellbeing in Tourism* by Correia et al. (2017)
- *Managing Quality of Life in Tourism and Hospitality* by Uysal et al. (2018), and
- *Best Practices in Hospitality and Tourism Marketing and Management: A Quality of Life Perspective* by Campón-Cerro et al. (2018).

The variety of topics covered by these works highlights the significance of QoL research in both tourism and hospitality. Nonetheless, despite the expanding number of studies, many unanswered questions remain. By origin, social indicators research is directed toward investigating what factors constitute one's wellbeing and how it can be further enhanced. As past QoL and wellbeing research in tourism indicates, the major challenge is how to successfully develop destinations in an environmentally and socially sustainable way, and at the same time improve the quality of life of industry employees, residents, and tourists. The pandemic has further exacerbated this issue. This will require a concerted effort from both academicians and practitioners in reviving the industry with a focus on the quality of life. Thus, the objective of this chapter is twofold: (1) to review the relevant literature on quality of life and wellbeing in a tourism context and (2) to discuss potential implications of COVID-19 on QoL research and offer some future research directions.

## Review of Literature and Theoretical Frameworks

The QoL and wellbeing research in tourism has built upon the social indicators research that in the 1960–70s pointed to the necessity of recognising the multidimensional nature of wellbeing. The pioneers of the social indicators movement noted that economic indicators only, such as Gross Domestic Product (GDP) or income, are inadequate measures of one's wellbeing and argued that social indexes have to be taken into consideration as well (Land & Michalos, 2018). This new movement prompted interest in quality of life research in many disciplines, including tourism, and contributed to the development of many composite indicators to monitor and manage the quality of life. The multifaceted nature of the QoL concept makes it rather hard to define. It embraces several aspects of an individual's life, including objective economic, socio-cultural, and environmental conditions aided by subjective evaluations of one's wellbeing (Jiang et al., 2018; Sirgy, 2012). Figure 1 reflects the multifaceted nature of the concept. The objective indicators of QoL encompass measures capturing several dimensions: economy (e.g., gross income), education (e.g., adult literacy rate), health (e.g., life-expectancy), environment (e.g., CO2 emissions), safety and security (e.g., number of road accidents), culture and leisure (e.g., number of theatres and museums). The subjective

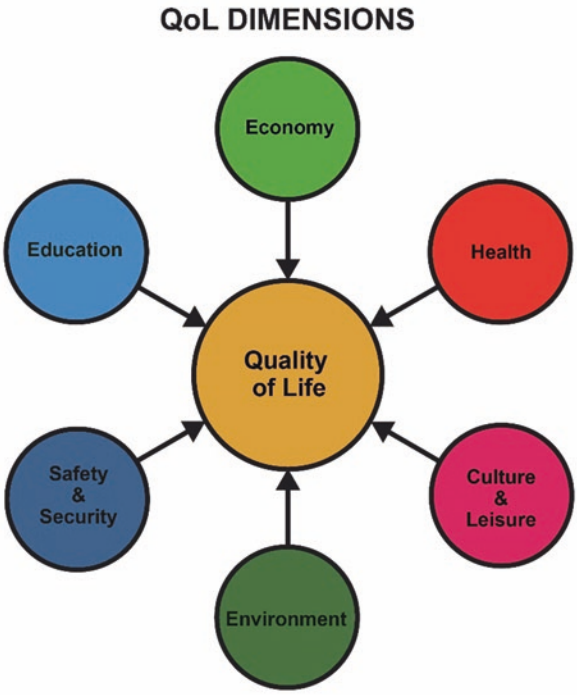


**Fig. 1** QoL dimensions

indicators of QoL are psychological in nature and include perceived QoL, happiness, and life satisfaction (Diener & Suh, 1997; Sirgy, 2002; Uysal et al., 2016).

The rapid evolvement of this novel research stream generated many scholarly works focusing on key stakeholders of tourism, namely, residents, tourists, and industry employees. Moreover, academics continuously apply new theoretical frameworks to explore the links between QoL and tourism. As Sirgy (2019) notes, the theoretical basis of QoL and wellbeing research in tourism is primarily dominated by the discipline of psychology (see *Part III Wellbeing: Health Psychology, Positive Psychology, and the Tourist*). There are three main perspectives on wellbeing that form the basis of QoL research: hedonic wellbeing (i.e., psychological happiness), life satisfaction (i.e., prudential happiness), and eudaimonia (i.e., perfectionist happiness) (Sirgy, 2019; Sirgy & Uysal, 2016). One of the most prevalent theoretical frameworks in QoL tourism research is the bottom-up spillover theory (see Fig. 2) (Sirgy, 2019). The theory posits that satisfaction with various life domains, including satisfaction with tourism experiences, spills over to overall life satisfaction. In other words, the affect within a life domain spills over vertically to the most superordinate domain (life in general), thus influencing life satisfaction. A good example is a study by Neal et al. (1999) that provides empirical support to the theoretical connection between satisfaction with travel/tourism experiences and satisfaction with life in general. An extensive survey of 815 consumers of travel/tourism services suggested that indeed satisfaction with tourism experiences has a direct positive effect on respondents' overall life satisfaction.

Another prominent theory is the need hierarchy theory (Sirgy & Uysal, 2016). The idea behind this framework is that overall quality of life is reflected by satisfaction with human development needs, of both basic (e.g., health, safety) and growth (e.g., self-actualisation, esteem) nature (Sirgy, 2019; Sirgy & Uysal, 2016). Drawing

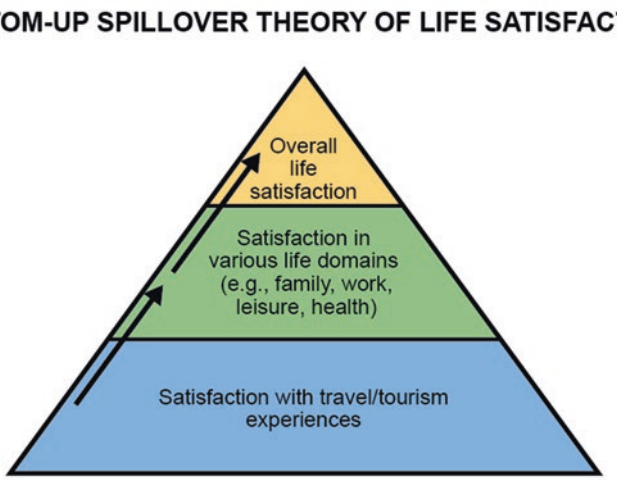


**Fig. 2** Bottom-up spillover theory of life satisfaction. (Source: Neal et al., 1999)

on the need hierarchy theory, Lee et al. (2014) validated the customer wellbeing index as it pertains to natural wildlife tourism. Specifically, the authors found that satisfaction with both basic and growth needs positively affects customer loyalty and leads to favourable behavioral outcomes (e.g., increased length of stay, total spending, and frequency of visits). Grounded in the need hierarchy theory, novel concepts and variables were introduced to the QoL research, including the development of quality of work life scale (Sirgy et al., 2001). The quality of work life scale includes dimensions such as satisfaction with economic and family, health and safety, esteem, actualisation, social, knowledge, and aesthetics needs and recognises the importance of tourism and hospitality workers being happy in their jobs.

Similar theoretical premises lie in the centre of the leisure benefits theory developed by Sirgy et al. (2017). The theory postulates that leisure activities positively contribute to subjective wellbeing by fulfilling certain basic and growth needs. These effects are intensified if the benefits from leisure activities correspond with certain personality traits. Currently, several novel theoretical perspectives focusing on the integration of emotions and QoL are employed by scholars; for example, the theory of emotional solidarity. Originally developed by Emile Durkheim (1915/1995) to explain the emotional bonds in religious groups, the theory of emotional solidarity was expanded to relations between tourists and residents by Woosnam (2011) and recently was used to explain the emotional wellbeing of residents as a result of social interactions with visitors (Wang et al., 2020). The study by Wang et al. (2020) confirmed that higher levels of residents' emotional solidarity expressed through dimensions of welcoming nature, emotional closeness, and sympathetic understanding toward tourists lead to higher levels of residents' emotional wellbeing.

As mentioned above, the three perspectives on QoL and wellbeing research in tourism include how production and consumption of tourism activities influence the wellbeing of tourists (e.g., Kim et al., 2015), destination residents (e.g., Alonso & Nyanjom, 2016), and industry employees (e.g., Kara et al., 2013). It should be noted that these studies focus on either objective quality of life measures or subjective indicators. Table 1 presents an overview of selected studies that explore both of these directions.

## QoL and Tourism from the Perspective of Destination Residents

Academics and industry representatives have long been interested in how tourism may impact destinations and thus, the various effects of tourism development have been researched extensively. The discussion on tourism development is closely related to the topics of perceived impacts of tourism and support for tourism development from local communities (e.g., Diedrich & García-Buades, 2009; Ko & Stewart, 2002). While evolving through the stages of exploration, involvement, development, consolidation, stagnation, decline, and rejuvenation, along with the

**Table 1** QoL and tourism research

| Author(s), Date | Purpose | Sample | Findings |
|---|---|---|---|
| *QoL and tourism from the perspective of destination residents* | | | |
| Perdue and Gustke (1991) | To investigate the relationship between a set of objective QoL indicators and tourism development | 100 counties in North Carolina | A set of objective indicators including housing quality, education expenditure, quality of health care facilities was found to be significantly associated with higher levels of tourism development, i.e., with the increasing levels of tourism development in the county, these indicators increased as well, thus contributing to QoL |
| Andereck and Vogt (2000) | To explore the relationship between residents' attitude and support for certain tourism development options | 1249 residents from seven communities in Arizona | In general, the variables of QoL, community development, and perceived negative impacts of tourism were found to influence residents' support for further tourism development. While residents across all seven communities reported support for tourism development, the communities differed in their preferences for certain tourism product development options, thus establishing an empirical link between QoL variables and support for tourism development |
| Ko and Stewart (2002) | To investigate the link between residents' perceptions of tourism impacts and their attitudes toward additional tourism development; and the mediating effect of community satisfaction | 732 residents of Cheju Island, Korea | Perceived negative and positive tourism impacts, including economic, social and cultural, and environmental impacts, affect residents' satisfaction with the community and consequently predicts residents' attitudes toward additional tourism development. |
| Urtasun and Gutiérrez (2006) | To analyse the impact of tourism on the host communities' 12 objective QoL indicators | Two yearbooks were composed from the Spanish National Institute of Statistics data | The tourism impacts on the host communities' QoL differ depending on which dimension of QoL is considered. Thus, tourism was found to have a positive effect on medical services and employment in the community and a negative effect on environmental quality. |

(continued)

**Table 1** (continued)

| Author(s), Date | Purpose | Sample | Findings |
|---|---|---|---|
| Yamada et al. (2009) | To examine the effect of cultural tourism and four life domains (community pride, wealth, health perception, safety) on life satisfaction of urban residents | 364 urban residents of a Midwestern city | The four life domains (community pride, wealth, health perception, safety) and cultural tourism are positively related to urban residents' life satisfaction |
| Meng et al. (2010) | To investigate the link between tourism development levels and objective QoL indicators | Data from National Bureau of Statistics of China and provincial bureaus on 31 provinces, from 1990 to 2006 was used. | The higher levels of tourism development correspond to the better economic, health, and education conditions in the province |
| Andereck and Nyaupane (2011) | To analyse the relationship between residents' QoL perceptions and support for tourism | 695 Arizona residents | The perceived personal benefits from tourism were found to be a mediating factor between the economic aspects of QoL and the perceptions of the role of tourism in the destination |
| Yu et al. (2011) | To investigate the impacts of environmental sustainability, perceived social costs, and perceived economic benefits, on residents' QoL | 649 Indiana residents | The environmental sustainability and perceived economic costs have significant effects on residents' QoL, while perceived social cost has no impact on residents QoL |
| Nawijn and Mitas (2012) | To evaluate the relationship between tourism impacts and residents' subjective wellbeing | 373 residents of Palma de Mallorca, Spain | Perceived tourism impacts are associated with the cognitive component and not the affective component of subjective wellbeing |
| Kim et al. (2013) | To explore the links between residents' perceptions of tourism impacts and their satisfaction with certain life domains | 321 Virginia residents from communities with different levels of tourism development | Residents' perceptions of tourism impacts affect their satisfaction with various life domains and consequently their satisfaction with life in general |

(continued)

**Table 1** (continued)

| Author(s), Date | Purpose | Sample | Findings |
|---|---|---|---|
| Woo et al. (2015) | To assess how the perceived value of tourism development and satisfaction with material/non-material life domains impact the residents' support for further tourism development | 407 residents from four US destinations including Florida, Hawaii, Nevada, Virginia | Residents' perceived value of tourism development has a positive impact on satisfaction with material and non-material life domains and overall satisfaction with life; overall QoL affects residents' support for further tourism development |
| Ridderstaat et al. (2016) | To evaluate the relationship between tourism development, economic growth, and QoL for the island of Aruba | Secondary data in a form of tourism receipts, Human Development Index (HDI), and real Gross Domestic Product for the island of Aruba were used | There is a direct, reciprocal relationship between tourism development and QoL. Specifically, it was found that while tourism development may have a short impact on some QoL dimensions (i.e., income, health, education), QoL positively affects tourism development in the destination in the long run. |
| Ouyang et al. (2019) | To investigate the link between residents' perceived QoL, perceived sport event impacts, and residents' support for a recurring event | 1873 Hong Kong residents were surveyed regarding the Standard Chartered Hong Kong Marathon | Residents' perceived QoL significantly affects the residents' support for a sporting event |
| Fu et al. (2020) | To examine the relationship between tourism demand and QoL in Hong Kong | Secondary annual data in the form of visitor arrivals, real GDP, and HDI for Hong Kong were used | The relationship between tourism demand and residents' QoL is dependent on the source market. Thus, it was found that the links between tourism demand, QoL, and economic development vary across main source markets: Japan, Mainland China, and the U.S. For Japan and Mainland China, the relationship between QoL and economic development was confirmed, while the U.S. source market additionally demonstrated a reciprocal link between tourism development and economic development. |

(continued)

**Table 1** (continued)

| Author(s), Date | Purpose | Sample | Findings |
|---|---|---|---|
| Chen et al. (2020) | To assess the links between residents' perceptions of tourism development, involvement in value co-creation, and their subjective wellbeing | 328 residents from four cities in China | Residents' involvement in value co-creation with tourists positively affect their subjective wellbeing |
| *QoL and tourism from the perspective of tourists* | | | |
| Neal et al. (1999) | To examine how satisfaction with tourism services is related to life satisfaction | 373 faculty and graduate students at a large university in the Southeast | Satisfaction with tourism services leads to satisfaction with life in general |
| Wei and Milman (2002) | To examine the links between senior tourists' participation in vacation activities, their overall satisfaction with travel experiences, and their psychological wellbeing | 84 senior tourists travelling on North American escorted tour | The participation in vacation activities are significantly related to senior tourists' psychological wellbeing, unlike satisfaction with travel experiences |
| Gilbert and Abdullah (2004) | To investigate whether taking a holiday affects subjective wellbeing. To compare these effects between holiday taking and non-holiday taking groups | 355 UK residents representing holiday taking group and 249 UK residents representing non-holiday taking group | Holiday taking group report a higher sense of subjective wellbeing before and after the trip. The respondents in the holiday taking group report experiencing more pleasant feelings after the trip, suggesting that tourism activities can help to enhance sense of happiness. |
| Michalkó et al. (2009) | To examine the relationship between tourism experiences and QoL | 11,500 Hungarian tourists | Tourism experience does not play a significant role in determining QoL |
| Nawijn et al. (2010) | To explore the link between vacations and happiness, specifically, whether vacationers differ in levels of happiness, as compared to non-vacationers | 1530 Dutch tourists | Vacationers show higher levels of pre-trip happiness, but there is no difference in post-trip happiness between non-vacationers and vacationers |

(continued)

**Table 1** (continued)

| Author(s), Date | Purpose | Sample | Findings |
|---|---|---|---|
| Sirgy et al. (2011) | To analyse the impact of positive and negative affect associated with tourism experiences on tourists' overall sense of wellbeing | 40 qualitative in-depth interviews and a survey of 264 respondents in the North West Province of South Africa | Positive and negative affect associated with tourism experiences have an impact on satisfaction with 13 different life domains and satisfaction with life in general |
| Eusébio and Carneiro (2014) | To explore the impact of tourism experience on QoL of youth tourists | 412 students at Aveiro University, Portugal | Tourism has a positive impact on youth tourists' QoL |
| Kim et al. (2015) | To examine the relationships between senior tourists' travelling behaviour and QoL | 208 senior tourists from Jeju Island, South Korea. | Travel experience has a positive effect on satisfaction with leisure life and overall life satisfaction among senior tourists |
| Backer (2019) | To investigate the link between Visiting Friends and Relatives (VFR) travel and QoL | 552 Australian respondents | In general, both hosting and visiting VFRs have a positive impact on QoL |
| Farkić et al. (2020) | To explore whether guided, immersive tourism experiences contribute to tourists' psychological wellbeing | 10 in-depth interviews with guides in the Scottish Highlands and Islands | The guided experiences positively impact tourists' psychological wellbeing |
| *QoL and tourism from the perspective of industry employees* | | | |
| Kara et al. (2013) | To test the effect of different leadership styles employees' QWL | 443 employees at 5-star hotels in Turkey | The transformational leadership is more efficient in contributing to employees' organisational commitment and QWL |
| Wan and Chan (2013) | To explore factors contributing to the QWL of casino employees | In-depth interviews with 40 casino employees from six casinos in Macau | Four dimensions, including physical work environment, job characteristics, HR policies and relationships in a work group were identified as important in contributing to the QWL of casino employees |
| Kim et al. (2017) | To investigate the links between CSR and hotel employees' QWL | 442 hotel employees from three upscale hotels in South Korea | The hotel employees' CSR perceptions positively impact their QWL and consequently enhance their job performance |
| Kara et al. (2018) | To test the effect of manager mobbing behaviour on female hotel employees' QWL and QoL | 373 female hotel employees from five-star hotels in Turkey | Hotel managers' mobbing behaviour negatively impacts female employees' QWL and overall QoL |

(continued)

**Table 1** (continued)

| Author(s), Date | Purpose | Sample | Findings |
|---|---|---|---|
| Kim et al. (2018) | To analyse the effect of hotel employees' perceptions of CSR on their QWL, job satisfaction, and overall QoL | 442 hotel employees from five upscale hotels in South Korea | The economic and philanthropic CSR positively impacts employees' QWL, but legal and ethical CSR do not; QWL positively contributes to job satisfaction and overall QoL |

Note: The studies in the table are not intended to be exhaustive in their coverage but rather examples

changes in the number of arrivals and receipts, tourism development in the destination is reflected by the changes in residents' attitudes and perceptions of tourism in the destination (Butler, 1980; Uysal, Woo, & Singal, 2012). However, tourism affects not only the residents' attitudes and perceptions of tourism development but also their overall wellbeing (Uysal et al., 2016). The analysis of how tourism manifests in different QoL domains is an important source of information that guides planning processes for destination management organisations and policymakers.

The research relating to tourism impacts on the residents' QoL has focused on both objective (e.g., Fu et al., 2020; Meng et al., 2010; Perdue & Gustke, 1991; Ridderstaat et al., 2016; Urtasun & Gutiérrez, 2006) and subjective evaluations of wellbeing (e.g., Andereck & Nyaupane, 2011; Chen et al., 2020; Ouyang et al., 2019; Woo et al., 2015). One of the first studies that investigated the impact of tourism development on objective QoL indicators was by Perdue and Gustke (1991). Their results demonstrated that certain objective measures, namely housing quality and education expenditure were significantly associated with higher levels of tourism development, while for instance, per capita income was found to have a weak relationship (Perdue & Gustke, 1991). Similarly, studies by Urtasun and Gutiérrez (2006) and Meng et al. (2010) investigated the link between tourism and QoL using objective measures. In contrast to Perdue and Gustke (1991), Urtasun and Gutiérrez (2006) found a strong association between tourism development with income and quality of healthcare. Meng et al. (2010) used tourism receipts as a proxy for tourism development and discovered that it is significantly correlated with objective measures of economic, health, and education conditions in the destination. The perceived, subjective assessment of wellbeing by residents was widely employed as well. Thus, Kim et al. (2013) investigated how the stage of tourism development affects community residents' satisfaction with certain wellbeing domains across 135 counties and cities in Virginia. The stages of tourism development were identified as introduction, growth, maturity, and decline based on four indicators: population growth rate, traveller spending growth rate, direct travel employment growth rate, and state travel tax growth rate (Kim et al., 2013). Then each destination was screened against these indicators and established to be in one of the four development stages. As their results showed, in the maturity stage, the relationships between perceived economic and social impacts and satisfaction with material and

community QoL dimensions were the strongest, while the connection between cultural impacts and emotional wellbeing intensified during the initial stages of tourism development. In a later study, Woo et al. (2015) focused on the perceived value of tourism and identified a positive association with overall satisfaction with locals' QoL. Specifically, the results indicated that if residents are affiliated with the tourism sector, i.e., they are economically dependent on tourism, then they are more likely to demonstrate stronger support for tourism development. Thus, these residents perceive tourism as economically beneficial to the community, which positively affects their sense of material wellbeing. Ouyang et al. (2019) further demonstrated the importance of analysing residents' QoL in relation to a specific event. The study focused on the hallmark sport event—the Standard Chartered Hong Kong Marathon, which attracts runners from more than 60 countries (Ouyang et al., 2019). The findings showed that perceived QoL of community residents has a strong impact on their attitudes toward a recurring event and its significance is increasing over time.

In general, the research on QoL and tourism from the perspective of residents indicates that tourism can affect residents' wellbeing both positively and negatively. The reviewed studies showed that the positive tourism impacts including economic, socio-cultural, and environmental aspects enhance community residents' QoL, while the negative ones may reduce QoL. The magnitude of these effects may differ across residents. As research indicates, residents who are affiliated with the tourism industry and benefit from it directly, show more support for tourism development and report higher levels of QoL. The residents' attitudes toward tourism and their levels of various OoL dimensions may also vary according to the stages of tourism development in the destination. In summary, the rich findings of QoL literature concerning community residents demonstrate that the prevalence of positive impacts contributes to further support of tourism from the community. Therefore, destination management organisations and policymakers should aim to provide quality tourism experiences while sustaining favourable wellbeing levels of community residents.

## QoL and Tourism from the Perspective of Tourists

Tourism experience is at the centre of the tourism industry. The interest of researchers and practitioners for a long time focused on how tourism experiences may influence the behavioural intentions of consumers. Such knowledge was utilised in developing marketing strategies to "sell" the destination and to attract new and repeat visitors. Nonetheless, the extensive QoL literature has demonstrated that satisfaction with tourism experiences may have a significant effect on tourists' overall satisfaction with life (e.g., Backer, 2019; Eusébio & Carneiro, 2014; Farkić et al., 2020; Kim et al., 2015; Wei & Milman, 2002). One of the first studies that investigated this relationship was the work of Neal et al. (1999). Guided by the bottom-up spillover theory, the study analysed whether satisfaction with leisure services

provided through the consumer journey would lead to satisfaction with life in general. Their findings indicated that satisfaction with leisure services and satisfaction with a general trip experience had a direct positive impact on overall life satisfaction. Additionally, the study revealed the mediating effects of trip reflections such as involvement, arousal, mastery, perceived freedom, and spontaneity on the link between tourism services and satisfaction with life. However, some studies did not confirm significant contributions of vacations to perceived life satisfaction. The study from Michalkó et al. (2009) asked respondents to assess the importance of travelling in their lives. Based on a survey of 11,500 Hungarians, it was discovered that travelling does not play an important role in the participants' life. Furthermore, tourism mobility was found to have no effect on general satisfaction with life, indicating that the setting may also yield different results and the context in which research is conducted would show variation.

Some studies attempted to establish the effect of vacations on one's subjective wellbeing by comparing several groups (Gilbert & Abdullah, 2004; Nawijn et al., 2010). Thus, Gilbert and Abdullah (2004) noted that participants in a holiday group report higher levels of wellbeing pre- and post-travel when compared to those in a non-holiday group. Despite the small effect size, the authors concluded that participating in travel activities positively contributes to tourists' sense of wellbeing (Gilbert & Abdullah, 2004). In a later study, Nawijn et al. (2010) examined the link between tourism experiences and QoL among 1530 individuals. Their findings confirmed that vacationers, compared to non-vacationers, demonstrate a higher degree of happiness pre-trip, while post-trip levels of happiness did not differ between the two groups (Nawijn et al., 2010). Additionally, research relating to QoL from the perspective of tourists demonstrated that travel experiences can contribute to perceived satisfaction with various life domains. Thus, Sirgy et al. (2011) in their study established that negative and positive affects that stem from travel activities have an impact on satisfaction with 13 different life domains (e.g., family life, social life, leisure life, financial life, health, and safety) and consequently, overall life satisfaction. While the authors confirmed that travelling positively affects various life domains, the strength of the effect varied. Thus, positive affect from the travelling experience significantly contributed to satisfaction with work life, social life, leisure life, love life, family life, arts and culture, spiritual life, intellectual life, and travel life, but not with the health and safety, and self domains.

A new line of research is currently evolving within QoL and tourism research, namely designing for quality of life. Considering the importance of enhancing the wellbeing of tourists, contemporary studies focus on designing the tourism experiences that enrich one's wellbeing (e.g., Farkić et al., 2020; Vogt et al., 2020). Designing for quality of life follows certain principles including a successful integration of destinations' physical attributes with intangible assets such as knowledge and skills of tourists and employees to ensure quality tourism experience (Uysal et al., 2020). For instance, Farkić et al. (2020) showed that immersive, slow adventure guided experiences positively contribute to tourists' psychological wellbeing. The semi-structured interviews conducted by the authors revealed that slow guided

experiences such as foraging, canoeing, and stargazing contribute to creating a sense of togetherness and meaningful moments among tourists (Farkić et al., 2020).

In summary, previous research has provided extensive evidence that tourism/travel activities contribute not only to satisfaction with the leisure life domain but also positively affect the overall QoL of tourists. The vacation experiences can have both short- and long-term effects on life satisfaction (Uysal et al., 2016). Interestingly, the anticipation of the trip can heighten the sense of happiness as much as the actual trip. For example, Gilbert and Abdullah (2004) determined that their holiday taking group showed higher levels of wellbeing before and after the trip, suggesting that planning and waiting for the vacation equally impacts tourists' sense of wellbeing.

## QoL and Tourism from the Perspective of Industry Employees

The concept of QoL was widely and successfully employed to study the impact of the workplace on employees' wellbeing in hospitality and tourism firms (e.g., Wan & Chan, 2013). To assess one's satisfaction with the job, a quality of work life (QWL) scale, covering seven dimensions, was developed by Sirgy et al. (2001). The QWL scale measures whether the firm's work conditions positively contribute to employees' perceived satisfaction with work and non-work life domains, including satisfaction with economic and family, health and safety, esteem, actualisation, social, knowledge, and aesthetics needs and overall life satisfaction through meeting their basic and growth needs (Uysal & Sirgy, 2019). Kara et al. (2013) tested the effect of different leadership styles on 443 hotel employees' QWL. The results confirmed that, when compared to the transactional approach (i.e., promoting interest-based relationships between employees and managers), transformational leadership (i.e., promoting leading by example) is more efficient in contributing to employees' organisational commitment and increases QWL and overall life satisfaction. The findings from another study (Kara et al., 2018) further showed how managers' mobbing behaviour, expressed in emotional abuse and psychological violence, negatively affects the QWL of female employees and their QoL in general. Recently, Kim et al. (2017) and Kim et al. (2018) investigated the effects of companies' corporate social responsibility (CSR) practices on hotel employees' QWL. Their results demonstrated that employees' perceptions of CSR positively impact both QWL and workers' organisational commitment. Moreover, the economic and philanthropic facets of CSR were found to have significant positive effects on QWL and overall wellbeing. These findings further reiterate the importance of creating favourable workplace conditions for tourism and hospitality employees as QWL consequently may have a significant effect on overall life satisfaction. Additionally, the QWL research demonstrates that certain values that companies adhere to in their work, influence employees' commitment to the organisation.

The topic of QoL and wellbeing in tourism is continuously attracting academic attention. Past studies relating to QoL and wellbeing in tourism show that indeed

tourism activities go beyond the traditionally recognised impacts on the economy of the destination or loyalty of visitors, expressed in behavioural intentions to return and recommend. Tourism is capable of impacting the quality of life of everyone involved in the fully functioning tourism system. This novel ultimate outcome variable that came into tourism and hospitality research identified many other facets of tourism value that were not discussed by either academic or industry representatives before.

## QoL Perspective and Approaches

The QoL perspective and approaches benefit all the stakeholders of the fully functioning tourism system. The nature of tourism research for practical reasons embodies the interlays of such constructs as sustainability, destination competitiveness, and the QoL of stakeholders as they are impacted by tourism development and activities. The implicit assumption is that tourism provides significant benefits (tangible and intangible) to its stakeholders (Uysal et al., 2012b). The extent to which stakeholders benefit varies, depending on the level of destination lifecycle and its infrastructure development policies. The box below presents one destination's economic policy around QoL.

**Vienna Tourist Board's Visitor Economy Strategy 2025**
In 2019 the Vienna Tourist Board developed their Visitor Economy Strategy 2025, in the centre of which is the quality of life of visitors and locals. The strategy focuses on sustainable tourism development, taking into account the needs of tourists and city residents. In their vision, the Vienna Tourist Board indicates that the purpose of the visitor economy is to add value in the form of business-added-value for the firms, and city-added-value for the residents and city itself. As the strategy outlines, the major components of QoL of tourists and community are the quality of the place and quality of the experience (see Fig. 3). Thus, to ensure the sustainable development of the destination, the Vienna Tourist Board identifies QoL of residents and tourists as key performance indicators along with the value added and overnight revenues. The basis for achieving the strategic objectives is a combination of innovation, smart solutions, and the efficient resource configuration. This requires close cooperation of the so-called ecosystem of companies and organisations that operate within the city. In implementing the defined strategy, the Board and other tourism stakeholders follow the principles of inclusion, premium quality of provided experiences, and digital humanism approach. The application of digital data ensures successful monitoring of the impacts of tourism activities on visitors and locals. Source: Vienna Tourist Board, 2019.


**Fig. 3** Viennese strategy diamond. (Source: Vienna Tourist Board (2019), used with permission)

The QoL research and concerns always juxtapose with the attitudes of stakeholders of the place as a destination (e.g., Andereck & Nyaupane, 2011; Kim et al., 2013). From the perspective of host community residents, we need to have QoL research concentrating on living conditions and how these living conditions impact their QoL. The value of tourism needs to maintain a focus both on the tourists as well as local communities as stakeholders. For example, Kim et al. (2013) linked community residents' perceptions of tourism impacts (economic, social, cultural, and environmental) with residents' satisfaction with particular life domains (material wellbeing, community wellbeing, emotional wellbeing, and health and safety wellbeing) and overall life satisfaction. The study found that the strength of these perceptual relationships is moderated by the stage of tourism development in the community. As the destination moves into a stagnation or decline phase of development, it is expected that there would be some deterioration to the life quality of residents, which may then result in less support for tourism development (Uysal, Woo, & Singal, 2012). Similarly, a growth phase would be perceived to improve the wellbeing of residents in the destination community, leading to good support for further tourism development. A study like this is essential for developing effective tourism

policies and gaining support from other stakeholders in further developing tourism activities. Residents are a major stakeholder in tourism and their wellbeing is important. The extent to which a new project impinges on the wellbeing of residents, whether they are directly or indirectly involved in tourism, is of immense value to having a sustainable tourism development and developing appropriate policies.

**Designing for QoL**

How destinations stage and design for tourism affects the nature of experience outcomes. Uysal et al. (2020) argue that designing for tourism is intimately related to the enhancement of quality of life; that is, designing appropriate platforms for tourism experience settings with its stakeholders will contribute not only to the wellbeing of participants but also improve the liveability of places as destinations. Designing for a quality experience to improve the wellbeing of stakeholders in the production and consumption of tourism engagement should follow a systems approach incorporating both the demand and supply sides of tourism. A prominent example of designing a place to enhance QoL is Zurich, Switzerland. Zurich is not only a popular tourism destination, but it has also been recognised for several years as a city with the best quality of life. Zurich Tourism Organization points out that the tourism development in the city follows the principles of economic, social, and ecological sustainability. The city aims to become a smart destination by actively implementing and promoting sustainability initiatives within the city that are aimed at reducing the negative effects of tourism and maintain the residents' QoL.

Source: Zurich Tourism (2020).

It is prudent that tourism enterprises promote the notion of work-life balance and have measures in place that can enhance the wellbeing of employees and service providers. By doing so, service providers as employees can deliver quality service in all aspects of the production and consumption of goods and services at the destination. Unhappy service providers cannot provide a quality experience, nor can they deliver quality services, which in turn negatively affects both management (e.g., retention, low turnover) and personnel outcome variables (e.g., loyalty, higher satisfaction, commitment). Within the realm of tourism activities, the challenge is to link the "non-economic value" of what we produce to performance measures (such as average daily rate, revenue per available room, productivity ratios) and appropriate sustainable indicators. The non-economic value of tourism could have the long-term potential to contribute to the image of the tourism enterprise, thus, to its intangible assets and share price. Clearly, the development of QoL performance measures linked to personal and management outcome indicators would be effective in monitoring activities and creating efficiency.

**Employees' Wellbeing**
A unique study by Kirillova et al. (2020) examined the existence of the link between employees' sense of wellbeing and hotel design aesthetics. The study, involving 525 operational-level hotel employees in the USA, revealed that depending on where one works in the hotel, employee wellbeing is likely to vary. For example, the study found that backstage employees experience less aesthetic pleasure and report a lower level of wellbeing than those employees who work frontstage. It is clear that design characteristics, such as unity (i.e., visual coherence among design elements) and variety, may influence employees' sense of wellbeing. The challenge is then how a hotel can be designed to further enhance employees' sense of wellbeing. Examining the role of design in hotels in improving not only employee wellbeing but also customer wellbeing is of immense value with financial implications.

Most of the studies included in this chapter along with their approaches to QoL highlight the promise that the tourism enterprise can enhance the wellbeing of different stakeholders and this can be accomplished directly or indirectly. There is still ample opportunity to further generate knowledge on how QoL research is applied in different tourism settings. It is also important to emphasise that we as researchers are further challenged to monitor change over time by developing appropriate QoL and sustainability indicators reflective of today's marketplace as well as tomorrow's needs for a given place, product, target, and goal (Uysal et al., 2018).

## What to Glean from Previous Research

It is evident that we have seen tremendous growth in scholarly work of wellbeing and quality of life research as it relates to tourism settings in the past two decades or so and this stream of research will continue to grow in the years to come. A closer examination of the extant literature on the topic reveals several issues that are worthwhile to mention.

1. Regardless of the unit of analysis, whether it is an individual as a consumer, employees of tourism goods and services, or residents of destinations, studies have utilised different approaches and theoretical underpinnings depending on the perspective of disciplinary representations such as economics, psychology, sociology, or consumer behaviour. This implies and is also seen from the preceding discussions that the study of wellbeing—quality of life cuts across and intersects with any field or disciplinary approach within a contextualised tourism setting.
2. Different life domains relevant to tourism settings such as leisure life domain, family life domain, work life domain, and the like are related to overall satisfac-

tion with life, meaning that wellbeing and satisfaction with life in general are the outcome variables or operationalised as the ultimate outcome variables. In this regard, studies usually attempt to understand the effects of some possible antecedents and attitudinal variables unique to tourism behaviours to explain satisfaction with life in general. We believe that this type of modelling or approach, grounded in the theory of planned behaviour which links beliefs to behaviour, will continue to be relevant for tourism—consumer behaviour research. The functionality of this is that the three core components of the theory, namely; attitude, subjective norm, and perceived behavioural control are being linked to wellbeing outcome variables and then via this connection, we will be in a better position to explain, say, an individual's behavioural intentions.

3. We see limited research that has used quality of life measures as antecedent or as mediating and/or moderating variables. There is ample opportunity here for researchers to explore the interplays of quality of life indicators in explaining performance indicators. The assumed connection between wellbeing—quality of life indicators and destination performance measures or sustainability indicators is yet to be fully developed and empirically substantiated.
4. Most of the reviewed studies in this chapter and elsewhere utilise subjective measures of wellbeing and quality of life at the individual or community level. We have very limited research that utilises objective indicators and these studies tend to use indicators that are quantifiable and represent mostly macro or aggregated information. Both types of indicators of wellbeing and quality of life are important for different reasons and we will continue to see these streams of research with different variants in the years to come. At the same time, we argue that if and where possible both subjective and objective quality of life indicators should be brought into the same research setting and examined simultaneously. For destinations as places, we as researchers should strive to develop both subjective and objective indicators to monitor changes over time.
5. Most of the studies that use subjective quality of life measures seem to have cross-sectional data, that is, researchers generate data at one point in time. For policy and monitoring reasons, it is prudent that we generate longitudinal data to understand how quality of life measures may change as destinations go through structural changes over time. By the same token, we need to monitor the objective quality of life indicators over time. However, almost all objective indicators of quality of life are time-series data. By conducting longitudinal studies of subjective indicators would allow researchers to indirectly delineate the perceived importance of objective quality of life indicators. In a way, behavioural changes or responses would reflect how well a given destination may have done or performed over time regarding its objective quality of life indicators.
6. A closer examination of quality of life research in tourism reveals that most of the reported empirical studies using subjective quality of life measures utilised structural equation modelling (SEM) or path analysis to examine behavioural variables in relation to wellbeing or satisfaction with life as a way of measuring quality of life. Some used correlation analysis and regression analysis to explain the amount of variance in wellbeing measures as a function of a set of indepen-

dent variables with some co-variates. Some other studies combined a multitude of statistical techniques including logit regression, ANOVA, or multivariate analysis of variance (MANOVA) to analyse the objective quality of life measures in different research settings. The use of statistical techniques appears to be a function of the main focus of the study and the nature of quality of life indicators within the context of a given study.

## Conclusion

In the past two decades, the links between tourism and quality of life have been extensively researched. As noted by Uysal et al. (2016) the very notion of QoL is embedded in tourism definition, as an activity to pursue leisure and recreation. In this chapter, we attempted to summarise the relevant literature relating to QoL in tourism by discussing the three major perspectives within this research stream, namely QoL and destination residents, QoL and tourists, and QoL and industry employees. We further delineated some examples in implementing QoL practices, aimed at enhancing the wellbeing and QoL of all tourism stakeholders. The scope of QoL research in tourism is not simply limited to these three perspectives. Residents, visitors, and employees as service providers are key stakeholders in any destination whether it is a city, built attraction or micro states such as island destinations, each requiring a context-based approach to QoL issues.

As cities become cultural centres and attract large numbers of visitors, they may experience environmental degradation, congestion, pollution, depletion of natural resources in relation to QoL of citizens and human development. Future wellbeing research should pay more attention to structural changes in city destinations and assess empirically how these changes affect different life domains such as health, work, leisure, and spiritual life. The degree to which we assess and monitor the effect of changes on life domains unique to a given city or urban area as a destination can provide insights for establishing the connection between QoL of residents and visitors and urban sprawl. We encourage scholars to do research in this area. By the same token, micro states, small island nations because of their limited resources and unique characteristics pose challenges for managing resources efficiently and effectively. The challenge is how to sustain tourism development, remain competitive without impinging on the wellbeing of locals. For instance, Croes (2016) noted that the connection between tourism development and residents' QoL in small island destinations requires more research and focus on non-income factors that may impact residents' happiness. We wholeheartedly encourage researchers to further explore the interplay of sustainability, competitiveness, and QoL issues in city destinations, islands, or built environments as they are facing new challenges induced by natural disasters, environmental deterioration, and increased demand for resources.

The ongoing health crisis poses new challenges for the industry and academics. The questions of wellbeing have become very relevant. Undoubtedly, the pandemic

is disruptive but at the same time, a formative phenomenon. As trite, as it sounds, this health crisis should be seen as an opportunity rather than an obstacle for the tourism industry. The pandemic offered an opportunity to reimagine the tourism experience from both the demand and supply sides. For example, Ramkissoon (2020) points out that the COVID-19 pandemic may prompt favourable behavioural changes. Thus, establishing programs that focus on pro-social and pro-environmental behaviours, following the pandemic, may lead to positive wellbeing outcomes (Ramkissoon, 2020). The challenge for those involved in the production and the consumption of tourism remains as to how to design a safe and quality experience that will contribute to the wellbeing of all stakeholders involved. As the restrictions to travel are lifted and destinations re-open, the major concern is guaranteeing safety. Before a vaccine is widely available, destination management organisations should work closely with government agencies to ensure that they follow the safety guidelines. For instance, as a part of it's Safe Travels initiative, the World Travel & Tourism Council (WTTC) developed the *Global Protocols for the New Normal* to ensure a safe tourism experience. Those businesses that employ the protocols receive a Global Safety Stamp to indicate that they have implemented health and sanitation protocols (WTTC, 2020).

The creative and innovative solutions are required from all parties, including academics, to implement principles related to the quality of life in the time of the pandemic, i.e., designing the tourism experience in a way that enhances visitors' wellbeing and at the same time contributes to residents' and employees' quality of life. Designing for quality of life conveys recognising the diversity of the travelling population. In this regard, the principles of accessibility and inclusion in designing a tourism experience are of great importance (Uysal et al., 2020). Destinations should ensure the physical accessibility of the tourism infrastructure and strive to design spaces where tourists and residents of various backgrounds can interact and share experiences. Therefore, further research is needed that concentrates on the designing elements of tourism experiences from both the supply and demand sides of a tourism system.

As noted above, the importance of wellbeing and QoL of tourism stakeholders increases in the times of the pandemic. The recent studies showed that the pandemic has negatively affected people's wellbeing, intensifying the feelings of loneliness and sadness (e.g., Brodeur, 2021; Li et al., 2021). As such, the academic conversation shifted toward identifying solutions that will contribute to increasing the QoL levels of residents, tourists, and employees on the road to recovery from the crisis. For example, Li et al. (2021) examined how virtual reality tourism may impact residents' wellbeing. The results indicated that virtual reality tourism positively affects the perceived value of the virtual experience and leads to a higher sense of subjective wellbeing. Thus, we believe future trends in both academia and the industry should be on developing adequate measures to monitor the performance of tourism stakeholders in achieving higher levels of wellbeing. This corresponds to the evolving line of research regarding the convergence of traditional performance measures and subjective or objective QoL indicators. Uysal and Sirgy (2019) present a convincing argument that quality of life indicators can also be treated as performance

indicators, independently or in nested forms with conventional performance indicators. Naturally, QoL indicators need to be discussed in relation to key stakeholders, namely tourists, residents of host communities, and employees of tourism and hospitality firms. The existence of the reciprocal relationship between conventional performance measures and QoL indicators begs for more research. There is no question that QoL indicators assist not only in gauging the level of destination competitiveness but also in ensuring the sustainability of efficient and effective use of resources.

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# Domestic Nature-Based Tourism and Wellbeing: A Roadmap for the New Normal?


**Michael Lück and Richard S. Aquino**

**Abstract** Since most tourism experiences occur in the natural environment, nature-based tourism (NBT) is probably the largest and most popular form of tourism. Prior to the COVID-19 pandemic, a multitude of studies have investigated the benefits of NBT, particularly the outcomes of participating in nature-based leisure and recreation activities for tourist wellbeing. This chapter explores how individuals pursue NBT and leisure during the COVID-19 pandemic with the aim of understanding ways of enhancing tourist wellbeing. We first review the benefits of NBT on individuals in relation to selected dimensions of human wellbeing. Due to the decline in international tourism during the pandemic, we draw insights from case studies about domestic nature-based leisure and recreation activities commonly engaged in by people before and during the pandemic. Thereafter, we reflect on the outcomes of the explored nature-based leisure and recreation activities on individuals' wellbeing during the pandemic, and propose a model highlighting three main dimensions of domestic tourism's role during and after the pandemic. Finally, we reflect on a future agenda of research on NBT and recreation in the *new normal*.

**Keywords** Tourism · Nature · Wellbeing · COVID-19 · Nature-based tourism

## Introduction

Humans have long been drawn to visit natural areas and attractions, undertake outdoor leisure and recreational activities, and immerse themselves in nature. Prior to the global disruption to mobility due to the COVID-19 pandemic, reports showed

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_11

that visiting natural areas has been steadily, if not rapidly, increasing. In the year 2019, the National Park Service (2020) recorded over 327.5 million recreational visits to U.S. national parks, this being approximately ten million higher than for the previous year. For the major European markets (e.g., Germany, France, Netherlands, Belgium, Poland, and the Czech Republic), visiting nature has been revealed as tourists' primary motive for selecting tourist destinations (Centre for the Promotion of Imports from Developing Countries, 2020). For protected areas in Southeast Asia, natural attractions were found to strongly influence tourist spatial patterns, as opposed to cultural and other supporting artefacts (Kim et al., 2019).

*Nature-based tourism* (NBT) has received multiple labels (e.g., n*ature tourism*, *natural area tourism*) and overlapping definitions. Newsome et al. (2013) simply defined NBT as tourism that takes place in the natural environment with particular attention to conserving and learning about nature. Fossgard and Fredman (2019) conceptualised NBT as the "nexus between tourism, outdoor recreational activities, and nature areas" (p. 2). Although NBT can take many forms including, but not limited to, ecotourism, geotourism, wildlife tourism, marine tourism, and adventure tourism (Fennell, 2014; Higham & Lück, 2007; Robinson & Novelli, 2005; Tisdell & Wilson, 2012), all these are characterised by natural environments and resources in developed or undeveloped locales (or a combination of both) for environmental protection and tourist enjoyment. NBT activities act as alternatives to the destructive forms of mass tourism because they are informed by a philosophy of sustainability and eco-centricity (Newsome et al., 2013). Yet, it is also recognised that NBT may damage the environment due to overuse and improper management (Cater & Goodall, 1992; Tisdell & Wilson, 2012).

The notions of environmental protection, sustainability and tourist enjoyment suggest that NBT should foster environmental education, ecological sustainability, local benefits, and tourist satisfaction (Fennell, 2014; Newsome et al., 2013). NBT can also be viewed through an economic transactional lens, which means benefits should be delivered for those who offer products (e.g., destinations, operators) and those who demand and consume tourism experiences in nature (e.g., tourists; Tisdell & Wilson, 2012). Apart from investigating the forms of NBT products and experience offerings (Arnegger et al., 2010; Huijbens, 2011), researchers have also provided significant attention on understanding *nature-based tourists*, including their needs and the perceived benefits gained from engaging in NBT.

Since tourism starts from one's need and desire for travel, early works on nature-based tourists examined the motivations for engaging in NBT (Eagles, 1992). Not surprisingly, seminal works on this topic identify *experiencing nature* as a fundamental tourist motive (Holden & Sparrowhawk, 2002; Mehmetoglu, 2007). Moreover, studies have found escaping, novelty-seeking and self-development as essential motives, proposing nature is sufficient to meet tourists' need to relax, experience new and different environments, and develop knowledge and skills (Luo & Deng, 2007; Mehmetoglu, 2007). Since the natural environment provides optimal settings for sports and adventure activities (Arnegger et al., 2010; Kulczycki & Lück, 2009), nature has also been revealed as a fundamental dimension of risk-seeking sought by some nature-based tourists (Giddy & Webb, 2016). Most importantly, NBT attractions and activities have been indicated as satisfying

wellness-seeking motives of tourists, highlighting the role nature plays in enhancing subjective wellbeing (Kim et al., 2015; Pyo et al., 1989). More specifically, recent research has illustrated that participating in NBT, leisure and recreation has positive effects on nature-based tourists' wellbeing and quality of life (Buckley, 2020; Campon-Cerro et al., 2020; Hanna et al., 2019), and is influenced by mobility (Aronsson, 2000). Thus, it is valuable to explore how individuals pursue NBT and recreation activities at these present times when human mobility is restricted.

Tourism activities were a super-spreader of the COVID-19 virus. Regardless of the form, tourism was also the first casualty of the COVID-19 pandemic. As governments enforced local to nation-wide lockdowns, international borders were closed and people were forced to stay at their homes. Travel plans were either re-scheduled or cancelled completely. People's activities and movements were limited during these lockdowns in accordance with local policies (e.g., in New Zealand, residents were allowed to undertake low-risk physical outdoor activities and visit local parks). And when travelling for leisure was once again allowed in many countries (domestically), restrictions such as social distancing and wearing of masks were commonly imposed at tourist sites. Although faced with rules and restrictions, individuals have still participated in domestic NBT and leisure activities during the COVID-19 pandemic. We propose that undertaking domestic holidays in nature regardless of the distance from home and duration, has the potential to benefit individual wellbeing. In this chapter, we provide a preliminary exploration of the types of tourism, leisure, and recreation activities pursued in nature-based settings during the pandemic. Based on the case studies investigated in this chapter, we infer some potential benefits of engaging in domestic NBT and leisure in the *new normal.*

## Nature-Based Tourism and Tourist Wellbeing

Literature on wellness tourism is predominantly focused on travel to confined spaces such as spa and health resorts, with offerings that include treatments (e.g., massage), activities (e.g., yoga), and nutrition (e.g., healthy food choices). Edited volumes, such as Smith and Puczkó (2013) and Bushell and Sheldon (2009) demonstrate this focus. Our chapter focuses on less structured concepts of wellness and wellbeing outcomes because: (1) we recognise that structured wellness tourism activities seem to be less relevant due to the restrictions imposed during the global pandemic; and (2) acknowledge the overlap between wellness and wellbeing benefits especially those associated with NBT. In some cases NBT offerings such as hiking programmes (Fig. 1), are deliberately designed to promote sickness prevention and foster wellbeing (e.g., Lück & Gross, 2016; Ohe et al., 2017), and therefore have a significant overlap. Nonetheless, Pyo et al.'s (1989) seminal work that tested the relationship between push and pull travel motivations showed that wellness motives were strongly related to nature-based attractions. Their study showed that health-conscious tourists perceived that visiting natural attractions may improve their wellbeing.

**Fig. 1** Hiking can be a fun and healthy family activity, such as in the Harz Mountains, Germany. (Image courtesy of Michael Lück)

The notion of *wellbeing* is subjective and does not refer to a fixed state (Hanna et al., 2019). The term is used interchangeably with the phrase *quality of life* (Uysal et al., 2016; see also *Part III Wellbeing: Wellbeing and Quality of Life in Tourism*), particularly in the context of improving people's life domains (e.g., financial, health, social, or occupational).

From a self-determination theory perspective, wellbeing is viewed as being enhanced by fulfilling needs for autonomy, competence and relatedness (Ryan & Deci, 2000). In line with this theory, Smith and Diekmann (2017) suggest that tourism and recreational activities that incorporate opportunities for self-development, mastering a new skill, or fostering social relationships with others, could improve tourists' wellbeing. Views on the dimensions of wellbeing vary from author to author, with some founded in the original work of Hettler's hexagonally shaped wellness model that includes elements (*life dimensions to balance*) of social, intellectual, spiritual, physical, emotional and occupational wellness (National Wellness Institute, 2020). Subsequent models were presented in circular shape (*wellness wheel*), initially consisting of Hettler's six dimensions. Over time, dimensions were changed and/or added, such as financial and environmental wellness (Fig. 2, University of Utah, 2020).

Guided by the interrelated dimensions that are commonly examined in studies of tourists and wellbeing (Huijbens, 2011; Kulczycki, & Lück, 2009; Smith &


**Fig. 2** The Wellness Wheel. (Source: University of Utah, School of Medicine 2020)

Diekmann, 2017; Uysal et al., 2016), we reviewed the perceived benefits and well-being outcomes of participating in tourism activities in nature-based settings (Table 1).

As Table 1 shows, previous studies have identified a range of outcomes and benefits for tourists who undertake tourism activities in nature. These include restorative outcomes that can improve physical and mental wellbeing. Curtin (2009), for example, found that watching wildlife and nature resulted in physical relaxation and rejuvenation. In a study of fitness holidays, Little (2015) discovered that nature was paramount in the practices of fitness-conscious tourists for their physical care and maintenance. In addition to physical wellbeing, Buckley (2020) found that tourists visiting forest and beach parks had improved mental health and they felt "regenerated, more relaxed, [and] recovered from stress" (p. 1416). Farkić et al. (2020) explored how slow journeying in nature resulted in tourists having a *sense of freedom* which enhances psychological wellbeing. Similarly, traversing natural landscapes and wildlife watching have been revealed to induce mental relaxation by transporting tourists into a *state of flow* (Curtin, 2009; Willis, 2015).

Perceived outcomes and benefits of tourists' emotional wellbeing have also been examined in previous NBT studies. These were investigated in the context of general tourism activities, as well as happiness and positive psychology (see *Part III Wellbeing: Health Psychology, Positive Psychology, and the Tourist*). Like the latter area of tourism scholarship, the reviewed studies for this chapter showed a direct positive link between NBT and tourists' happiness (Buckley, 2019, 2020;

**Table 1** Published studies examining perceived outcomes and benefits of nature-based tourism on tourists' wellbeing

| Wellbeing dimension | Perceived outcomes and benefits for nature-based tourists | Contributors |
|---|---|---|
| Physical | Physical relaxation<br>Improving overall physical health<br>Rejuvenation<br>Improved physical fitness<br>Prevention | Buckley (2020), Croy et al. (2020), Curtin (2009), Farkić and Taylor (2019), Little (2015), Lück and Gross (2016) and Willis (2015) |
| Mental | Mental relaxation and recovery<br>De-stressed/lower stress levels<br>Being in a state of *flow*<br>Feeling a sense of freedom<br>Restore cognitive resources | Buckley (2019, 2020), Croy et al. (2020), Curtin (2009), Farkić et al. (2020), Mackenzie and Brymer (2018) and Willis (2015) |
| Emotional | Increase in overall happiness and positive emotions<br>Experiencing a sense of awe and wonder<br>Place attachment | Aquino et al. (2018), Buckley (2019, 2020), Campon-Cerro et al. (2020), Curtin (2009), Kulczycki and Lück (2009) and Willis (2015) |
| Social | Sense of togetherness (e.g., *communitas*)<br>Social connectedness | Farkić et al. (2020) and Mackenzie and Brymer (2018) |
| Occupational | Sense of accomplishment<br>Gaining new skills | Aquino et al. (2018), Croy et al. (2020), Hanna et al. (2019) and Kulczycki and Lück (2009) |
| Intellectual | Increasing awareness about nature and wildlife<br>Learning about cultures | Croy et al. (2020), Hanna et al. (2019) and Lück (2003, 2015) |
| Spiritual | Changed worldview<br>Clarity or purpose in life<br>Spiritual fulfilment<br>Harmonising life with nature<br>Rethinking human-nature relationships | Aquino et al. (2018), Buckley (2020), Campon-Cerro et al. (2020), Curtin (2009), Farkić and Taylor (2019), Hanna et al. (2019), Heintzman (2019), Pernecky and Johnston (2006) and Willis (2015) |
| Environmental | Harmony with nature<br>World and political awareness<br>Natural resource management<br>Recycling/Conserving energy<br>Sustainable and healthy food choices | Ardoin et al. 2015, Katpar et al. (2016), University of Nevada Las Vegas (2020) and Winter et al. (2020) |

Campon-Cerro et al., 2020). Positive emotions, such as having a sense of awe and wonderment, were also associated with the experiences of tourists viewing and immersing themselves in geological landscapes (Aquino et al., 2018; Willis, 2015). While conceptualised to contribute to all dimensions of wellness and wellbeing, Kulczycki and Lück (2009) postulated that tourists' performance of adventure tourism activities and immersion in risky environments also develop the positive attribute of place attachment.

Social wellbeing outcomes were also evident in NBT studies. In a study of guided slow nature-based adventures, a sense of togetherness related to the concept of *communitas* between tourists and their guides was a main finding (Farkić et al., 2020). Accordingly, this social outcome was postulated to enhance "tourists' feelings of belongingness, fulfilment and overall wellbeing" (Farkić et al., 2020, p. 2074). This outcome appears to be common in outdoor adventure and NBT because these settings encourage individuals to work with others towards achieving common goals (e.g., skill mastery), thus promoting social connectedness (Mackenzie & Brymer, 2018).

Self-development as a result of improved occupational and intellectual wellbeing was also apparent. In several studies (Campon-Cerro et al., 2020; Hanna et al., 2019; Mackenzie & Hodge, 2020), a sense of fulfilment or accomplishment was strongly present in tourists' perceived benefits from engaging in NBT activities and recreation (e.g., conquering a mountain peak or finishing a trail), which in turn enhances individuals' occupational wellbeing. It can be argued that one of the most important benefits of NBT is learning new things about the environment, specifically about wildlife, biodiversity and its stewards (e.g., local communities and cultures). An environmentally educative experience is one of the pillars of ecotourism (Fennell, 2014), and past studies have shown that knowledge enhancement outcomes were evident, especially in nature-based tours with interpretation provided (Lück, 2003, 2015). Moreover, results suggest that experiences of nature are facilitators of personal change, as tourists partaking in outdoor adventure activities were revealed to become more environmentally and culturally aware (Hanna et al., 2019).

Another highly evident and an increasingly explored benefit of NBT is the effect on tourists' spiritual wellbeing. Studies indicated that communing with the natural environment induces individuals to rethink their relationship with nature, achieve clarity of outlook in life, and change their worldviews (Buckley, 2020; Hanna et al., 2019). In some instances, NBT may provide individuals with the opportunity to reflect and self-realise. In an exploration of experiences when traversing a risky volcanic trail, Aquino et al. (2018) found tourists were thinking philosophically about life while being challenged by the trekking activities and landscapes. These incidents of personal reflection that positively shape tourists' spiritual fulfilment were also depicted in other empirical inquiries (Campon-Cerro et al., 2020; Curtin, 2009; Heintzman, 2019; Willis, 2015).

Strongly related to spiritual wellbeing outcomes, nature-based tourists may develop place attachment given the immersive environments they engage with during NBT (Hanna et al., 2019; Kulczycki & Lück, 2009). In turn, this outcome may lead to several environmental wellbeing benefits while increasing sustainability

(Winter et al., 2020). Environmental wellbeing promotes lifestyles that respect the natural environment (University of Nevada Las Vegas, 2020). As shown in previous studies, participation in NBT may lead to a range of pro-environmental behaviours (e.g., energy conservation, food waste reduction) making individuals mindful of the adverse impacts of their activities and lifestyles on nature (Ardoin et al., 2015; Katpar, et al. 2016).

Conversely, it is important to note that while tourists produce their own NBT experiences, benefits and outcomes accruing from this form of tourism on individual wellbeing are also dependent on the experience design. Some elements of NBT experience design may include the natural environment, built tourism provisions (e.g., walkways and viewing platforms), physical activities, presence of interpretation, and social interactions.

## The Nordic Countries and Japan: Case Studies in Tourism and Nature-Based Leisure Philosophy and Practice

In order to illustrate the positive wellness effects of NBT, we have chosen two case studies of regions and countries where the population generally has a very close relationship with nature, namely the Nordic countries and Japan. These cultures have a philosophy that places great importance on outdoor pursuits during leisure times, be these recreational activities or main holidays. There are different approaches in these places, from "just being in nature" by engaging in activities, such as hiking, kayaking, or skiing, to more formalised programmes, such as forest therapy.

### *The Nordic Countries, the Outdoors, and Friluftsliv*

Fredman et al. (2006) note that Scandinavians have always had a great affinity with the outdoors, and as such a profound understanding of NBT. For example, Viken (2006) notes that Norwegians do not really understand the concept of ecotourism because Norwegians have a close relationship with nature, and "nature is more or less where the Norwegians are born and where they live, harvest and spend their spare time, and it is also a significant element of national identity" (p. 39). Icelanders and Danes have developed an understanding of nature-based and sustainable tourism, which takes place in natural environments, and where learning about and conservation of nature is self-evident (Andkjær, 2012; Huijbens, 2011). As for Sweden, a national census revealed that 78% of the Swedish population had participated in forest hikes, and 11% in mountain hikes at least once per year (Fredman et al., 2006; Statistics Sweden, 2004).

This fundamental connection with the natural environment, based on the everyday life of Scandinavians, is manifested in the term *friluftsliv*, which can be loosely translated into *free air life*. The term was coined by the famous Norwegian author Henrik Ibsen in 1859, and is a philosophy deeply rooted in Norway and Sweden (Gelter, 2000). It is a philosophy hard to grasp in its entirety and depth, and difficult to translate, but it underpins a lifestyle, or way of life, based on experiencing the natural environment. Referring to Romanticism, Faarlund et al. (2007, p. 393) postulate that this philosophy relates to a culture where "nature is home of culture", "Friluftsliv is a way home", and "silence is a way free Nature speaks by keeping quiet." Gelter (2000, p. 78) notes that "the reward of this connectedness with the landscape is this strong sensation of a new level of consciousness and a spiritual wholeness", which in turn may be translated as wellbeing.

While Finland is not part of Scandinavia, it is a Nordic country and shares many similarities with its Scandinavian neighbours, including the significant role of outdoor recreation. Puhakka et al. (2017) note that there is a growing effort in developing nature-based wellbeing tourism in Finland. Indeed, they argue that national parks play a role in human wellbeing and health, and that there are psychological and cognitive benefits of interacting with nature. The National Resources Institute Finland (LUKE) recognised this importance and published *From Forest Bathing to Green Roofs: Guide for Productised Environments in Summer and Wellness Tourism* (Uusitalo & Lindroos, 2018), including practical information for landscaping in a tourism resort and tourism resort *cultivates*, that is, the beneficial plants that can be cultivated in the resort's grounds (such as providing pollen for bees and food for the restaurants). The Institute's overall goal is wellbeing through NBT.

Based on case studies in the Nordic countries, Hjalager and Flagestad (2012) noted that the conception of wellbeing tourism in these countries is very diverse, and includes varied products, such as events and festivals. They advocated for innovation in wellbeing tourism in these countries, highlighting the importance of technology (such as the integration of mobile phone technology) and for institutional innovations through collaboration.

An example of a study from Sweden, demonstrating the wellness benefits of being active in nature, in this case a marine park, follows.

**NBT and Wellness in Kosterhavet National Park, Sweden**

Hansen (2018) undertook research in Kosterhavet National Park, Sweden's first marine park, investigating the connection between the natural environment and visitors' health and wellbeing. Kosterhavet is located in the northwest of Sweden, bordering Norway. Being a marine park, 98% of its 389 km2 is sea, with 2% comprised of adjacent coastline and a number of islands in the archipelago (Fig. 3).

(continued)

The Park attracts approximately 300,000 visitors annually (Figs. 4 and 5), most of whom are Swedes and Norwegians (Hansen, 2016). Hansen employed visitor generated content analysis by asking visitors to provide him with up to 25 photos of their stay in Kosterhavet, followed up by an interview discussing these photos. Subsequent analysis showed that several photos linked to health and wellbeing aspects, and this became even clearer in the accompanying narratives. The study revealed five wellness-related main themes:

(a) physical activities and exercise,
(b) food experiences,
(c) sensations of the elements,
(d) peace and relaxation, and
(e) togetherness.

Hansen (2018) concludes that:

> Together, the visitor pictures and narratives from the study form an idea about how aspects of health and wellbeing are experienced in Kosterhavet. These experiences take place on an individual level and connect to personal feelings related to health and wellbeing when engaging with the natural environment in Kosterhavet (2018, pp. 132–133).

It became clear that many of the themes are interrelated; for example that good and healthy food experiences were also linked to togetherness. Another noteworthy finding of Hansen's study was that he observed the natural environment to have a dual role. First, the natural environment acts as a frame for the visitor experience and moderator for their wellbeing. These experiences can take the form of direct feelings (e.g., exercise and physical wellbeing) or indirect feelings (e.g., sensations, emotions). The second role concerns the experience of the healthy environment itself. This may include the sound and smell of the sea, or the taste of healthy locally caught seafood.

Given that most visitors to Kosterhavet National Park are from Scandinavia, the findings of Hansen's study underpin the importance of the philosophy of *friluftsliv*, and how it is directly related to quality of life and wellness.

## Japan and Forest Bathing

For many, the term forest bathing sounds unfamiliar, and perhaps even absurd. However, this concept has a long tradition in many countries including Germany, France and Russia (Zheng & Yang, 2013). Many studies have examined the health and wellbeing benefits of forest bathing (spending time among trees) in a variety of contexts and countries including Taiwan (Chen et al., 2018), Finland (Konu, 2015), Poland (Bielinis et al., 2018), and China (Mao et al., 2012). In Japan, forest bathing has not only wellness benefits, but is also directly linked to spirituality (Lee et al.,


**Fig. 3** Kosterhavet National Park, Sweden. (Source: Hansen (2016, p. 62))

2018). Indeed, Lee et al. (2018) argue that the concepts of forests and nature are based on the tripartite relationship of Shintoism (one of Japan's main native religions or belief systems); human beings, nature/forests and Kami (神 or deity). Consequently, the authors note that while there are common notions, the Japanese meaning of nature is distinct from that of other East Asian countries (Fig. 6).

Many non-tourism studies have investigated the health and wellbeing effects of forest bathing on various demographic groups (e.g., youth in Poland, middle-aged women in Taiwan, the elderly in China), and have highlighted the importance of the benefits of forest bathing. Further studies have specifically investigated the benefits


**Fig. 4** Kosterhavet National Park in Sweden. (Image courtesy of Michael Lück)

**Fig. 5** Nature-based tourism in Sweden's Kosterhavet National Park. (Image courtesy of Michael Lück)


**Fig. 6** Shintoism is based on the relationship between humans, nature and Kami. (Image courtesy of Michael Lück)

of forest bathing in Japan (Fig. 7). Here, the concept of forest bathing is referred to as *Shinrin-yoku*, a term meaning *making contact with and taking in the forest atmosphere* coined by the Japanese Ministry of Agriculture, Forestry and Fisheries in the 1980s (Japan Experience, 2020; Park et al., 2010). Research provides evidence of the positive effects of Shinrin-yoku (Ohe et al., 2017; Park et al., 2010; Tsunetsugu et al., 2010; Zheng & Yang, 2013), so much so that an official Forest Therapy Program was established by the Forest Agency in Japan.

**The Forest Therapy Program in Japan**

In the early 2000s, the Japanese Forest Agency and the Forest and Forest Products Research Institute initiated a programme that enhanced forest bathing to include forest therapy. In addition to research about the positive effects of forest therapy, venues for the programme could be certified under two categories: (a) forest therapy base, or; (b) forest therapy road, based on how widely the effects reach. The official Forest Therapy website explains:

> WHAT IS A "FOREST THERAPY BASE"
>
> A "Forest Therapy Base" is an area located in a forest where the relaxing effects have been observed based on scientific analysis conducted by a forest medical expert. Moreover, it is an area where nature merges with society permitting people

(continued)

> to come together and partake in some social activity surrounded by a natural environment. At each "Forest Therapy Base", for the purpose of promoting a healthy lifestyle and encourage relaxation, other than forest walking, various other forest therapy programs are made available to visitors.
>
> In order to be certified as a "Forest Therapy Base", an appropriate forest location must be properly maintained so that visitors can effectively receive "Forest Therapy" and enjoy the physiological and psychological benefits. Also, a certified "Forest Therapy Base" needs to have more than two "Forest Therapy Road[s]" which will be discussed further.
>
> WHAT IS A "FOREST THERAPY ROAD"
>
> A "Forest Therapy Road" is a walking path that has been scientifically evaluated by a qualified expert. The path is judged on the physiological and psychological benefits it provides to those who walk along it. The "Forest Therapy Road" normally consists of a leisurely walking environment with mainly gentle slopes and wider paths than a regular sidewalk (Forest Therapy Society, 2020, *Forest* page, para. 1–3).

In 2006, the first six therapy bases and four therapy roads were certified, and this number has grown to 58 bases and 4 roads in 62 forests (Table 2).

Given the many health benefits of forest therapy and forest bathing, this programme has the potential to grow significantly and become a popular part of the tourism offerings in Japan, and elsewhere.

## Nature-Based Tourism, Wellbeing and COVID-19: Lessons for the New Normal?

The cases we have presented demonstrate that NBT and wellbeing are an integral part of these countries' make-up, and outdoor experiences are engrained in the cultural DNA of their residents. This is particularly noteworthy, because due to travel restrictions and fear of flying during a pandemic the majority of travel during the COVID-19 pandemic is indeed domestic. It is also important to encourage NBT experiences, because for many COVID-19 has added stress in the workplace and at home. Domestic NBT has the capability to alleviate some of the pandemic induced stresses and enhance the general wellbeing of domestic tourists. The next two subsections outline some of the responses to the adverse impacts of COVID-19 on the case study locations' international tourism, as well as these countries' subsequent measures to promote domestic NBT. Thereafter, a model that emphasises the valuable role of domestic NBT in the new normal is presented.

### *The Nordic Countries*

During the pandemic, Nordic countries had different government responses in terms of travel restrictions, and COVID-19 measures in general. Sweden has been in the spotlight for its controversial herd immunity approach. However, despite this

**Fig. 7** Forest bathing near Kyoto, Japan. (Image courtesy of Michael Lück)

**Table 2** Forest therapy bases and forest therapy roads in Japan

| Region | Forest therapy base | Forest therapy road |
|---|---|---|
| Hokkaido | 2 | – |
| Tohoku | 5 | 1 |
| Kanto | 10 | 1 |
| Hokuriku—Koshinetsu | 16 | 1 |
| Tokai | 2 | 1 |
| Chugoku | 10 | – |
| Shikoku | 2 | – |
| Kyusyu | 10 | – |
| Okinawa | 1 | – |
| **Total** | **58** | **4** |

Sources: Forest Therapy Society (2020) and Japan Experience (2020)

approach, there were travel restrictions in place, but these were lifted in the height of summer just before the important mid-summer holidays (mid-June; Radio Sweden, 2020). At the end of 2020, those asymptomatic were allowed to travel, but individual municipalities may have had local restrictions. International arrivals were permitted to enter Sweden from EU countries, the UK, Norway, Iceland, Liechtenstein or Switzerland. All non-essential inbound tourism was not permitted (Krisinformation Sverige, 2020).

At the time of writing, all Nordic countries had travel restrictions, especially for tourists from outside the EU. Within each country, rules also existed in terms of when and where to travel and under which conditions. These regulations change frequently, so it would be moot to detail them here. For up-to-date information, one may consult national tourism advisories, such as the ones shown in Table 3.

As might be expected, all countries aforementioned had significant decreases in visitor numbers and overnights stays. For example, Sweden's overnight stays have declined by approximately 30% since the outbreak of the pandemic early in 2020 (Statista, 2020). This decline was exacerbated by the tighter travel restrictions including mandatory quarantine on return required by Norway, one of the most significant tourism generating countries for Sweden. Iceland's inbound travel had dropped by more than 95% in September 2020 compared to the previous year (Icelandic Tourist Board, 2020). Other Nordic countries experienced similar reductions in visitor numbers, especially from outside their respective borders.

Travel restrictions, along with the fear of contracting COVID-19, and cumbersome border procedures at airports, resulted in many citizens staying at home or travelling domestically. Consequently, some locales in Nordic countries have experienced significant growth in tourist numbers. For example, the island of Öland is reported to be "packed with people, but not everyone is pleased" (Nikel, 2020, para.10). Negativity has arisen where the local Öland population fears that the virus will return to the island. In Norway, expedition cruise ships with up to 250 passengers are permitted (at the time of writing) to make port calls in Longyearbyen, Svalbard, a popular cruise destination. However, since most cruise operators have cancelled their operations until at least early 2021, this visitation is of limited help to boost tourism income, since it appears that only the Norwegian Coastal Express (Hurtigruten) continues to serve Svalbard (Nilsen, 2020). Finland reported that domestic trips became very popular in 2020. However, Finns had some reservations about the safety of commercial accommodation in the country—hotel nights decreased by about one-third compared to 2019. In contrast, cottage holidays, both

**Table 3** National tourism advisories.

| National tourism advisories | Website |
|---|---|
| Icelandic Tourist Board | https://www.ferdamalastofa.is/en |
| Visit Norway | https://www.visitnorway.com |
| Visit Denmark | https://www.visitdenmark.com |
| Visit Finland | https://www.visitfinland.com |
| Krisinformation Sverige (Swedish Emergency Information) | https://www.krisinformation.se |

in owned and rented cottages, were extremely popular and "increased nearly one-and-a-half times compared with the previous year" (Official Statistics of Finland, 2020, para.7).

### *Japan*

As for most tourist destinations around the globe, Japan's inbound tourism ground to a halt during the pandemic. Indeed, at the time of writing, Japan Guide reports the current state of tourism as "borders virtually closed" (Japan Guide, 2020, para.1). Consequently, Japan aimed to support the industry by fostering domestic travel, promoted by the *Go To Travel* campaign, offering Japanese travellers subsidies for day and multi-day trips amounting potentially to 50% in savings (Furutani, 2020). The campaign was successful, and Asahi.com, (2020) reported that the Nishitama area, rich in nature with forests and a limestone cave, was overcrowded by cars carrying day visitors. The congestion was so bad that public transport and emergency services had trouble operating, triggering a limit to the number of cars allowed to enter the area. This resulted in 870 cars being denied entry the following day.

Another response to the lack of international travel is the call for a re-emergence of micro-tourism. This was common in the 1970s, when limited budgets and leave days necessitated short and close-by holidays for Japanese workers (Shoji, 2020). Now there is a call to revive this concept, particularly to support the tourism industry while at the same time spreading the number of tourists across the year to avoid seasonal crowding issues. However, during specific holidays such as during the Golden Week or the Bon holidays, too many Japanese took micro-holidays resulting in unprecedented crowding (as for the case of the Nishitama area described above). Nevertheless, Shoji (2020) concludes that in 2020 micro-tourism has been judged as successful, where, for example, reports claim that domestic visitors keep the Gunma Prefecture's hot-spring industry alive.

## The Role of Nature-Based Tourism During the COVID-19 Pandemic: A Template for the New Normal?

After having introduced and reviewed the case studies on the Nordic countries and Japan, it became clear that despite the significant negative impacts the COVID-19 pandemic has had on the tourism industry, as well as on individuals, there are positive lessons to be learnt. This is particularly the case when it comes to nature-based activities and NBT. As discussed above, the traditional forms of *wellness tourism*, that is, tourism focused on spa and wellness hotels appear to have less relevance during a global pandemic. However, it has been widely reported that many people

have experienced significant stress during the pandemic due to lockdowns, fear of contracting the virus, changed work arrangements (i.e., working from home), additional responsibilities (such as home schooling of children), actual or potential job losses, and others. We argue that NBT has great potential to help alleviate at least some of these stresses by providing a direct positive effect, be it through day trips, short stays or the main holidays. While this outcome may be a quite obvious positive effect on the wellbeing of the tourists or recreationists during a difficult time, we also argue that such holidays will have an equally positive effect in the new normal for years to come. Staying closer to home, and spending time in nature, has the added bonus of taking the stress out of travelling long haul (such as check-in queues, safety checks, time differences, climate differences), which presumably contributes to the overall wellness of the travellers.

Another, far less obvious benefit of NBT in terms of wellbeing and tourism is the fact that local tourism businesses benefit from domestic travel. In many countries, from small populations (such as New Zealand) to large populations (such as the USA), domestic travel was generating greater economic benefits pre-pandemic when compared to international tourism. If domestic tourism in the era of the new normal becomes even more popular, there are additional wellness benefits, not only for the travellers, but also for the tourism business proprietors, employees and destination communities. Many business owners and employees in the tourism industry have been heavily affected by the COVID-19 pandemic, and underlying causes may continue for some time to come. This has direct and indirect wellness implications due to financial worries, actual and potential job losses and furloughs, and a sense of not being needed. Domestic NBT has the power to infuse funds into these businesses, and thus help them *sur*vive. In focussing on NBT and increasingly healthy holiday options, NBT can also *re*vive the domestic tourism industry by reinventing itself. In this way, the often mentioned "reset button for the tourism industry" (Lück et al., 2021) may indeed be pushed. The model in Fig. 8 illustrates these relationships between the impacts and stresses induced by the COVID-19 pandemic, NBT, wellbeing outcomes and the survival of domestic tourism destinations.

## Conclusion

The COVID-19 pandemic transpired to be a truly global pandemic and posed unprecedented challenges to countries around the world. One of the hardest hit industries has been the tourism, hospitality and leisure sectors due to international travel being almost eliminated. However, with some restrictions, domestic travel has been possible in many places. Governments and businesses have begged people to travel and spend money in local tourism and hospitality businesses in an effort to support their survival.

A second major effect of the pandemic was a significant impact on the wellbeing of many citizens induced by uncertainty about jobs, isolation during lockdowns, and in the most severe cases hospitalisation and even loss of loved ones due to the virus.

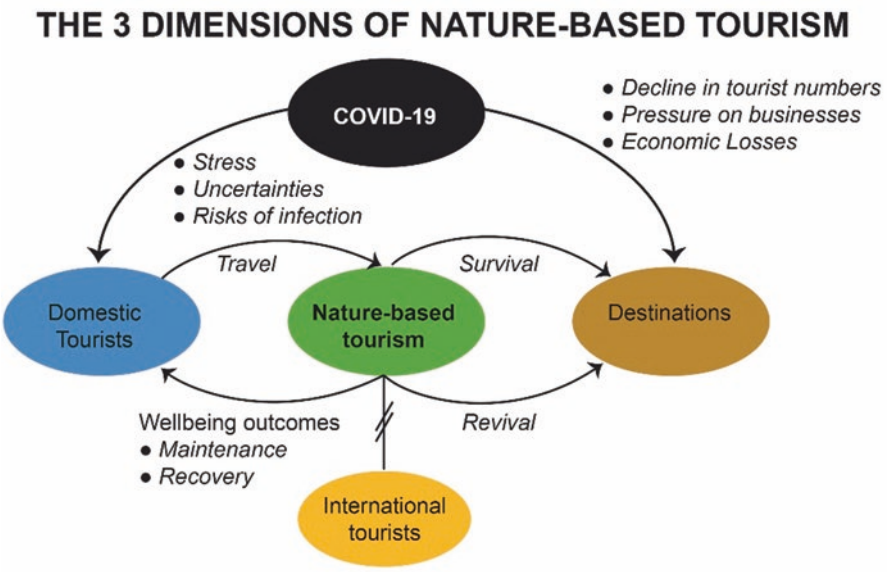


**Fig. 8** The three dimensions of domestic nature-based tourism during the COVID-19 pandemic: Wellbeing, revival and survival

In this context, we have discussed the wider concepts of wellness and wellbeing, and their different dimensions. Using case studies from the Nordic countries and Japan, we explored the inherent connectedness of these cultures to nature, and how this is exemplified in people's daily lives. Even during a global pandemic, their desire to spend time in nature seems hardly to have evaporated. In fact, in the absence of international travel, the attraction of natural settings is likely to have gained an even more significant role. This is shown in examples where encouraging short-distance travel has resulted in a heavy use of local infrastructure and overcrowding in Japan.

On the basis of these case studies and earlier research, we argue that domestic NBT can play a major role during a pandemic, as well as in the *new normal*. Our proposed model identifies three interrelated dimensions that, through their interactions, aid in the maintenance and improvement of wellness among citizens. First, we argue that simply being in nature (e.g., hiking, forest bathing) has significant health benefits, as evidenced by the Japanese example of forest bathing and forest therapy. Second, domestic NBT may aid the survival of the hardest hit tourism businesses and destinations. And third, NBT can play a major role in reviving and reinventing tourism in the new normal, and in doing so underscore the need of more sustainable travel options.

While the latter two dimensions (Fig. 8) are ostensibly economic in nature, an assumption may be that they have no obvious relationship to wellbeing. This view would be short-sighted. As we have discussed, most tourism businesses have been significantly affected by the pandemic, and this had major wellbeing implications;

business owners will continue to worry about how to survive, pay their bills, whether to let go employees. They hence face a bleak-looking future. Equally, many employees have lost their jobs or face uncertainty about the security of their employment. All of these effects have a direct impact on the wellbeing of these individuals, and if domestic NBT can help revive the tourism industry, then this would have positive implications for the wellbeing of many people working in the tourism and hospitality sectors. An additional benefit, though not directly discussed in this chapter, may be a more sustainable and resilient tourism industry not heavily reliant on international tourists in a new normal after a global pandemic.

The need to travel in nature for recreation, recovery and renewal has existed long before the global pandemic. Given this, we suggest more empirical examinations of nature-based tourist experiences (including the barriers to engaging in NBT and its limitations) and the impacts of domestic NBT on wellbeing during the new normal. Although our chapter has focused on NBT, we also recognise that individuals may have engaged in other forms of nature-based leisure and recreation during the pandemic (e.g., walks in urban parks during lockdowns). Thus, we also suggest investigating the immediate effects of non-tourism leisure and recreation activities in nature on individual wellbeing.

**Acknowledgments** We would like to thank Elizabeth Turner for the meticulous proofing of this chapter, and her valuable suggestions for improvement.

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# Study and Tourism: Challenges for International Students in 2020


**Kay Hartwig and Elizabeth Wheeley**

**Abstract** International students make a vibrant contribution to Australian universities and the tourism industry. During the COVID-19 pandemic international students were placed under additional stress (as was the world) to manage study and life. For those students who came to Australia with an intention to travel, they had those tourist aspirations halted as the country closed its borders and shared in global efforts to stop the spread of COVID-19. This chapter presents research, undertaken prior to and during the COVID-19 pandemic, about international student wellbeing. Findings highlight the significant impact the pandemic had on international students' living and study experiences, and particularly limitations to their travel aspirations which are an important factor in deciding to study in another country.

**Keywords** International students · Travel · Tourism · Study · Work · Health · COVID-19

## Introduction

Australia has long been a destination of choice for international students, who see it as a safe, clean and diverse place to study. Indeed, a recent international student survey report notes that:

> Of those prospective students who are considering studying in Australia, the most common words they would associate with the country are that it is "beautiful", "safe", "clean", and "welcoming", while qualitative responses suggested Australia is viewed as a "developed"

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_12

> country with a high level of cultural and environmental diversity, and which offers good universities and a high quality of life (QS Quacquarelli Symonds, 2020a, p. 6).

In 2019, it was estimated that more than 750,000 international students were studying in Australia (Australian Government, 2019). Universities have both statutory and social responsibilities to ensure that all international students have the necessary support and resources to be successful in their studies and to ensure social and cultural success as well (Australian Government, 2000). During their time in Australia many international students take the opportunity to become tourists in their new country. Ammigan and Langton (2018) believe that the living and learning experiences of international students are vital for the sustainability and reputation of Australia's international education sector. A positive experience in these two dimensions—study and tourism—supports student satisfaction (Ammigan & Langton, 2018). International students are important to Australia in both the higher education and tourism sectors. It has been estimated that they contribute over $38 billion to the economy in Australia every year—thus supporting over 130,000 Australian jobs and enriching the social fabric. There is an estimated contribution of $25 billion to the Australian economy outside of tuition fees (Australian Bureau of Statistics, 2019).

The year 2020 presented many challenges for international students across their study and personal life. They have had to adapt to a new way of studying; financial difficulties; being isolated in a new country; and rethinking their anticipated travel plans to visit many popular tourist venues. This chapter explores the experiences of international students attending a Queensland university during 2020, recognising the additional layer of challenge confronting them due to the COVID-19 pandemic. The chapter reports on research literature in relation to international students' experiences, wellbeing, tourism and the impact of the pandemic. This is followed by the presentation of findings from recent research about international students' wellbeing, expectations for international study and the *reality* of 2020. The conclusion draws together key messages about international students' study and tourism in relation to the challenges experienced during 2020.

## Literature Review

This section reviews recent literature about international students' experiences; international student wellbeing; international students and tourism; and the impacts of the pandemic on the higher education student.

## *International Students' Experiences*

In order to provide quality programs for international students, the Australian Government (2000) established the ESOS (Educational Services for Overseas Students) Act and more recently the *National Code of Practice for Providers of Education and Training to Overseas Students 2018* (Tertiary Education Quality and Standards Agency, 2018).

This Code establishes legislative requirements and standards for all institutions offering programs for international students while they are studying in Australia and have entered the country via a student visa. The ESOS Act and Code ensure the programs offered are quality programs and that the experiences for the students are reputable. Most Australian universities have specific initiatives that assist international students to be well-cared for during their study program. The importance of international students' experiences is acknowledged on university websites. For example, Griffith University (2020) runs a *Griffith Mates* program for international students. This program has domestic and international students from the Griffith community working together to support international students during their study program. The program offers services, activities and networks to help international students prepare to start at Griffith, throughout their studies, and beyond. Monash University (2020) highlights their student experience by using social media like Facebook, where future students can interact with current international students through the Monash University International Student Service. Deakin University (2020) has International Student Advisors on every campus to assist with any type of challenge being experienced by an international student. The advisors have lived and studied in other countries and have experienced firsthand the cultural and social adjustments required. There are also many clubs, societies and events available. At the University of Queensland (2020) there is an International Students Collective that is open to all international students and anyone interested in cultural diversity. This is set up to guide and support international students throughout their journey and advocate on behalf of international students to the University of Queensland on all important matters, for improved university experiences and student services.

All of these universities provide services such as airport pickup; help with accommodation; English language programs; assistance with enrolment; newsletters that detail special events and activities; counselling; and functions to meet with domestic and international students. As well, many offer bursaries, grants and scholarships to assist with finances. All of these services and activities assist the overall experience of the international student. Despite the efforts of universities, research by Arkoudis et al. (2018) found that international students in Australia continued to face challenges in areas such as relationships; feelings of isolation; finances; work opportunities and accommodation experiences.

The expected study experiences for international students have undergone many challenges in 2020. As Deardorff (2020) states: "…for international educators, 2020 has not only challenged us but also provided opportunities to re-think and re-imagine international education in a troubled 21st century" (2020, p. xv). This

re-thinking and re-imagining of international education has had an impact on international students. The delivery of their courses may be very different to what they had expected. For some students this can be a challenge, for example Siczek (2020) reports that the first half of the spring semester saw students on campus, but by the end of the semester only three students in her class remained on campus. However, Siczek notes that all of the students continued to engage and connect and care for each other during the weeks of the semester even though they were scattered across the globe but joined together through her course.

## *International Student Wellbeing*

Student wellbeing is of paramount importance for all students studying in a higher education institution. Bimonte et al. (2020) report that although research on happiness has identified a wide range of factors, they believe the three main categories include: economic variables; social factors and health status. They state that sense of acceptance/integration may affect most of these factors and the way they impact on happiness, and that integration has a direct impact on the components of subjective wellbeing:

> A person's subjective feeling of being integrated can have a positive effect on mood, increasing self-esteem and self-confidence, whereas a subjective feeling of not being integrated and therefore not totally accepted by the community can generate stress, anxiety and possibly anger (Bimonte et al., 2020, p. 949).

Their research indicated that irrespective of other personal aspects, what matters is integration (feeling part of a community) being an important predictor of subjective wellbeing. Furthermore, Marks and Shah identify that: "Well-being is more than just happiness. As well as feeling satisfied and happy, well-being means developing as a person, being fulfilled and making a contribution to the community" (Marks & Shah, 2004, p. 9).

Dodge et al. (2012) believe that linked to challenges is the idea that individuals develop relevant skills or resources to cope with the challenges that may come their way. However, Csikszentmihalyi (2002, p. 252) predicts that the concept of *flow* will occur when challenges and skills are relatively in balance. Students need to be challenged but when the challenges are too great and personal resources are not sufficient to cope, the imbalance can affect wellbeing. For Dodge et al. (2012), their definition of wellbeing is to centre on a "state of equilibrium or balance that can be affected by life events or challenges" (p. 222). Wellbeing is the balance point between an individual's resource pool and the challenges faced. "Stable well-being is when individuals have the psychological, social and physical resources they need to meet a particular challenge" (Dodge et al., 2012, p. 230). When individuals have more challenges than resources, wellbeing is disturbed.

All university students (domestic and international) experience challenges as they undertake their study journeys. These life transitions may mean moving to a new location away from family; learning to be more independent and responsible in

new contexts; and coping with the demands of university study. International students bring additional layers of complexity to these issues. These may include: being in a new country a *long way* from family and friends and their regular support systems; adapting to a new cultural environment; coping in a second or third language; financial and employment issues; and adding the pressures to be academically successful and complying with the various student visa requirements. For many, negotiating and understanding their new country and experiencing a new university can be extremely complex. Mesidor and Sly (2016) believe that international students go through many adjustments: cultural adjustment; social adaptation; academic adjustment; psychological adjustment. They call on universities to have "adjustment plans for international students to ensure a smooth transition from their home to their host country" (p. 273).

## *International Students and Tourism*

International students have an influential effect on the Australian tourism industry which is in addition to their study-related activities and expenditures. Min-En's (2006) research involved 23 international students in focus groups who provided responses of their tourism activities while in Australia. The research indicated that international students are significant contributors to tourism by visiting places of interest, purchasing souvenirs, casual work in hospitality and visits by friends and relatives. The primary factors considered by the participants when choosing Australia as their study destination were the cost of the study and time taken to complete the course; as well the perception that Australia was a "safe place". This issue of safety and security was raised across all the focus groups in the study. As well, all focus groups mentioned the scenery and the Australian icons such as Ayers Rock (Uluru), koalas and kangaroos. All participants had at least one visit from friends or relatives during their stay.

These findings are supported by Weaver's (2003) earlier study which determined that each international student generated on average expenditures of AU$12,000 from tourism-related activities within Australia. The study sample consisted of 139 students from a range of countries. They completed a nine-page survey. From the sample, 83% had taken a trip; 78% had at least one visit from family or friends; 53% reported making a return trip to Australia and 65% had influenced others from their home country to study in Australia. The results from Weaver's (2003) study indicated that "international students have an influential effect on the Australian tourism industry, and this is over and above their education-related activities and expenditure" (p. 95). Michael et al. (2004) also found that two-thirds of international students travel while studying in Australia and nearly as many intend to take holidays in Australia on completion of their studies and after they return home. International students are therefore making a sizeable contribution to the tourism sector.

Tran et al. (2018) identify a special form of tourism in which international students are involved: *Visiting Friends and Relatives (VFR) tourism*. They believe that

**Fig. 1** International students enjoying a visit to the beach. (Image courtesy of Griffith Explore, Griffith University)

international students' choices of educational destinations can be influenced by their tourism-related perceptions. They also confirm that having the ability to undertake tourism adventures pre, during and post their studies can have a positive impact on student wellbeing. Tran et al. (2018) identified an initial conceptualisation of the convergence between two increasingly significant global phenomena—international education and tourism. They also identified another important social aspect of the impact of VFR tourism on students' wellbeing during their study. VFR during the studying period of international students has "diverse and nuanced impacts on their overall overseas study experiences" (Tran et al., 2018, p. 89). International students have an influential effect on the Australian tourism industry which is in addition to their study-related activities and expenditures. Backer (2019) also found in her research, with a sample size of 552 participants across Australia, that VFR travel overwhelmingly brought benefits and "provided great joy and contributed positively to the quality of life for the majority of respondents" (p. 166) (Fig. 1).

## Impacts of the Pandemic and the Higher Education Student

International students right around the world have been greatly impacted by the COVID-19 pandemic (QS Quacquarelli Symonds, 2020b). For those who were living in Australia when the lockdowns commenced, many have lost their casual

hospitality jobs and their studies have gone online. Many needed the financial support of their jobs to pay for accommodation and food and next semester's fees. Many have not had access to the technological requirements needed to study effectively online. Many have felt isolated and alone and have not been able to socialise with other students or friends. Many have felt disconnected from the university. These issues are identified and supported by Scull et al. (2020) in their study investigating how the Australian education sector responded to the COVID-19 pandemic and how Australian universities implemented innovations to change the mode of teaching. They found that Australian educators responded well to the pandemic and implemented many innovations by changing the mode of their teaching to online environments. However, the study highlighted two critical factors "in that online students faced a heightened risk of feeling isolated, and that students in online-learning environments may not learn at the same pace as students in physical teaching and learning settings" (Scull et al., 2020, p. 9).

In a study conducted by Hebebci et al. (2020), 16 teachers and 20 students participated. The aim of the study was to "reveal the opinions of teachers and students about the distance education applications carried out in the COVID-19 pandemic" (p. 267). While they reported that the views on distance education are not clearly separated from each other, they noted that more students were not satisfied with the education. Some reasons for the dissatisfaction include "not understanding the subject, finding the teacher inadequate, inadequate time and lack of infrastructure" (p. 278). The teachers however, viewed distance education more positively and drew attention to the importance of sustaining education. The teachers did highlight that there was a lack of interaction.

The outbreak of COVID-19 saw disruption to life around the world and had a profound effect on all countries, their people, health and economies. The pandemic has affected education in many ways. As well as the factors highlighted above of financial, technological, socialisation and disconnectedness, mental health has been identified as an important issue during the pandemic (Sahu, 2020). Students found it difficult to manage and concentrate on their studies while they are "dealing with financial hardships, being away from family and loved ones and having to isolate in their rooms, which affects their mental health severely (Nguyen & Balakrishnan, 2020, p. 1374). While many students experienced anxiety and depression during the pandemic, Zhai and Du (2020) also identified discrimination and stigmatisation faced by Chinese students studying overseas, and this has led to anxiety and stress-related disorders. McKie (2020) confirms that racism and discrimination towards Asian international students results in "high levels of mental stress, social anxiety, discrimination and feelings of insecurity in Australia."

Sahu (2020) also identified that the pandemic may have a serious impact on the careers of this year's university graduates and with the interruptions in teaching and assessment, this can cause a sense of uncertainty, stress and anxiety.

## Methodology

International students experience challenges in their studies and lives that are different from domestic students (Skromanis et al., 2018). This chapter draws on the analysis of qualitative interview and survey data from two groups of students enrolled in education courses at a Queensland university. In the first group, research higher degree students participated in interviews about their wellbeing that focused on academic and non-academic factors (Hartwig & Wheeley, 2020). These data, which were collected pre-COVID-19, focus on the experiences of international students including factors that impacted their wellbeing and supports that allowed them to cope. In-depth semi-structured interviews were undertaken with 12 participants. Table 1 shows a summary of interview participants' demographic information. In presenting the data, all participants have been given a pseudonym that reflects either their cultural heritage or their choice to use an Anglicised name.

There were 12 respondents with age ranges between 20 and 44 years. Three participants were enrolled in doctoral programs; six in master's programs; and three undertaking graduate diploma courses. All students had English as an additional language. Given the small cohort, geographical areas were used rather than specific countries.

In the second group, education coursework students were participants in a survey to identify the expectations they had towards their study prior to COVID-19 and the impact of the pandemic on their academic, personal, and travel opportunities. This survey specifically investigated how they perceived Australia as a destination for study and for tourism and compared their tourist aspirations pre-COVID-19 with the 2020 "reality" of international study. Participants ($n$ = 29) were enrolled in a

**Table 1** Interview participants and demographic information

| Pseudonym | Geographical area of origin | Age Range (years) | Gender | Program of study |
|---|---|---|---|---|
| Afiq | Southeast Asia | 40–44 | Male | Doctor of Education |
| Anas | Southeast Asia | 20–24 | Male | Master of Education |
| Carmen | Southeast Asia | 25–29 | Female | Master of Educational Studies |
| Dee | Oceania | 40–44 | Female | Master of Educational Studies |
| Fred | East Asia | 30–34 | Male | Doctor of Philosophy |
| Jenny | Southeast Asia | 25–29 | Female | Master of Educational Studies |
| Mina | Middle East/East Asia | 25–29 | Female | Master of Educational Studies |
| Helen | East Asia | 25–29 | Female | Graduate Diploma of Education (Secondary) |
| Kelly | East Asia | 35–39 | Female | Master of Educational Studies |
| Zoe | East Asia | 35–39 | Female | Doctor of Philosophy |
| Hu | East Asia | 25–29 | Male | Graduate Diploma of Education (Secondary) |
| Sherry | East Asia | 25–29 | Female | Graduate Diploma of Education (Secondary) |

range of education courses including the Master of Teaching, Master of Education, Master of Educational Studies and Bachelor of Education courses. Table 2 shows a summary of participants' demographic information. Similar to the interview group, survey respondents were given a pseudonym to aid the presentation of findings.

There were 29 survey respondents with age ranges between 20 and 39 years, with most enrolled in the Master of Education program and having English as an additional language. The survey questions were open-ended to gather detailed information about students' expectations prior to 2020 as well as their experiences during 2020 from their perspectives as international students with the added challenges created by the pandemic.

Qualitative data were analysed using thematic analysis (Braun & Clarke, 2012). The process involved six steps: familiarisation with the data; generating initial

**Table 2** Survey participants and demographic information

| Pseudonym | Country of origin | Age range (years) | Gender | Program of study |
|---|---|---|---|---|
| Yan | Hong Kong | 25–29 | Female | Bachelor of Education |
| Eunji | South Korea | 20–24 | Female | Bachelor of Education |
| Amala | Bangladesh | 25–30 | Female | Master of Education |
| Dechen | Bhutan | 30–34 | Male | Master of Education |
| Palmo | Bhutan | 35–39 | Female | Master of Education |
| Kim | Bhutan | 35–39 | Female | Master of Education |
| Hua | China | 20–24 | Female | Master of Education |
| Ling | China | 20–24 | Female | Master of Education |
| Mei | China | 25–29 | Female | Master of Education |
| Jun | China | 30–34 | Female | Master of Education |
| Chun | China | 30–34 | Male | Master of Education |
| Rachel | East Timor | 30–34 | Female | Master of Education |
| Aditi | India | 20–24 | Female | Master of Education |
| Ella | India | 20–24 | Female | Master of Education |
| Prisha | India | 25–29 | Female | Master of Education |
| Jasmit | India | 30–34 | Female | Master of Education |
| Farida | India | 30–34 | Female | Master of Education |
| Noriko | Japan | 30–34 | Female | Master of Education |
| Mary | Philippines | 35–39 | Female | Master of Education |
| Samadhi | Sri Lanka | 25–29 | Female | Master of Education |
| Hang | Vietnam | 25–29 | Female | Master of Education |
| Tham | Vietnam | 30–34 | Female | Master of Education |
| Mia | USA | 25–29 | Female | Master of Education |
| Evelyn | USA | 35–39 | Female | Master of Education |
| Jane | Not specified | 30–34 | Female | Master of Education |
| Jun-seo | Korea/Canada | 30–34 | Male | Master of Teaching |
| Arya | India | 25–29 | Female | Master of Teaching |
| Tarini | Singapore | 25–29 | Female | Master of Teaching |
| Xin | China | 20–24 | Female | Master of Educational Studies |

codes; searching for themes; reviewing potential themes; defining and naming themes; and producing the report (Braun & Clarke, 2012). These steps are undertaken in an iterative manner until clear, distinct themes are identified and can be described in detail.

This approach to data analysis was well-aligned with the focus of the data owing to the subjective nature of wellbeing and a need to understand individuals' perceptions and lived experiences. The following sections address: issues affecting international students' wellbeing; international students' expectations of studying at a Queensland university; and the impact of COVID-19.

## Research Findings

### *Issues Affecting International Students' Wellbeing*

International students face many challenges when they leave their home, family and friends to travel to another country to embark on study that may be for some years. Through this experience, it is important for the students' needs to be met to ensure their quality of life and wellbeing during this time away from home. Cutter (1985) defined quality of life as "an individual's happiness or satisfaction with life and environment including needs and desires, aspirations, lifestyle preferences" (p. 1). Quality of life and wellbeing are difficult to separate. Backer (2019, p. 162), indicates that "well-being is a related concept to quality of life but is more focused on positive components in a person's life such as positive emotions, such as happiness and as such is affected by quality of life". Through their experiences some international students can transform themselves and their lives to cope and flourish, thus maintaining their wellbeing and quality of life, whilst others face challenges where the outcomes are not as clear and can greatly impact their lives.

The findings on wellbeing identified a need for balance between the challenges experienced by individuals and the resources which they could access to cope. This aligns with the model presented by Dodge et al. (2012) who define wellbeing as "the balance point between an individual's resource pool and the challenges faced" (p. 230).

In relation to travel and tourism, one participant reported that she gained an interest in studying in Australia through travel. She says:

> I first came [to Australia] in 2010, but at that time it was just a working holiday… I was very busy in Taiwan for almost 10 years and then I felt so tired I just wanted to go somewhere where no-one knows me, and so I went to Tasmania (Zoe, Taiwan).

From there, Zoe undertook an English course and travelled around Tasmania before going to Queensland to gain her second masters. At the time of the interview, she had enrolled in a different university in Queensland having received a scholarship and had just submitted her PhD for assessment.

Another participant, Dee, from Papua New Guinea, discussed getting to know Brisbane as a city and getting used to travelling. She was initially apprehensive about travelling at night, saying:

> I don't really see a lot of people around whom you'd think and be suspicious… but otherwise … I don't let my guard down (Dee, Papua New Guinea).

Later she commented:

> I feel very safe here. Even my husband at the beginning, when he knew that … I would be taking courses … in the evening… he was a bit concerned about that. I said, it's safer here. So when he came on his visit … and he saw that passengers in the bus, there were other females who were along by themselves as well. He said, 'Oh, okay'. So he doesn't think much about it these days (Dee, Papua New Guinea).

Now she is thinking about travelling further:

> I'm thinking of bringing my family over, and that would be having that wider space on travelling, that would be great for my family… to get to know, not just to be stuck in one place (Dee, Papua New Guinea).

Dee seemed to value the experiences that come from travelling. Backer (2019) acknowledges in her study that travel (VFR trips) for many can offer improvement in happiness, with many of their participants stating that they had higher levels of fun. They concluded that travel offers an important source of quality of life. A further study by Tran et al. (2018) found that travel had a significant impact on students' wellbeing during their study in another country. VFR travel assisted students with adaptation in the host country and cultural connections. Dee's comment further broadens the idea of travel in that she wanted to share those experiences with her family.

Planning ahead for students can be challenging. Education courses can involve school placements and communication was important for Helen from China. When she could not start her placement at the same time as other students, that did not really bother her. She said:

> Even though I'm late compared with the other classmates—they start from today—I'm fine with that because you've got everything you need to know… And you can make your life plan… Somehow you know you've got a holiday… maybe you can just travel somewhere, or you can do a little bit of study… so I think its fine (Helen, China).

Helen had had a previous experience where communication about her school practicum was not as clear, which meant that she was not able to plan as she would have liked.

## *International Students' Expectations of Studying at a Queensland University*

The findings from our survey of international education students were quite different from those of the international research higher degree students' wellbeing prior to COVID-19. In part, this may be due to the differences in the levels of study: coursework is more structured and scaffolded than research; but these differences are also likely to be related to the impact of the pandemic on students' lived experiences as international students in Australia. This section discusses students' expectations of studying at a Queensland university, including their academic and non-academic intentions. Students' expectations were related to perceptions about the university providing a *quality education*; interest in experiencing other cultures; perceptions of safety; and future opportunities that might be created having achieved their degree. These are all core issues in the decision-making of international students to study in another country (QS Quacquarelli Symonds, 2020c).

Studying at a Queensland university was perceived to provide a quality education. This theme was described using language such as:

> [H]ave a good education (Ella, India).
>
> [G]et a good valid degree that will help me in my future (Aditi, India).

and

> [T]o gain an international qualification and Australian degree (Mary, Philippines).

Another student elaborated:

> International education and experience are very important to achieve my career target (Samadhi, Sri Lanka).

Interestingly these comments focus on the outcomes rather than the processes of quality learning experiences. Samadhi also felt that Australia was "a better place for study and living" implying a consideration for *quality of life* while studying rather than solely the study experiences.

Students described study in Australia as "world-class" (Hang, Vietnam; Farida, India). Hang noted that there were many supports from government, whereas Farida perceived opportunities to work post-study. In choosing to study education, Aditi (India) was specific in her comments that she felt that Australia is "one of the best in the world for teaching education."

Some respondents offered perceptions about the differences in study opportunities between Australia and another country, identifying that they felt it would be a "better education" where another provided some comparison noting:

> The scope and education system in India with regards to the career path that I have chosen is not as well structured and administered (Aditi, India).

Sometimes there were pragmatic reasons for choosing to study in Australia. One student responded:

> Basically, the reason I chose to study in Australia because Australia under DFAT program offers scholarships every year to East Timor citizens (Rachel, East Timor).

Another noted:

> I was unfortunately not accepted into a teaching program in Canada. Therefore, I looked at other options (Jun-seo, Canada).

Culture was sometimes discussed in a very general manner, for example, "experience another culture" or be part of a "multicultural community." At other times, culture was described in more detail. Mary from the Philippines commented that she wanted to "study at the same time work, experience Australian culture and meet other people with diverse backgrounds." She identifies the diversity that relates to our multicultural society.

The cultural experiences were valued and noted by one student as adding depth to her experiences in her home country:

> My major is education, but I have been educated in my country all the time. So I want to experience it overseas and think what the differences between Australia and my home country (Ling, China).

Farida from India mentioned having a "curiosity" to learn about different cultures. Her expectations involved gaining "international experience and to see/learn more varied ways of doing things."

English language was important to some students with Eunji from South Korea commenting that she wanted to "learn culture as well as a language while living overseas." The perception that culture is *learned* is interesting and related to the intention to engage, understand, and possibly assimilate to Australian society. International connections were also valued. Aditi from India wanted to "make new friends."

In relation to travel as tourists, only five survey respondents indicated that they had not expected to travel prior to commencing study in Australia, whereas thirteen students gave details about their desire to travel. The destinations mentioned varied although there were shared interests in Australia's natural environments:

> I want to travel to Tasmania, I wish I can see more nature and wildlife in Australia (Hua, China).
>
> I want to go to Cairns to see the Great Barrier Reef and dive, and feel the characteristics of other cities (Mei, China).

Aditi from India wanted to:

> travel all across Australia. Queensland with its wide landscapes and flura [*sic*] and fauna. Wildlife etc. I wanted to slowly cover each part of Queensland, trekking and hiking and visiting wildlife sanctuaries and being part of wildlife and environmental activities (Aditi, India).

Farida's interests were in the "beautiful places within Australia as well as in New Zealand." Participants were interested in city destinations as well. Ling from China described her travel desires as follows:

> I wanted to visit Australia's major cities and some famous scenic spots, such as Sydney, Melbourne, Cairns, Perth, as well as famous scenic spots such as the twelve bronze man and the Great Barrier Reef (Ling, China).

Perceptions of Australia as a safe place to study, live and travel are important. Hua from China wrote:

> I expect Australia is safe, people have a high standard living and multicultural community and easy to be part of the community (Hua, China).

Eunji from South Korea shared personal experiences and the influence of a friend:

> One of my close friends moved to Australia when he was 7 years old and he said good things about Australia and my dad don't [*sic*] want me to go to America because it is too dangerous (Eunji, South Korea).

In embarking on international study, future expectations were indicated in the previous sections on opportunities for a quality education, shared cultural experiences, safe living and travel in Australia. Prisha from India captures what she expected as a student and for her future:

> I expect to live a quality and peaceful life in Australia. I want to experience international standards of education. With a good quality of education and real knowledge in my field I expect to get a good job after I complete my course (Prisha, India).

Prisha, however, responded *not applicable* to intentions to travel as with COVID-19, writing:

> I am still in my home country, India. All my processings [*sic*] are done but due to border restrictions, I am still in my [home country] (Prisha, India).

## *The Impact of COVID-19 on International Students at a Queensland University*

Student responses gave some insight into the depth and breadth of the impact the pandemic has had on their study and travel opportunities. Australia has fared better than many countries in relation to managing the pandemic with Moloney and Moloney (2020) stating: "it is arguable that Australia's quarantine policy response to COVID-19 has been more effective than those of many other countries" (p. 679). Although some news articles referred to Australia as *the lucky country*, perhaps harking to Donald Horne's, 1964 book, lower population density, geography as an island state, strict external and internal border controls are all likely to have impacted controlling the spread of COVID-19 in Australia. Farida from India expressed gratitude for what Australia offered during the pandemic. She wrote:

> I expected nice place and good University and most of the expectations are met. [The] COVID situation made living difficult for a while but Australia is quick in recovering, which has been a relief. It is nice and safe which is the most wonderful thing about this country (Farida, India).

For others, international border controls meant that some students were unable to come to Australia to commence their studies or return to Australia after a trip home. Prisha describes her experiences thus:

> Due to pandemic, I am still in my home country. Studying online was a bit of a difficult task. I have never experienced this before. As being an international student there seems a need to cover maximum credit points. This stressed me a lot. But later this issue was solved. Thanks to our Director and teacher. Master of Education is really an interesting program. It gave me lots of experience and knowledge. I learnt lots of things studying just 30 credit points. Australia has a very unique studying pattern that helps students to gain lifelong knowledge. But some personal issues also hindered my studies go well, My mother had a heart attack, my aunt died. Stresses continued with the studies. Hoping my next trimester would be the best (Prisha, India).

Ling from China could not enter the country but had previously lived and studied in Australia. Although domestic and international students have been studying online, there are additional challenges for students living overseas. She says:

> I cannot entry the country and I have to study online. And the VPN [Virtual Private Network] is always unstable so that I have to spend time to watch the recordings (Ling, China).

Challenges related to online learning extended beyond internet connectivity. The relationships that support learners were difficult to develop. The online classroom presents particular challenges for international students, beyond the technological interface and similar to our research higher degree students, was the impact of language on students' confidence and success in their studies. Hua from China wrote:

> I think my degree highly depends on the communication online classroom is not really work for me, as an international student, my spoken English is not perfect while study online by using a microphone to talk make me feel embarrassed and lack of passion of study and staying at home face to the laptop cannot help me develop the relationship with my classmates (Hua, China).

Here, Hua identifies that language can be a barrier to engaging in learning and feeling motivated about her studies. The research higher degree students also identified language challenges in reading and interpreting academic literature, communicating clearly with supervisors, and producing written work to the required standard (Fig. 2).

Students experienced uncertainty about their futures. Part-time work opportunities were hindered by the pandemic. Hua from China explained:

> I feel my future become uncertain and life this year is far away from my expectation.[I have] no friends [where I live] sometime make me feel stress and cannot get into the community. I usually do some part-time jobs while studying in Australia, but I cannot do any of them due to the concern of COVID (Hua, China).

Dechen from Bhutan elaborated:

> [I had a goal] to study and have a part time job to earn a little to help me pay daily bills. But due to current situation it's hard to get a part time job (Dechen, Bhutan).

Dechen's wife is with him in Australia and he notes that:


**Fig. 2** Image from an example university program showing international students studying online. (Image courtesy of Griffith International, Griffith University)

> …we could sustain [ourselves] with the money we brought from our country, and moreover we [have] had continuous support from our parents (Dechen, Bhutan).

He explains further:

> It was really hard to find a part time job and moreover it was very hard to learn with no interaction with other students… I had stress of my family back home, due which I could hardly concentrate on my studies (Dechen, Bhutan).

Financial challenges added to the stress of living and studying in Australia. Part-time work may offer more than financial resources; it may also provide the social contexts for the development of friendships.

In relation to travel, the reality of studying as an international student during the pandemic meant that only three students had in fact travelled: one, went bush camping while working in Queensland (Evelyn, USA); another travelled to cities including Cairns, Sydney and Melbourne (Hua, China); and the third to Perth, Cairns and Melbourne (Ling, China). Ling elaborated:

> This was a wonderful experience and each city has different style, which made me feel relax (Ling, China).

The meaning travel as a tourist holds for some international students is encapsulated by Hua from China where she says:

> Usually each year I will spend 2 weeks travel in Australia most of the time just find local food and experience a different culture and enjoy sightseeing and shopping in the city. I am a person who loves [to] travel a lot each year travel—to me [travel] is always the recovery time reward and treatment for me after hard working or study. No travel this year makes me feel stress and lack of energy (Hua, China).

## Case Studies

Two case studies are presented which illustrate the challenges, but also the change brought about from additional support. These data are from reflections of an international coordinator at the university.

### *Case Study 1: Rahima From Pakistan*

Rahima was studying a Master of Educational Studies and had completed one year of her program. Her husband was living with her in Australia working as a taxi driver. They had a 3-year-old daughter. Rahima and her husband shared the care for their daughter working and studying flexibly. At the end of 2019, Rahima became pregnant with their second child.

At the beginning of 2020, her husband travelled back to Pakistan because the company where he was employed required his skills and knowledge in order for him to keep his job to which he intended to return in 2021. The outbreak of the pandemic meant that he could not return to Australia.

Rahima's due date was approaching, and she was alone and the sole carer for her daughter. She was very stressed and became ill, which affected her health and study. The international coordinator became involved as a regular visitor to Rahima's home and assisted in providing food packages and contacts with international student advisors and health services. Many attempts were made to arrange travel for her husband on compassionate grounds and as the due date loomed, the international coordinator commented that she was fully expecting to find herself holding Rahima's hand in the birthing suite! Fortunately, two days before the birth, Rahima's husband was able to return to Australia to be there to welcome his baby son.

With the support of the university academics, Rahima was able to take advantage of extensions on assessments and additional academic support to complete her studies. When thinking about international students' experiences, it is easy to generalise about their experiences and separate study from their personal and family lives. The challenges that impact their studies extend beyond their university experiences.

### *Case Study 2: Priyanka From India*

Newly arrived in the country to study a Master of Education, Priyanka was staying with an Indian family where they spoke their home language. She started her studies taking four courses on campus when responses to the pandemic meant that all university courses moved to online delivery. Shy and reluctant to ask for help, Priyanka failed two of her four courses.

Developing academic English to complete research and writing at a master's level was challenging for Priyanka. Learning online, she had few opportunities to practise her English language skills. With the university campuses closed and restrictions in place to limit all travel within the city, Priyanka's ability to find help was sorely limited given that she had not developed relationships with other students or contacts to help with English language and other academic supports.

Online learning continued into the commencement of the next study period where Priyanka again enrolled in four subjects. A pressure to take on a full course load is exacerbated by visa restrictions limiting the time students have to complete their studies. The university international coordinator convened and taught one of these courses. The coordinator noticed that during the online sessions Priyanka would not turn on her camera or microphone and did not engage in tutorial discussions even when especially invited to give an opinion and her standard response was to type "No" in the chat box. She failed the first assessment task. At the halfway point of the study period, international students were allowed on to campus for the duration of tutorials only. Following the first face-to-face tutorial, the coordinator invited Priyanka to meet and discuss her progress. It was revealed that she was unaware of possible supports and even navigating the online course site which held essential course content and assessment information.

By supporting Priyanka to access these resources, there was a flow-on effect to her other subjects allowing her to successfully complete the courses during that second study period. The intervention of a caring and knowledgeable academic with experience supporting international students can make a real difference in setting students up for success.

## Conclusion

International students are important members of Australian university communities and the pandemic has brought to the fore the support systems and resources these students need for success in their studies, in maintaining positive wellbeing and in realising their hopes and aspirations. A number of key learning points have been highlighted from this research. First, the pandemic has had a significant impact on international students' opportunities in relation to their studies, while also adding to the stresses experienced and expectations not met. Second, the unique challenges that are part of the international student experience need to be understood by

universities and governments in order for the enhancement and creation of effective supports in response to the particular challenges of 2020. Third, plans to travel as a tourist are an important facet of most international students' intentions when coming to Australia. This is an area that has been severely limited by the pandemic, with some students not able to enter Australia and border restrictions limiting travel within Australia.

So, WHAT'S PAR for the course? The international students who participated in this research are resilient and have persisted with their studies from their home country or within Australia. The pressure on universities to pivot to primarily online learning has exacerbated some of the challenges experienced by international students and as Nguyen and Balakrishnan (2020) highlight, "the consensus is that Australia could have done a better job in caring for international students during the pandemic" (p. 1373). For many international students enrolled in education courses at one Queensland university their high hopes and dreams have been diminished by the challenges and struggles of 2020. This imbalance in resources—psychological, social and physical—in relation to the levels of challenge experienced by international students in 2020 is likely to have disturbed their wellbeing. However, with a continued commitment to international education, universities and governments are seeking creative solutions to support international students in their study and tourism experiences.

There is no doubt that COVID-19 has heralded in a new era of digital education, with online study set to increase in the future, although *in-person* and *blended* study modes which combine online and in-person delivery are still more popular ways to deliver teaching for international students (QS Quacquarelli Symonds, 2020d). While study online has the benefits of added flexibility, convenience, and ability to easily juggle work and study, the main reasons against studying online identified by international students are a lack of access to facilities, reduced social interactions, and limited ability for overseas travel.

Based on the interview and survey results presented in this chapter, the attraction of living, working and travelling overseas will continue to be very popular for international students, with a common intended response to the pandemic being to "wait it out" by deferring studies until next year or until international borders reopen. However, the onus will be on Australian universities to provide support structures for international students in the post-COVID-19 era. These include having a "flexible action plan that prioritizes the health of students and faculty; and a flexible educational delivery model that maintains quality and emphasizes safety" (QS Quacquarelli Symonds, 2020e, p. 5). There should be a focus on ensuring high-quality educational delivery whether delivery is online or in-person. The QS report (QS Quacquarelli Symonds, 2020e) also emphasises an "iron-clad approach to safety measures and hygiene standards" (p. 8). Social distancing, flow of students and public health requirements will be paramount. Institutions will need strategies "to provide mental health and emotional support" (QS Quacquarelli Symonds, 2020e, p. 12) to ensure students are well-looked after so they can successfully engage in their study and Australia continues to be a destination of choice for international students.

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# Generation Z, COVID-19 and Tourism

**Donna Pendergast and Kyrra Wilks**

**Abstract** Generational theory is an engaging way to consider a birth range of people with shared experiences that have shaped their collective values and beliefs. The COVID-generation, comprised of Generation Z and the current Alpha birth generation, share the experience of the global pandemic during their impressionable, formative years. As a generation they will shape and carry into the future the collective memory of the COVID-19 generation. This chapter narrows the lens to Gen Z as the youngest complete birth range generation aged 10–24 at the time the pandemic was declared. The character traits of Gen Z are explored and a systematic quantitative literature review conducted to consider what contemporary research reveals about Generation Z's tourist/tourism behaviours, especially those related to health, safety and wellbeing, and how has this been impacted by the pandemic. The COVID-19 pandemic has had a devastating and widespread effect on the travel industry and the recovery, and we share insights into the lived experiences of Gen Zs from around the world, who tell their stories and provide thoughts about their future as travellers. These unmediated stories located in the chapter reveal that Gen Z are indeed keen to engage in future travel and will bring their unique generational character traits to shape the reconstitution of the travel industry, which will in turn feature in the collective memory of this generation.

**Keywords** Generation Z · Travel · Tourism · COVID-19

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_13

## Introduction

The COVID-19 pandemic was officially declared on 11 March 2020 by the World Health Organization [WHO], (2020a). According to the Worldometer, the world population on 1 July 2020 in the midst of the global pandemic was 7,794,798,739 with a median age of 30.9 years. Almost a year later, by 26 April 2021, the records indicate there have been 147,768,496 coronavirus cases 3,122,001 deaths, including the largest number of more than 586,148 in the United States of America (USA) (Worldometer, 2021). This data is regarded as being a gross underreporting of the infection rate, as many countries in the world are not well-resourced, leading to undertesting and subsequently underreporting (Lau et al., 2021). The pandemic has impacted all humankind and will continue to have an effect long past this initial period of infection, with widespread vaccination the only foreseeable circuit breaker that operates from the strategy of protecting against severe disease and ideally establishing herd immunity (Wouters et al., 2021). No one is exempt from infection, however,

> people aged 60 years and over, and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, obesity or cancer, are at higher risk of developing serious illness. However, anyone can get sick with COVID-19 and become seriously ill or die at any age (WHO, 2020b, n.p.).

including Gen Z.

Throughout time, the study of major events and the impact on humans has been captured in a number of ways and through a range of demographic lenses. One is through the consideration of birth ranges, grouped into generations, who have shared experiences of major events impacting them, and how they subsequently continue to shape the character of the generation over time (Pendergast, 2009). Depending on the age at which the events occur, the impact can have different effects, having such profound social, economic, health and other impacts that the script for that generation diverges from what was anticipated. These events are typically captured in stories that are told and retold, and over time these become the collective memory of each generation. As Holmes (2020, para. 6) explains:

> [C]ollective memory is a term historians use to refer to the ways the public 'remembers' an event or a period of time. It is the version that gets publicly told, endorsed and reworked through films and history books, commemorative activities, monuments and school curricula.

This global pandemic is of such wide reach and magnitude that it can be regarded as an event that will shape all living generations, and particularly impact the younger generations during their formative years, as they journey as a collective through the pandemic as a shared experience that will shape their values and perceptions, leading to enduring characteristics and traits that will define the generation. They will create the collective memories of the generation through their storytelling (Pendergast & Dobson, 2021).

The concept of generational theory as a social construct with which to explore tourism has been detailed elsewhere, particularly with regard to Generation Y (see Pendergast, 2010). It enables segmentation for understanding tourist behaviours and

comes with the benefit of extending beyond mere description to deeply understand the root of motivations and aspirations that drive the generation and their decisions (Huang & Lu, 2017). Futures tourism literature extensively explores this construct, using it to predict the effects of generational demographic changes across the industry in both broad and specific ways (Gardiner et al., 2014).

Generational traits across all living generations have been shaped by the pandemic and the world's response to it. The need for a global rapid response meant every aspect of our lives was affected—from how we live, work, and operate in communities—challenging the core values of each generation, but none more so than the impressionable Gen Z and Alpha generations that are in their formative years during this disruption to humankind. The pandemic response has led to a global shift that has seen: the need for physical/social distancing; "iso" (home isolation); the shift to learning at home; closure of social, retail and sporting facilities; the shutdown of the international tourism industry and domestic travel; resource shortages and panic buying of products such as toilet rolls, pasta and other essentials; and every aspect of our lives to move into a constant state of uncertainty and high alert. This is unprecedented and the effects far-reaching.

The purpose of this chapter is to focus on the generation that is currently emerging from childhood into early adulthood—the Z generation (hereafter Gen Z)—to gain insight into the ways in which the pandemic might shape this collective as tourists, with a focus on health, safety and wellbeing. To do so, the chapter will provide as a basis the literature surrounding generational theory, with a spotlight on the Gen Z, consider emerging literature which proposes impacts, and will provide voice to members of the generation, offering a range of narratives about their lived experience of the pandemic and how this is shaping them as current and future tourists.

## Generations Impacted by COVID-19

The living generations in the world population at the time the global pandemic was declared are represented in Table 1. The range of the birth years attributed to each generation, the generational names, and even the population numbers are all contestable, reinforcing the reality that generational theory is not a pure science, but is a way of looking at groups that is both popular and inclusive and provides a broad brushstroke lens. For the purposes of this chapter, the details provided in Table 1 will be used.

The generations that dominate the workforce are the Baby Boomer, Generation X and Y. Gen Z includes some who are school-age through to those new to the workforce, with members ranging in age from 10 to 24 years at the time the pandemic shut down the world in 2020. Gen Z is the first birth generation of the twenty-first century. The Alpha generation is the current birth generation, and all of those aged 9 and under in 2020 are considered to belong to this cluster. At the time of the pandemic declaration, many Alpha generation and Gen Z members were in home care or schooling. Figure 1 provides a visual representation of the data presented in Table 1.

**Table 1** Living generations in 2020 at the time the pandemic was declared, 11 March 2020

| Birth years | Generation name | Age range in 2020 | Estimated percentage of world population[a] |
|---|---|---|---|
| 1901–1924 | Lost | 96–119 | 0.2 |
| 1925–1942 | Silent | 78–95 | 1.7 |
| 1943–1960 | Baby Boomer | 60–77 | 11.6 |
| 1961–1979 | Gen X | 41–59 | 16.5 |
| 1980–1994 | Gen Y | 26–40 | 28 |
| 1995–2010 | Gen Z | 10–25 | 24 |
| 2011– | Alpha | 9 or younger | 18 |

[a]Estimated from United Nations, Department of Economic and Social Affairs, Population Division (2019)

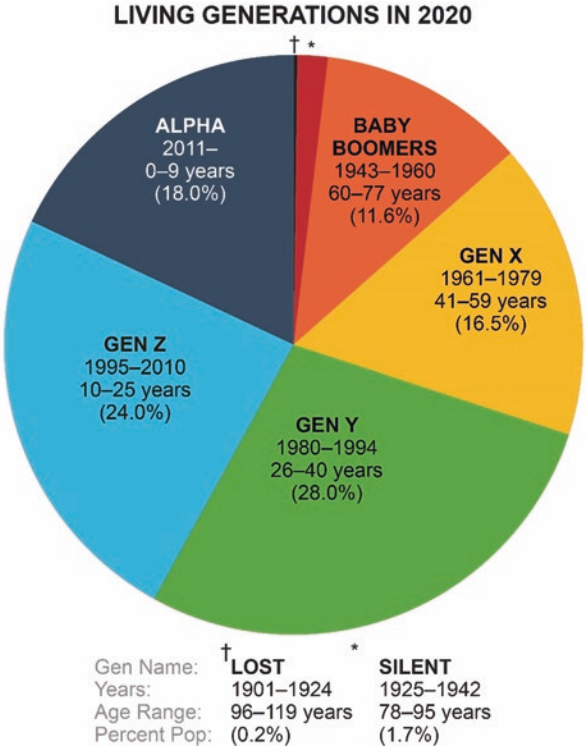


**Fig. 1** Living generations in 2020 at the time the pandemic was declared, 11 March 2020. (Source: Estimated from United Nations, Department of Economic and Social Affairs, Population Division (2019))

This means there are almost 2,000,000,000 Gen Zs globally—close to a quarter of the world population. According to generational theory, the human lifespan includes four phases where values and belief systems are shaped and tested, as summarised in Table 2.

During the childhood years values and belief systems are being acquired, and later they are tested and challenged, and ultimately transferred to others (Pendergast,

**Table 2** Phases in the lifecycle with value and belief system actions

| Phase of lifecycle | Age | Value and beliefs | Explanation |
|---|---|---|---|
| Childhood | 0–20 | Acquiring | Being nurtured, acquiring from others and influences. |
| Young adulthood | 21–41 | Testing | Challenging and testing, reshaping. |
| Mid-adulthood | 42–62 | Asserting | Asserting values and beliefs, leadership, managing and directing. |
| Elderhood | 63–100 | Transferring | Asserting values and beliefs, leadership, managing and directing, reflecting and mentoring. |

2010). With regard to Gen Z, with ages ranging from 10–25 at the height of the pandemic, the phase of life includes both childhood and young adulthood. This means that the acquisition and testing of values and belief systems is underway, and hence the impact of the pandemic on these social aspects are profound, shaping the ways in which Gen Z character traits will evolve. During these life phases Gen Z is focused on school and education, peer groups and experimenting with relationships, with the oldest entering the workforce, socialising with friends and gaining independence from families. Importantly, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020) data reveals that 94% of the world's student population, many of whom are Gen Z, have been affected by school closures, impacting 1.6 billion learners and further projecting that 24 million students risk not re-entering education due to permanent school closures, health and safety risks, financial and other factors resulting from the pandemic. For those who do return, the length of out-of-school learning has been more than a year, with long-term school closures widely experienced. For many, their transitions such as rites of passage, firsts and lasts, milestone events, final year of school, gap years, travel plans, 18th birthdays and other activities typical of transition to young adulthood have not happened as expected, or have been completely abandoned, and the effects of these losses are expected to be profound (Prestridge & Pendergast, 2020; Pendergast & Dobson, 2021). In order to understand this situation relevant to their health, safety and well-being in the tourist domain, this chapter turns first to the characteristics of the Gen Z and then considers how the pandemic may affect their tourism behaviours.

## Gen Z

As already explained, the economic, social and political conditions impact on all generations in different ways because of their phase in the human lifecycle. During the formative years of the childhood phase (0–20), these conditions have the effect of shaping the characteristics of the generation. At this time the Gen Z group aged 10–25 years are in both the childhood and early into the young adulthood phases of the lifecycle. Prior to the pandemic, researchers identified five defining traits of Gen Z—they are: *digital*, *global*, *social*, *mobile*, and *visual* (McCrindle & Fell, 2019).

**Table 3** Traits of Gen Z

| Trait | Explanation |
|---|---|
| Digital | Born into a digital world with wireless access means blurred boundaries between home/social and school/work. They are genuine digital natives. Borderless world with easy access to information; intuitive users of technology; not afraid; screen-experienced; always 'on'. Screen generation. Media saturation. Self-educate through access to knowledge and digital literacy capabilities are independent and able to process information to make decisions. |
| Global | Access to technology and unbounded information means high exposure to a broad range of cultures and experiences. A broader experience from global influences which become less regional; movies, music; fashion; celebrities is available in synchrony at any time. Gen Z has more in common with their international peers than any previous generation. They have never known a world without war and terrorism so crave safety and security. |
| Social | Connected to peers constantly through social media platforms—hyper-connected. Networked and constantly connected to their peers means constant shaping by the social world they are constantly connected to and values are shaped by the approvals (likes) and constant feedback through these networks. Social media immersion is a defining aspect. |
| Mobile | Technology on the move and multiple jobs and careers and to experience portfolio careers. Gen Z use five screens on average. This is the most highly educated generation and hence values of sustainability, ethics and equity are more visible and influential in shaping values. Because they access technology while mobile they expect immediate response. |
| Visual | Prefer visual over text and hence videos and image-based messaging is preferred. Enables breakdown of language barriers through images and colours. Communication has shifted from predominantly auditory to visual with photos, videos. Gen Z expect personalisation. |

Table 3 outlines these five defining traits of Gen Z with insights and elaborations from across the literature added to explain the characteristic.

It is clear from these five defining traits that digital technology and the engagement with digital tools is a feature that defines Gen Z. Indeed, the ubiquitous impact of digital technology on this generation is an effect like no other, and they are the first generation to be wholly born in the digital era which has quickly evolved into the Information Age. A digital timeline is presented in Fig. 2 which highlights the rapid acceleration of the digital world and the tools that have become readily accessible to Gen Z (Figs. 3 and 4).

## Gen Z and Tourism

There is an extensive literature that characterises Gen Z as distinct from other generations. It can also be argued that Gen Z's "profile as tourists has been extensively outlined, with an orientation toward individualism and mobility as well as an interest in digital and gamified tourism experiences" (Tang et al., 2020, p. 4020), consistent with the five traits previously outlined. Particularly important is the consideration

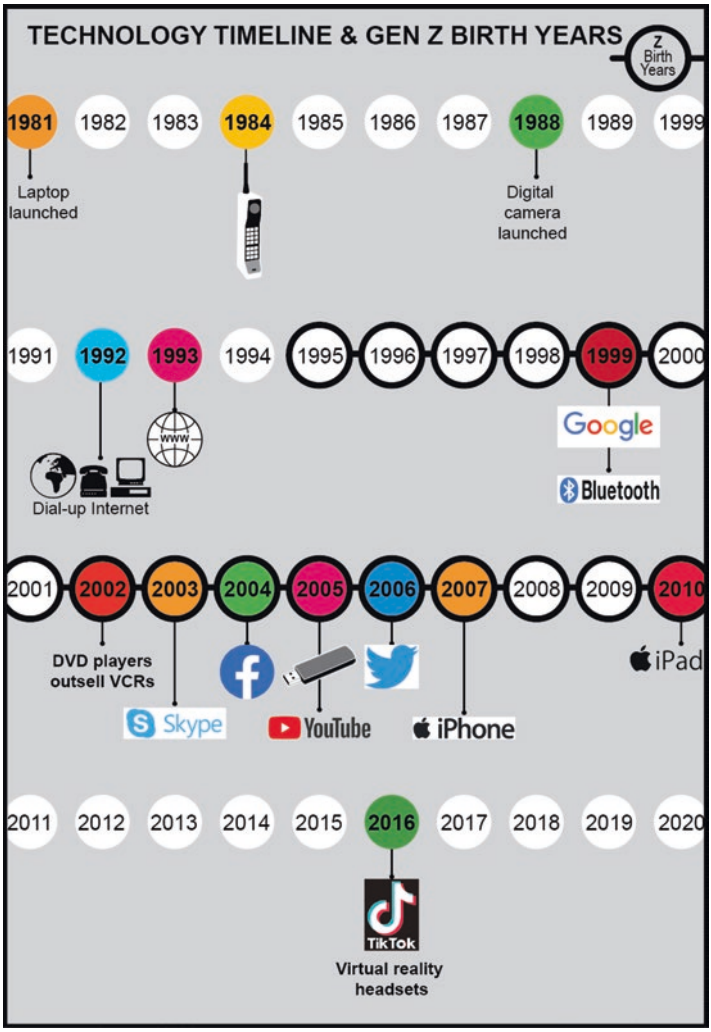


**Fig. 2** Technology timeline and Gen Z. (Source: Developed by Professor Donna Pendergast)

of Gen Z, tourism, and their digital capabilities, and how this takes effect in the shape of social media influencers.

According to the World Economic Forum (Viens, 2019), Gen Z are classified as the first generation to have never known a world without the internet, spending an average of 2 hours and 55 minutes of daily activity on social media. They access a wide variety of sites including YouTube (89% of Gen Z), Facebook (77%), Instagram (74%), and Twitter (48%), amongst others. In a recent study by the IBM Institute for Business Value when Gen Z were asked, "how do you spend most of your time outside of school or work?", 74% responded that they would spend time online, while only 44% would spend time with family and 23% with exercise (Cheung

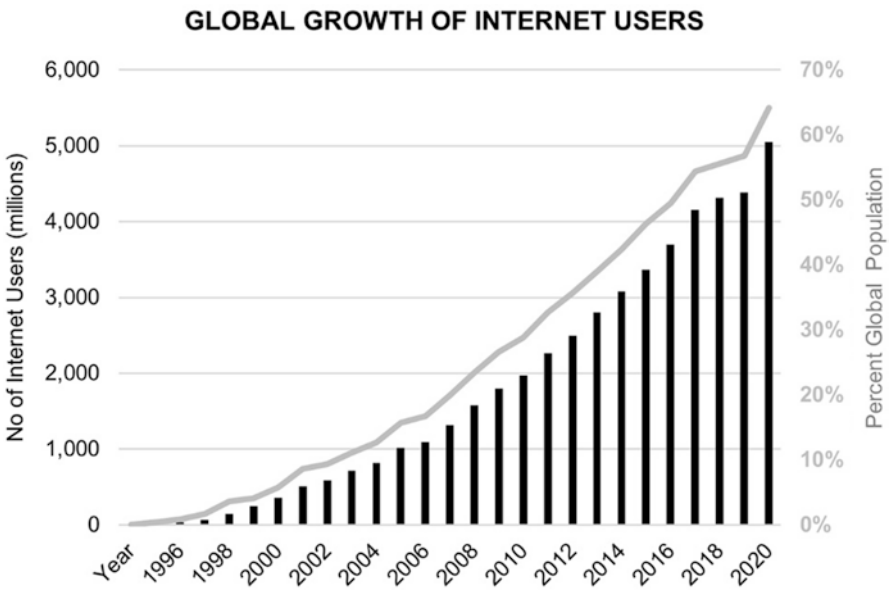


**Fig. 3** Global Growth of Internet Users. (Source: International Telecommunication Union (2019))

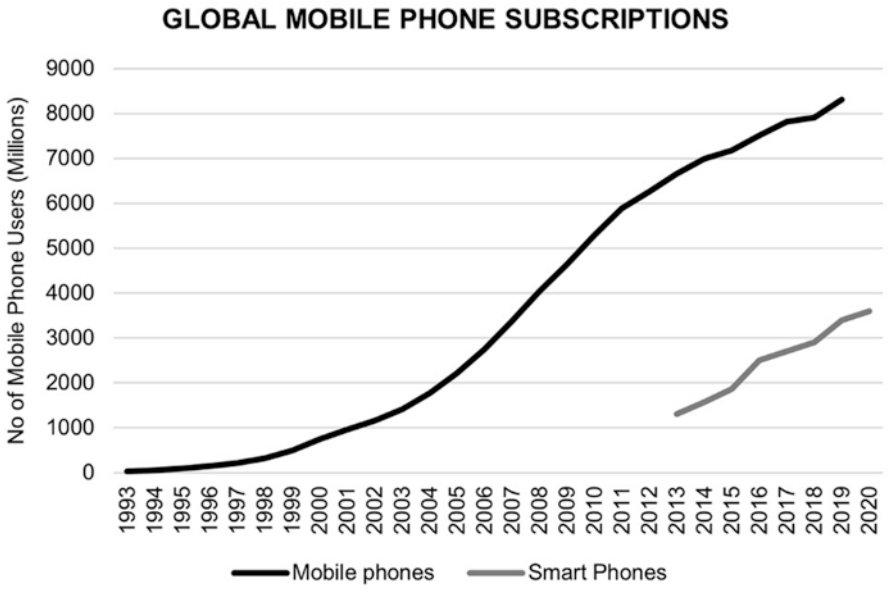


**Fig. 4** Global Mobile Phone Subscriptions. (Source: O'Dea (2021a, b))

et al., 2017). In a recent report 50% of European Gen Z'ers say they have used social media more often to relax since the COVID-19 outbreak (Facebook IQ, 2020). These trends of high social media usage and interaction are predicted to continue to increase in the future alongside the need to stay connected with a growing global population (Viens 2019).

Due to their high interaction and reliance on social media, Gen Z are often influenced by what they see advertised and shown through the media, one specific example being within the field of tourism. As of the beginning of 2021, there were 467,759,338 Instagram posts with the hashtag *#travel* (ICEF Monitor, 2021). Industry research shows that social media plays a considerable role in determining where young people travel in the world, with many of the platforms relying on the key concept of "escapism", where followers are inspired to live the life they see through their screens (Hutchinson, 2017).

This spread of online social networking has prompted the widespread appearance of social media influencers (Cox et al., 2009). According to Freberg et al. (2011, p. 90) a social media influencer can be defined as "a new type of independent third-party endorser who shapes audience attitudes through blogs, tweets, and the use of other social media". In a questionnaire-based global survey by Rakuten Marketing (2019) in five countries with 3600 consumers, it was suggested that 88% of respondents use social media travel influencers to find new travel destinations. Influencers commonly post landscape photos, images of experiences and images of themselves in beautiful locations. These influencers specifically target the Gen Z segment, because of their high influence via social media (Pop et al., 2021). Jade Broadus, creative director of Travel Mindset, a new company which connects influencers and travel companies, gives professional insight into the emerging trends stating, "People trust influencers like they trust their best friend" (Baran, 2021, para. 8). The defining feature which determines a social media influencer's success is the trust of their followers, which positively promotes their willingness to purchase/travel as shown by the influencer (Lou & Yuan, 2019).

There are a number of lists ranking the most influential global travel influencers, for example, *Forbes Top Travel Influencers*. In a May 2021 report which identified the most influential travel influencers by followers and engagement, it was reported that @beautifuldestinations ranked number one in terms of influence, with over 17 million followers and 1.51% engagement rate (Influencer Marketing Hub, 2021). The top 10 included a number of larger influencers such as National Geographic Travel (43 million followers), as well as many individual influencers with many millions of followers each (Influencer Marketing Hub, 2021), as presented in Table 4.

Hence, due to Gen Z'ers high social media engagement, their travel destinations, purpose, and measures of success and fulfilment are highly filtered by the expectations set by social media influencers.

Throughout the remainder of this chapter, six boxes will share unmediated insights from Gen Z individuals, providing them with a voice to share their experiences of the impact of the pandemic, and to think about the future effects on their tourist hopes. These insights are not intended to be representative of all Gen Zs. This chapter now turns to explore the literature utilising a systematic quantitative literature review.

**Table 4** Top ten travel influencers in 2021

| Rank | Name | Followers (Millions) | Engagement rate |
|---|---|---|---|
| 1 | @beautifuldestinations | 17 | 1.51% |
| 2 | @natgeotravel | 43 | 0.20% |
| 3 | @jessicathivenin | 6.2 | 6.92% |
| 4 | @earthpix | 19 | 0.66% |
| 5 | @wonderful_places | 15 | 1.04% |
| 6 | @raghavjuyal | 8.3 | 2.06% |
| 7 | @artem_chek | 3.9 | 5.01% |
| 8 | @ppteamrafa | 6.7 | 1.50% |
| 9 | @earth | 3.5 | 4.92% |
| 10 | @earthfocus | 6.7 | 1.25% |

Developed from Influencer Marketing Hub (2021)

**Kyrra Wilks, 18 Years, 8 Months, Australia**

When the COVID-19 pandemic was declared, I was completing my final year of schooling on the Gold Coast. I was also in the leadership role of College Captain and a member of many school groups such as bands and involved in a number of extracurricular activities—music and cultural-related.

Yes, the words *digital*, *global*, *social*, *mobile*, and *visual* describe my generation. We are a generation who has grown up learning how to utilise technology and gain the benefits of communicating and connecting efficiently, enabling us to network and share ideas. However, I believe, especially after the global pandemic, that there are some other important key words which describe our generation. These are: resilient, connected, passionate, advocators and proactive.

I mainly use one iPhone, a laptop which I take to University and a desktop computer for studying and work at home. I am active on Instagram, Facebook and Snapchat.

Every year our family would take a family holiday overseas. Most of the travel I have done in my lifetime has been international, due to my parents travelling a lot for work, especially when I was younger. Some of my favourite travel experiences include exploring Europe and spending holidays in the snow in Japan. A highlight was my school China tour where we lived with homestays and were able to experience life in another country, spending time in our sister school and engaging with the culture. I enjoyed this experience so much because it taught me a lot about different cultures, allowed me to gain an appreciation for different music, arts and communication forms and enabled me to make meaningful friendships and connections with people from different backgrounds and upbringings.

I was meant to attend a Europe Music Tour with 30 other students from Year 7–10 to perform in cathedrals and competitions around Europe in June

(continued)

2021. However, unfortunately due to COVID-19, this trip was cancelled and all of the fundraising and practice for the trip was not able to be used. Finally, I had been planning for around 12 years to travel to Europe at the end of school with my family to celebrate graduation. The trip was meant to include travelling to the main tourist attractions—the Eiffel Tower, the Colosseum and the Louvre Museum. However, this trip was also not able to go ahead, and instead I ended up travelling to Noosa (due to border closures) for my end of year celebrations.

The pandemic drastically impacted my final year of schooling in many ways. To begin, it meant that our cohort spent around 6 weeks learning from home, meaning that our learning was quite disrupted. This combined with the new ATAR (Australian Tertiary Admission Rank) curriculum certainly made it a very challenging year. Furthermore, the pandemic had a major effect on my role as College Captain, because—how can you bring people together when you are so physically separated? For our leadership team this meant being innovative in our ideas and coming up with new ways to connect—for example, live streaming assemblies, online meetings, online cross-country, and so on. Socially, I found the global pandemic to be extremely testing. However, with our amazing forms of networking through technology, I was able to stay very well-connected with all of my friends, teachers and peers throughout this time, making it as smooth as it possibly could have been. The pandemic affected us all in many different ways. For me, it meant many missed opportunities and special occasions and time with friends and family. However, it also taught me resilience, challenged me to improve my communication skills and forced me to think outside the box—abilities I will have for the rest of my life.

Due to recent announcements that international travel may not open up again properly until 2023, all of my international travel plans have been put on hold. However, I am about to head to Cairns for my family's first holiday since the pandemic was announced over a year ago. We have decided to travel somewhere within our state of Queensland so that, if border restrictions are put in place again, hopefully it would not cancel our travel arrangements. At the moment, I believe this is the safest way to travel, locally and safely, with everything being so unpredictable. I also plan to finally reschedule my end of school travel plans to Europe after I finish my degree in 2025. By this time, I believe the international restrictions will all have eased, and the vaccines will (hopefully) have been distributed globally.

I believe that once I return to international travel in 2025 everything will almost be back to normal—although I do believe that many of the changes we have made throughout the pandemic will be long-lasting. For example, improvements in personal hygiene, like handwashing, using facemasks, cleaning surfaces. Businesses have also improved many of their practices, for example, sanitising tables, chairs, any surfaces which are in contact with

(continued)

multiple individuals. Improvements like these will continue to improve the health and safety standards of travel well into the future. Not only have physical health standards changed, but also the mindsets of international travellers. I believe that people will be more conscious of their own health and safety and pay more attention to the places they travel, the food they consume, the way they sanitise their hands, and so on, which is a great step to overcoming not just the COVID-19 pandemic, but all diseases and viruses able to spread, eg. the number of deaths from common flu have been drastically decreased throughout the pandemic due to these improved practices. So no, I am not concerned about travelling in the future, just interested to see how we can adapt and improve with these new changes.

## Systematic Quantitative Literature Review

A systematic, quantitative literature review (hereafter SQLR) was conducted to identify the most pertinent literature for this chapter. SQLR is an approach to interrogate the literature that is exhaustive, rigorous and replicable, an approach that is gaining in popularity due to its value (Pendergast et al., 2020). This SQLR has a particular interest in health, safety and wellbeing and was conducted in two phases: Phase 1 at the interface of *Generation Z* and *tourist* OR *tourism*, and Phase 2 at the interface of *Generation Z*, *tourist* OR *tourism*, AND *COVID* OR *pandemic* (see Fig. 5). Our guiding research question was: What does contemporary research reveal about Generation Z's tourist/tourism behaviours, especially those related to health, safety and wellbeing, and how has this been impacted by COVID OR the pandemic?

We have adopted the systematic quantitative literature review methodology as prescribed by Pickering and Byrne (2014) and Pickering et al. (2015), which provides for an approach that follows a step by step method. The process is visually summarised in Fig. 6 and will be explained in the following section.

In order to review published empirical research, searches were conducted across eight main databases: Griffith University library journal database, ProQuest Central, Web of Science, Social Science Citation Index, Informit, ScienceDirect, Directory of Open Access Journals, MDPI Open Access Journals. These provide access to the major publishers internationally. The inclusion criteria were:

1. Empirical research-based and specified methodology—quantitative, qualitative or mixed methods
2. Published in peer-reviewed journals or conference proceedings with full-text available
3. Published in English (or with a translation available)
4. Phase 1—Published from 2000–2021 with *Generation Z* AND *tourist* OR t*ourism focus*
5. Phase 2—Published from 2000–2021 focused on *Generation Z* AND *tourist* OR *tourism* AND *COVID* OR *pandemic*.

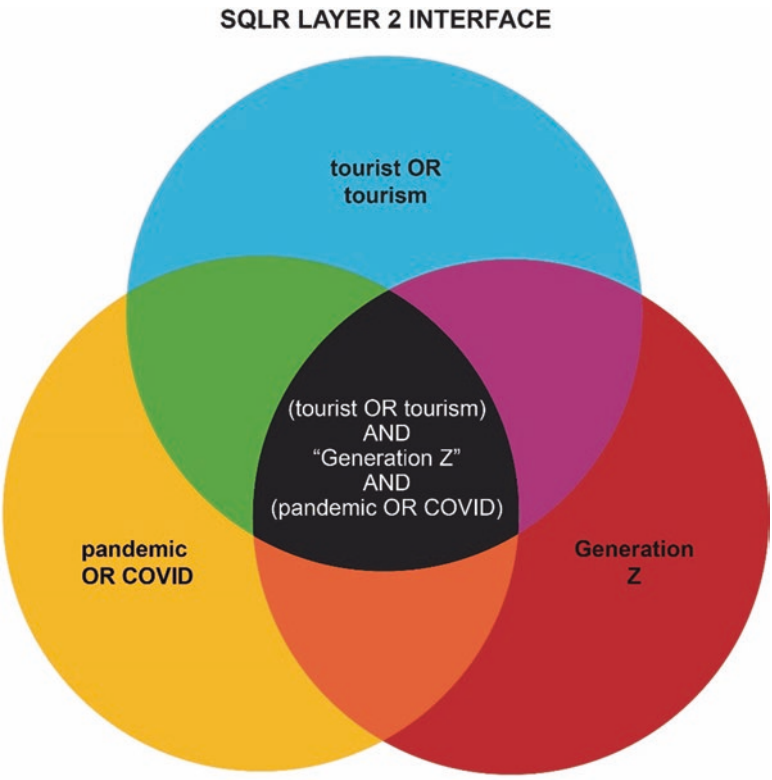


**Fig. 5** SQLR Phase 2 INTERFACE of Generation Z AND tourist OR tourism, AND COVID OR pandemic. (Source: Developed by Professor Donna Pendergast)

Articles were identified using the following methodology (see Fig. 6):

1. Searches for relevant articles which were added to the database (based on titles and scan of the abstracts)
2. As articles were identified, keywords from those studies were added to the initial list of search terms (*tourist* OR *tourism*; *COVID-19* OR *pandemic*)
3. Bibliographic branching was used by reviewing the reference lists of articles we included in our database to see if there were any further studies that were relevant to our review. One was initially found but on full reading was excluded due to the criteria.

As presented in Fig. 6, 274 studies were identified from the Phase 1 database search for *tourist* OR *tourism*; AND *Generation Z*; and 39 studies were identified from the Phase 2 database search for *tourist* OR *tourism* AND *Generation* Z AND *COVID* OR *pandemic*. The following systematic method was then applied:

1. Abstracts of all 274 and 39 articles respectively were skim-read and included/excluded according to criteria

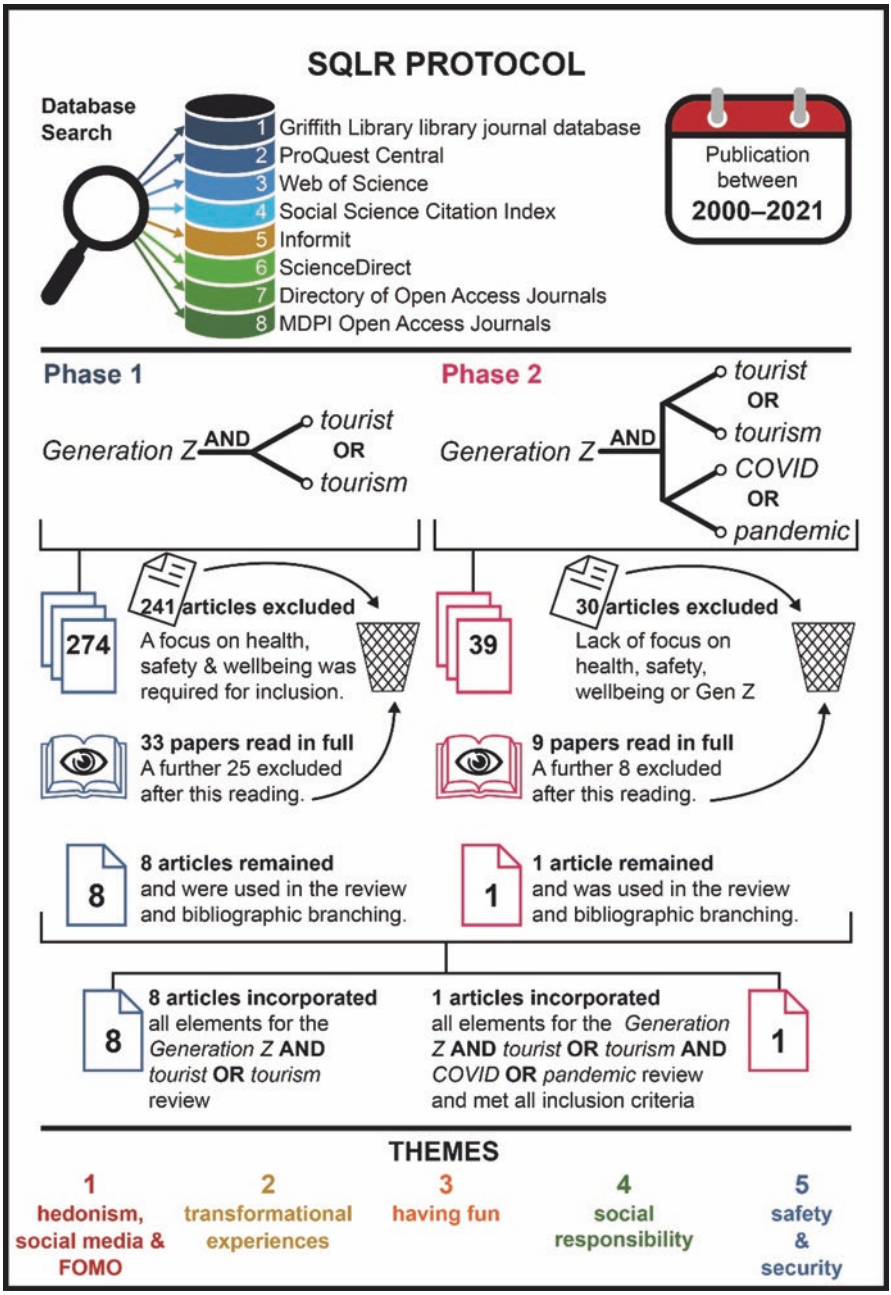


**Fig. 6** SQLR protocol. (Source: Developed by Professor Donna Pendergast)

2. For Phase 1, 241 were excluded (a focus on health, safety and wellbeing was required for inclusion). Specific exclusions included a focus on topics such as: workforce, employment, consumer, other generations, those lacking research. For Phase 2, 30 were excluded, because of a lack of focus on the areas of health, safety or wellbeing; and the absence of Gen Z application
3. For Phase 1, 33 papers were read in full; for Phase 2, nine papers were read in full
4. For Phase 1, a further 25 were excluded after this reading; for Phase 2, eight papers were excluded
5. For Phase 1 the remaining eight were included in the review and also used for bibliographic branching. For Phase 2, just one paper was included in the review and also used for bibliographic branching
6. Bibliographic branching revealed one additional paper
7. Eight articles incorporated all elements for the *Generation Z* AND *tourist* OR *tourism* review. One article incorporated all elements for *Generation Z* AND *tourist* OR *tourism* AND *COVID* OR *pandemic* review and met all inclusion criteria.

**Christopher Airey, 18 Years, 7 Months, Australia**

I was in year 12 when the global pandemic was declared. At this time, I was College Captain and actively involved in various musical bands and volunteer groups.

Yes, I believe the words *digital*, *global*, *social*, *mobile*, and *visual* are some words that can be used to describe our generation. This is due to us growing up alongside new technologies forming a more digital and interconnected world.

I use my phone for social media communication and my laptop for education and gaming-related communication. I predominantly use Snapchat and occasionally applications such as Instagram, Facebook, Whatsapp and TikTok.

Our family loves to travel and go on various adventures, generally around Christmas time. When I was younger, we mainly travelled to Fraser Island each year as we loved to escape to a semi-isolated island. No phone reception, 4 × 4 driving, fishing, and rainforest adventures. Fraser was our ultimate holiday. As I grew older, we started travelling along the entire eastern coast of Australia—up to Cains and down to Tasmania. After holidaying here, we started going international with our first major holiday to America. Since then, I have had the privilege of exploring New Zealand, China, Hong Kong, Singapore, the Philippines, and small islands around Japan.

As I was involved heavily in music at my school, we had planned to travel through Europe and go on a music tour. We had intended to perform in various cathedrals, festivals, and schools while learning about the history and the culture behind each new place. Additionally, we had booked a cruise to the Whitsundays with my extended family.

(continued)

COVID has taught me to cherish the little things! Whether that be sitting down for a whole family dinner, seeing a friend, or going out for lunch, as when we could not do anything of the little things due to isolation, I began to feel more appreciation for these little activities. COVID has also taught me to adapt and to be resilient. It has taught me to see the bigger picture and find out-of-the-box solutions instead of just cancelling an event due to difficulties.

I currently do not have any travel plans as I have recently started tertiary studies; however, this year, it would be amazing to get away and travel to either Fraser Island or down to Perisher and ski. In the future, if travelling overseas is permitted, I would love to go to Japan! I have always dreamt about going to Japan and skiing in their snowfields while learning more about their culture.

## *Phase 1 Tourist OR Tourism AND Generation Z*

In order to drill down deeper into the literature to focus on health, wellbeing and safety, and Gen Z tourism behaviour based on evidence from research, the eight publications that met all inclusion criteria were critically reviewed and common themes identified. There were five themes generated from the papers:

1. hedonism, social media and fear-of-missing-out
2. transformational experiences
3. having fun
4. social responsibility, and
5. safety and security.

Each of these themes will now be considered.

### Hedonism, Social Media and FOMO

Styvén and Foster (2018) explored the propensity for Gen Z travellers to make travel decisions based on seeking the *need for uniqueness* (NFU) and achieving *opinion leadership* (OL)—all connected to social media sharing of the travel experience. For Gen Z, sharing their travel experience on social media is important for their emotional wellbeing because they attach importance to how others view them. It is seen to be important to share travel experiences that are themselves unique, meeting their NFU, and a kind of accumulation of this leads to OL. In this way, Gen Z tourists are themselves vital for marketing, becoming the self-related drivers of *electronic word-of-mouth* (eWOM) that has such an impact on return and new visitor numbers through this influencing, both intended and unintended. These authors highlight the role of the Gen Z "self" as becoming part of the tourist product and connected to the brand. Other researchers also noted the hedonic reasons


**Fig. 7** Selfies are a feature of Gen Z—and travel experiences are captured by Gen Z as selfies. (Images courtesy of Kyrra Wilks)

underpinning emotional aspects of Gen Z travel behaviours, with Robinson and Schanzel (2019) revealing that the popular concept of fear-of-missing-out (FOMO) associated with Gen Z broadly is a reason for travel for some (Fig. 7).

## Transformational Experiences

Likewise, Wee (2019) explored Gen Z and educational travel noting that rites of passage travel allow for a more fluid understanding of Gen Z rather than adopting a rigid typology. The need for a paradigm shift in the tourism economy that moves

beyond the experience economy to the transformational, where lived experiences, networking, and educational growth are enabled, was emphasised. The notion of "extraordinary" was also identified in a study conducted by Haddouche and Salomone (2018) where Gen Zs revealed travel as being a chance to escape their usual routine and engage in new experiences and new tourist practices, with a keenness for the extraordinary and exceptional. This links with the NFU, OL and FOMO identified in the first theme.

### Having Fun

Tang et al. (2020) explored Gen Z subjective wellbeing (SWB) as it related to workplace culture, emphasising this as a valued aspect of Gen Z employees in the hospitality industry and more broadly as travellers. So too is the need for the experience to involve "having fun"—engaging in activities that promote good moods, the desire to laugh, and having stories to tell (Haddouche & Salomone, 2018).

### Social Responsibility

The next theme in the literature emerging out of this literature search was the unique relationship of Gen Z to sustainability and the environment. Buffa (2015) provided insights into the benefits of taking a generational lens and aligning this with the young traveller segment to consider sensitivity to issues of sustainability and the subsequent implications for destination strategies. More recently, Sharmin et al. (2020) identified the importance of environmental sustainability awareness as a characteristic of Gen Z tourists, and the need to promote this with both millennial tourists and local authorities enabling activities given their sensitivity to this aspect of travel that meets their social responsibility inclinations and hence enhances their emotional wellbeing.

### Safety and Security

Robinson and Schanzel (2019) reiterate a number of characteristics about Gen Z travellers that relate to each of the aforementioned themes. In addition, they point to the importance of safety, stating that "Generation Z has never known a world without war and terrorism and as such they crave safety and financial security" (Robinson & Schanzel, 2019, p. 129). The implications are that Gen Z will consider the destination profile in terms of frequency of terrorist attacks, security procedures, sociopolitical issues at the destination, and environmental factors such as sustainability practices and the weather. Nevertheless, the researchers concur that Generation Z has become "accustomed to and adapted to the volatile global enviroment in which they have grown up" (Robinson & Schanzel, 2019, p. 135). Robinson and Schanzel (2019) developed a model arguing that experiences for Gen Z fit into three realms:

physiological, relating to body; psychological, relating to the soul; and spiritual, relating to the spirit. Taken together, these three realms provide a useful summary of the themes identified in Phase 1 of the SQLR.

**Anica Moller, 17 Years, 11 Months, Australia**

When the global pandemic hit, I was a year 12 student at Somerset College on the Gold Coast. I was also working part-time as a waitress at Mike's Kitchen Steakhouse.

Honestly, I do believe the words *digital*, *global*, *social*, *mobile*, and *visual* well describe the Z generation as we are in our most technologically advanced era. However, it is not to say this is all we can be described as. I see Generation Z as independent, revolutionary, accepting and unique.

I use two devices—one phone (social), one laptop (university work and social) and Instagram, Snapchat and Facebook are my main social media platforms.

Prior to COVID-19, my family and I were avid travellers. We loved to travel both overseas and interstate. We would usually travel to South Africa (every year or so) to see all our extended family. As both my parents have grown fond of running, it was not unusual for us to travel interstate to Sydney, Tasmania or Canberra for a marathon. My favourite travel experiences include our 2017 trip to America (with family) and my 2019 school trip to Germany (alone). I loved both these trips so much as I was able to live in such a different way and experience daily life and culture as foreigners do. Germany was a 3-week couch tour and exchange program in which I became more independent and environmentally conscientious. I also made friends for life overseas. America was the light in a very dark time for my family where I was able to live so many of my fantasies bred from social media—such as experiencing snowy mountains, true American greasy barbecue and pumpkin spice lattes. Travelling is an extremely bonding experience to not only other people you are with or interact with, but different cultures and ways of life.

My family and I had planned another America trip at the end of 2019—as a celebration of the end of my schooling. This would replace my "Schoolies" experience. I had also planned to have a week-long road-trip with a group of girls from school, however, the border restrictions to New South Wales at the time prevented this.

At first, I believed the impact of the pandemic towards me was not that severe. But over time, there has been many small yet impactful and inconveniencing changes made to my life. As COVID-19 hit in my senior year of schooling, I was confronted with online school, cancelled school festivals, a 4-month delayed and restricted formal, no Schoolies and more. These were all inconveniences I could bare. However, not being able to see my sick family in South Africa or my immediate family in Gold Coast after my first semester of living away proved to be a bit more challenging.

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I am currently too focused on my University studies to plan any other travel besides Darwin-Gold Coast trips. Nevertheless, I am still beaten with excitement at the prospect of overseas travel in 5 years' time. Although the pandemic may affect the areas of the world I am able to travel, it will not affect my enthusiasm or eagerness to do so.

My concerns of travelling in the future include the potential risk of more outbreaks. However, I also believe by the time all borders and international laws are eradicated, travel as we know it will continue normally.

### *Phase 2 Tourist OR Tourism AND Generation Z AND COVID OR Pandemic*

The second Phase of the SQLR added the context of the pandemic to the literature search. Out of necessity the timeframe for the SQLR was drastically reduced from the Phase 1 20-year scope to cover just over 12–14 months in Phase 2, given the pandemic at the time of writing this chapter had been declared just over 12 months before. Thirty-nine articles were discovered across the data bases. After applying the protocols as outlined in Fig. 6 and removing duplicates from Phase 1, just one publication met all inclusion criteria. Several theoretical papers and opinion pieces were excluded because they had no empirical research component.

The singular research study meeting all inclusion criteria investigated the impact of the pandemic on the youth tourism market, revealing that:

The pandemic did not have a great impact on tourists' travel attitudes and preference. In this context, it is estimated that there will be no major change in the travel mobility of young people in the post-pandemic period. On the other hand, the pandemic impacts the participants in the hygiene and safety dimension. In this regard, it is estimated that young tourists will be sensitive about hygiene and safety in their travels (Asan, 2020, p. 503-4).

Hence, the study concluded that Gen Z will be willing to start travelling again but will have a heightened focus on hygiene and safety, which aligns with a theme from the Phase 1 review. It is important to note the limitations of this study given it utilised a convenience sample of just 103 respondents through an online survey administered in the early months of the pandemic. It is expected that the literature will grow dramatically in this field. While the literature is not yet available for a meaningful SQLR, it is possible to speculate as to the possible effects of the pandemic on Gen Z and to consider some of the commentary offered by experts in the field.

**Baxter Dent, 18 Years, Australia**
I was in Grade 12 at school, playing music at pubs and cafe's 2–3 days per week, when the pandemic was declared.

The words *digital*, *global*, *social*, *mobile* and *visual* describe the modern era of society, not just our generation. However, our generation have been exposed to modern devices and the internet since birth and have grown up alongside the behemoth technological revolution.

I use two digital tools—Phone and Laptop—and use Snapchat, Instagram, Facebook, Goodreads.

Unfortunately, I wasn't a particularly good traveller prior to the pandemic; I had been to a number of places, but never mentally left home. Looking back, I lacked an appreciation for local culture in both overseas and domestic locations.

My future travel plans were (and still are) vague, but I did have a romance about a vagabonding lifestyle overseas, most likely throughout Europe and Asia—living amongst the people for months on end.

As a professional musician, I believe that it set my career back; as the pandemic came down, I was just starting to find my footing in the industry, which was wiped away as restrictions tightened, and I had to rebuild my network and momentum during the recovery period. Excluding that minor setback, I feel that I am, overall, better equipped to handle the world because of the pandemic. It gave me a lot of time for introspection and self-development, as well as leisure time, which gave me time to work and rest in balance, which I had struggled with throughout 2019.

My immediate travel plans are all within the Oceania region, I would like to do a road trip around Australia and visit close friends in New Zealand, but after I finish my degree and "set up" the rest of my life, I would like to travel to Europe for an extended period of time, and explore Tibet.

I have a number of concerns about travelling in the future, the most pressing of which is a fear that it will detract from the rest of my life due to the time and financial costs associated with leaving for an extended period of time.

I feel better about international travel following the pandemic, as there is a new implicit trust that government and business will (at least for a while) take greater care to create and enforce high standards across a number of fields, especially cleanliness and health.

## Impact of COVID-19 on Gen Z

Beyond this SQLR with its narrow inclusion parameters, there is a growing literature base that reveals COVID-19 is widely accepted as a risk factor that influences tourist behaviour (Bratic et al., 2021). Within this risk acceptance, Gen Z is a market segment that has been identified as important to the travel industry's reconstruction, primarily due to their willingness to travel and to do so in a safe and sustainable

manner in order to ameliorate the risk (Kelly, 2020). For example, Gharzai et al. (2020) suggest the character traits of Gen Z provide constructive responses to the pandemic, identifying their collaborative nature, aptitude for visual and electronic communication, capacity to study and work from home, ability to rapidly distil information, and keenness to connect with peer groups as being among the attributes that will contribute to an intergenerational response to the pandemic and to restarting the tourism industry.

A study conducted by McCrindle and Fell (2020) reveals that while all generations have been impacted, Gen Z has reported the most uncertainty and highest percentage of negative responses. The top five emotions in response to COVID-19 expressed by Gen Z indicate they are: anxious (49%); frustrated (44%); overwhelmed (35%); confused (34%); and, unprepared (33%). Across all of the generations, only the Baby Boomer and Builder generations included a positive word, in both cases the word *hopeful* at 34% and 45% respectively. The most frequent word used by all generations except Builders was *anxious*, with the Builders indicating *vulnerable* as the most frequent word to describe their feelings (50%). Nevertheless, the same study revealed that: "Gen Z were the most likely to say that COVID-19 will increase the next generation of children's desire to travel and explore the world (82%)" (McCrindle & Fell, 2020, p. 7).

**Jennaye Mclintock, 18 Years, Australia**

When the pandemic was declared I was a Year 12 student working part time at McDonalds.

To some extent I agree with the description of Gen Z as *digital*, *global*, *social*, *mobile*, and *visual*, but in fact we are truly the first generation to navigate a world entirely filled with technology in every aspect of life. So, we have also become pioneers, creators and imaginative thinkers instead of the "lazy" generation relying on tech for everyday life.

I have one phone, one laptop, one Apple watch, and Bluetooth headphones. My social media is: Tiktok, Snapchat, Instagram, Facebook, Twitter, Tumblr, Pinterest.

I was lucky enough to travel around the world in January of 2020, right as whispers of an unknown virus began. Being able to see so much of the world and different cultures right before the pandemic was an incredibly lucky experience that made me so sad to consider I would not see them for some time.

My travel plans were truly endless, as every place I discovered online made it to my bucket list. Studying abroad was definitely an experience I wanted to try and realising that may no longer be a possibility was a tough pill to swallow.

I was for sure one of the lucky ones. I never lost job security, never had to wear masks for more than a week, didn't lose my school formal or graduation. Any complaint about a missed party or concert however important to me seemed so medial and privileged compared to the dire circumstances faced by so many around the globe.

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I have savoured small plane trips only an hour long just to feel that excitement of travelling again. When it is safe to travel, best believe I am on the first flight away!

I don't believe many things in the world will go back to how they once were before, but I have no doubt the majority of us will be trying to make safe and COVID-free if we can help it! So I don't worry about travelling in the future.

It has made me appreciate my experiences so much more and savour every moment I got to spend travelling!

Prior to the pandemic Dimitriou and Abouelgheit (2019) proposed a list of 11 strategies to cater to Gen Z tourists, highlighting the importance of social and mobile tools. These 11 strategies have been utilised in Table 5 to consider firstly the alignment with the character trails of Gen Z, and secondly, their resonance with the SQLR. Notable in this list is the absence of very explicit strategies related to health, safety and wellbeing, which is of particular interest to this chapter.

**Table 5** Alignment between the SQLR and strategies to cater for Gen Z tourists

| 11 strategies to cater to Gen Z tourists | Alignment with 5 defining traits of Gen Z: digital, global, social, mobile, and visual mapped against the 11 strategies | Resonates with themes from Phase 1 and Phase 2 SQLR |
|---|---|---|
| Create highly targeted and personalised genuine content on mobile applications and online media platforms. | Digital<br>Global<br>Social<br>Mobile<br>Visual | Hedonism, social media and fear-of-missing-out<br>Transformational experiences<br>Having fun; social responsibility<br>Safety and security |
| Create affordable packaged deals since this generation is on a budget and loves deals. | Social | Hedonism, social media and fear-of-missing-out<br>Transformational experiences<br>Having fun<br>Social responsibility<br>Safety and security |
| Create innovative apps that add real and new value to users that include but not limited to comparing, searching for a wide range of information and easily booking travel experiences. | Digital<br>Mobile<br>Visual | Hedonism, social media and fear-of-missing-out<br>Transformational experiences<br>Having fun social responsibility<br>Safety and security |

(continued)

**Table 5** (continued)

| 11 strategies to cater to Gen Z tourists | Alignment with 5 defining traits of Gen Z: digital, global, social, mobile, and visual mapped against the 11 strategies | Resonates with themes from Phase 1 and Phase 2 SQLR |
|---|---|---|
| Include more local people and local culture as part of the tourism package. | Social | Transformational experiences social responsibility |
| Include gen Zers themselves in their staff to help other employees become familiar with this generation's wants and needs. | Digital<br>Global<br>Social<br>Mobile<br>Visual | Hedonism, social media and fear-of-missing-out<br>Transformational experiences<br>Having fun<br>Social responsibility<br>Safety and security |
| Promote travel as a lifestyle and an experience instead of promoting flight plus hotel packages. | Global<br>Social | Transformational experiences<br>Having fun<br>Social responsibility |
| Carefully select, recruit and manage influencers such as vloggers (i.e., video bloggers), streamers and celebrities to promote their brands. | Digital<br>Global<br>Social<br>Visual | Hedonism, social media and fear-of-missing-out |
| Encourage customers to post content of their experiences publicly. | Digital<br>Global<br>Social<br>Mobile<br>Visual | Hedonism, social media and fear-of-missing-out<br>Transformational experiences<br>Having fun |
| Enable the maximum personalisation of experiences and pay close attention to details. | Social<br>Mobile<br>Visual | Hedonism, social media and fear-of-missing-out<br>Transformational experiences<br>Having fun<br>Social responsibility<br>Safety and security |
| Consider creating 3-D virtual tours, augmented reality and video clips of products, services and destinations as this generation is so much more visual. | Digital<br>Visual | Having fun |
| Tailor tourism products by incorporating more activities that will have a larger and stronger social media presence | Digital<br>Social<br>Visual | Hedonism, social media and fear-of-missing-out |

Sources: Adapted from *11 Strategies*: Dimitriou and Abouelgheit (2019, p. 329); *Understanding Generation Z*: *Five defining traits* McCrindle and Fell (2019, p. 10)

## Conclusion

This chapter provides an overview of generational theory as a lens for segmenting the field of tourism, with a particular focus on Gen Z. While the literature about generational theory and tourism is quite prolific, the SQLR reveals that research building an evidence-base as to the behaviours of Gen Z is not particularly abundant, especially when the focus is refined to health, safety and wellbeing.

Gen Z travellers are expected to play an important role in the reconstitution of the tourism recovery efforts post-pandemic and in the new phase of COVID-normal, globally. The literature points to generational traits that favour unique experiences that enable Gen Z to share their stories via social media while staying connected. Gen Z has a positive disposition to travel in the future but will ensure there is attention to safety and sustainability as a feature of the experiences. This is affirmed by the unmediated voices of members of Gen Z.

**Jessica Shefford, 19 Years, 2 Months, Australia**
When the COVID-19 pandemic hit the Gold Coast, I was a few weeks from finishing my first semester at university. I had not turned 18 yet and was still fresh to the university life.

Yes, I do agree with those specific words *digital*, *global*, *social*, *mobile*, and *visual* describe the Z Generation. We are a generation that has grown reliant on technology and utilise technology in ways other generations had not had the opportunity to. We are a generation that is social as there is more freedom of speech due to the power of social media. As well as this, we are extremely visual as we have opportunities to showcase any form of imagery we like to the world in a split second. Generation Z is completely different to any other generation as we are the generation that has started to adapt to world technology and experience the effects of it directly.

I am constantly using my iPhone, as well as a Macbook laptop for university. I use Snapchat, Facebook, Instagram, Linkedin, Tiktok and Messenger.

Prior to the pandemic, I had been on several overseas holidays. I had travelled to Hawaii, New Zealand, Las Vegas, New York and Los Angeles—my favourite destination by far being New York. New York was by far my favourite destination as I felt like every single resident there did not take notice of you. I felt like you would wear pyjamas on the streets and no one would even take notice, due to how busy the streets are. I loved that feeling of freedom and that I felt like I could be myself and not have to worry about what other people thought. I rarely travelled interstate or within Australia so when COVID-19 hit the Gold Coast, I was quite upset I could not have the choice to travel oversea and go back to New York.

I had a plan that had been created since I was in high school, to do a university exchange to America. I planned to go to Columbia, and do a university

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semester there. My plans got completely shut down once the COVID-19 pandemic hit and it was quite upsetting. I had now lost this opportunity to develop global skills and fully understand another culture. Going on an exchange to Columbia would have made me a more suitable candidate for job opportunities as I would have gained an experience not many others have.

The pandemic drastically impacted my first semester of university. I was fresh into uni, and was just starting to learn the aspects of studying required. When COVID-19 hit the Gold Coast, I was then forced to do all of my university exams and classes online. This was a struggle for me personally because I was just starting to adapt to the regular way of uni, and now had to shift into a completely different one. Now that I am in my 5th semester, I have fully adapted to the online way of completing uni. When university goes back to the way it used to be, I am going to feel like I am back into my 1st semester all over again as I would have to re-learn all the aspects of studying.

The pandemic also affected my internship with one of the Gold Coast's leading hotels, the JW Marriott. I was recruited as an intern at the beginning of March 2020, but it sadly got postponed for 8 months, which placed a delay on my learning experience.

I plan to travel to Cairns in August 2021, as I believe it is important to help contribute to the local economies. I am also doing this as I feel secure with COVID in Queensland rather than going to another destination, where I may get stuck. In the next 5 years, I would love to go on a tour around Europe and live my life as much as possible being a young adult.

No, I do not have any concerns about travelling in the future. The pandemic will not affect my travel decisions as I believe that in 5 years, COVID will be gone. I will not have the fear of contracting the virus, nor being stuck in another country.

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# Part IV
# Contexts

# Understanding How Tourists Perceive and Respond to Risk: A Focus on Health Risk

**Jie Wang and Marion Karl**

**Abstract** With the COVID-19 pandemic, safety and hygiene are becoming key criteria for travel decision-making; therefore, understanding tourists' perception of and response to risk, particularly health risk, becomes more prominent when the tourism industry is one of the hardest hit by the COVID-19 pandemic. After a comprehensive literature review on tourists' risk perception, this chapter develops a risk perception model in the "tourist-destination relationship" context. Going from a more general discussion on tourists' risk perception, this chapter reviews the literature on tourists' health risk perception as a sub-field and illustrates it using a case study. This case study discusses Australian tourists' risk perception of diseases or illnesses using pre-COVID-19 survey data. Based on the results of the case study, this chapter outlines an interdisciplinary research agenda to understand tourists' perception of and response to risk in the context of tourist health and safety in the post-COVID-19 era. This chapter concludes with urgent research themes and topics, disciplinary insights, methodology and future opportunities.

**Keywords** Tourism · Risk perception · Health risk · COVID-19 · Health · Safety

## Introduction

Safety and security are basic human needs and essential to tourism and travel (Wang et al., 2019c). Reducing risk in tourism has therefore become the key for successful tourism development in destinations and risk perception is now a decisive element in travel decision-making for individuals (Fuchs & Pizam, 2011). Understanding

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_14

how tourists perceive and respond to risk has been an important research field in the past decades, resulting in more than 880 journal publications in Scopus (based on a keyword search using *risk* and *tourism* in November 2020). This chapter focuses on risk perception because tourists' response to risk is driven by their subjective risk assessment rather than the objective risk level (Karl & Schmude, 2017; Wolff et al., 2019). Risk perception is an important concept for tourism academia and the industry because it can explain why people choose to act in particular ways, and can thus contribute to effective risk management.

Studies on risk in tourism are often driven by tourism crises, such as a natural disaster or global crisis events (e.g., COVID-19 pandemic) (Ritchie & Jiang, 2019). In particular, the terror attacks of 9/11 in New York have triggered ample research on this topic, which led to a more theoretically deepened understanding of the underlying mechanisms of risk perception and travel behaviour. The COVID-19 pandemic has already inspired numerous new studies on this topic and will further enhance our understanding of risk in tourism. Past reviews of the literature revealed that tourism research on risk tends to apply a case study approach and focuses on a specific disaster or risk type (e.g., terrorism risk), destination or tourist type (e.g., backpacker, cruise tourist) (Ritchie & Jiang, 2019). Studies that compare multiple types of risk (Gray & Wilson, 2009) and/or a range of destinations are rare (Karl et al., 2020).

The COVID-19 pandemic has triggered ample research investigating the impact of health risk on travel behaviour (e.g., Zhang et al., 2020). *Health risk* can be defined as a factor that raises the probability of adverse health outcomes (WHO, 2009). The threat of infectious diseases can lead to a crisis in tourism, because it increases the perception of health risk, leading to reduced travel activities and consequently negative impact on tourism development (Haque & Haque, 2018). While the COVID-19 pandemic is still unfolding, tourism researchers are debating about the future of tourism in the post-pandemic phase. It is yet unclear whether COVID-19 will lead to a *new normal* with changed tourist behaviour as a legacy of the pandemic, such as short-haul travel instead of long-distance (Zenker & Kock, 2020) or if tourist behaviour will return to "business-as-usual" once the imminent health threat of COVID-19 has been eliminated (Lew et al., 2020).

Tourism researchers and industry practitioners can learn from case studies of past epidemics in certain countries or regions to understand how health risk impacts tourists' decision-making and tourism development in the short and long term. Examples of past epidemics are the foot-and-mouth-disease (FMD) outbreak in the UK in 2001 (Blake et al., 2003), the severe acute respiratory syndrome (SARS) outbreak in Asia in 2003 (Kuo et al., 2008; McKercher & Chon, 2004), and the Ebola virus disease (EVD) outbreak in Africa in 2014 (Novelli et al., 2018).

The first objective of this chapter is to develop a risk perception model after we review the current knowledge on risk perception and its impact on travel decision-making and tourist behaviour in general. The second objective is to explain health risk in the context of travel and tourism in particular, which has so far been one of the most important topics in tourism risk studies. This chapter also reports a case study on how Australian tourists perceive health risks and which measures they

undertake to protect themselves against a range of travel-related health risks. This case study is based on a national survey conducted in the pre-COVID-19 period. Going beyond the case study, this chapter concludes with thoughts about current and future changes in risk perception and how this may impact travel decision-making in the post-COVID-19 era. Finally, a research agenda for future studies to enhance the understanding of how tourists perceive and respond to risk is outlined.

## Understanding Tourists' Perception of and Response to Risk

This section offers an overview of risk literature in tourism research. It discusses the general knowledge on travel risk, tourists' risk perception, and cognitive as well as affective determinants of risk perception. An overarching framework is proposed to illustrate the role of tourism risk perception in the tourist-destination relationship context. This section also provides a review of the current literature on health risks of travelling.

### *Tourists' Perception of Risk*

Expected utility theories in economics and psychology base their definition of perceived or subjective risk on the commonly accepted objective risk definition (Wolff et al., 2019). They understand perceived risk as an assessment of the severity and probability of possible outcomes in the future. In tourism research, risk perception has been defined, conceptualised and measured in various ways, leading to bias in the results and contrasting conclusions due to inconsistencies (Wolff et al., 2019). In this chapter, we follow the suggestion outlined in the review of past tourism literature on risk by Wolff et al. (2019) and understand *risk perception* as a cognitive evaluation and judgement of risk levels, which might be influenced by affect, but is not a feeling or attitude per se.

Understanding the factors that influence risk perception is essential for tourism research as well as the tourism industry to explain tourists' responses to different risk types. McCabe et al. (2016) proposed a holistic model of travel decision-making, which involves two psychological choice systems depending on the level of involvement and cognitive load (e.g., information, time availability). They argued that tourists' travel decision-making can be either affect-driven, automatic, intuitive, rapid, and less effort oriented (i.e., heuristic choices), or rational, complex reasoning and more effort required (i.e., systematic choices) (McCabe et al., 2016). For example, tourists use information search as a risk reduction strategy (Lo et al., 2011) which is part of the rational choice system. As well, travel decision-making in the context of risk can include both types of choice systems. In many cases, tourists use mental shortcuts—so-called heuristics—to judge risk levels and rely on their emotional responses to threats to inform their decisions. Both cognitive and

affective factors need to be considered to better understand risk perception and associated travel decision-making and tourist behaviour.

## *Factors That Influence Tourists' Risk Perception*

Risk perception cannot be reduced to any simple subjective correlate of an estimate of risk based on the production of probability and consequences (Breakwell, 2014). Risk perception is not an entirely rational process (Slovic, 1987), but rather a subjective evaluation influenced by partial or lay knowledge (Sharifpour et al., 2014) or personality (Nordfjærn & Rundmo, 2015). Interestingly, tourists often over- or under-estimate travel risk, but still base their decisions on these biased risk perception (Fuchs & Reichel, 2006). Prior studies have identified several factors that influence tourism risk perception.

### Trust

Tourists tend to perceive a lower level of risk if they trust the information source and the process used to assess the risk (Walters et al., 2017). Since tourists generally have limited knowledge about all risks that might occur at a destination they have to rely on information from different sources (e.g., government officials, friends and relatives, mass or social media) to evaluate the risk level and make decisions about whether or not they feel it is safe to visit a destination.

### Control

Tourists who feel control over the future consequences of a risk perceive lower levels of risk. Perceived control depends on the type of risk (e.g., risky street conditions or driving habits at a destination can be controlled by safe driving whereas tourists will likely perceive less control over terrorism risk) as well as personality traits. Two core self-evaluation traits are essential in the context of risk and control: Locus of Control and Self-efficacy. The concept of *Locus of Control* (Rotter, 1966) suggests that whether tourists attribute control over a situation to themselves (i.e., internal locus of control) or to outside factors or chance (i.e., external locus of control) depends on a psychological trait. For example, adventurous tourists who are motivated to travel by sensations and less anxious about travelling have an internal locus of control (Griffith & Albanese, 1996). The concept of *Self-efficacy* (Bandura, 1977) implies that tourists' decision-making in the context of risk depends on how much they believe in having skills and abilities to deal with a risky situation while travelling rather than their actual capabilities. Self-efficacy can be enhanced through successfully experiencing a challenging situation or by learning from the social environment, which explains the strong impact of own travel experience and

word-of-mouth information on risk perception and travel decision-making in the context of risk (Karl, 2018; Sönmez & Graefe, 1998).

### Type of Risk

Mixed evidence exists regarding the impact of different risk types on travel behaviour (Karl et al., 2020). Tourists perceive risks of natural cause (e.g., natural disaster) as less risky than man-made risk types (e.g., terrorism). Consequently, they are more likely to change their travel plans to avoid man-made compared to natural risk types (Karl et al., 2020). Other studies indicate that health risk was perceived as one of the major risk categories influencing travel decision-making (Kozak et al., 2007; Law, 2006), and even more influential than terrorism risk (Rittichainuwat & Chakraborty, 2009). However, in some macro-level studies, political instability and terrorism were perceived as the major risk categories disrupting tourist flows between source market and destination over time (Jin et al., 2019; Lanouar & Goaied, 2019), while health risk is only the secondary (Jin et al., 2019). Hence, how people self-evaluate the severity and impact of different risk types on their travel behaviour and how these different risk types affect their actual travel behaviour may differ substantially (Karl, 2018).

### Scope and Frequency

Tourists perceive cataclysmic events, where many people may die at the same time as particularly risky. For instance, large-scale terrorism with a high number of fatalities was found to have a stronger (direct) impact on tourism than minor events with no fatalities (Thompson, 2011). They may perceive such risk as more severe because the consequences are much more impactful (e.g., large numbers of deaths). Moreover, frequently occurring hazardous events, such as numerous terrorism attacks at a destination, can create long-term tourism decline (Pizam & Fleischer, 2002). Frequently occurring events may create a permanent change in risk perceptions of a destination and a negative destination image. This tendency to perceive frequent events as riskier directly refers to the second dimension of risk perception—the probability of occurrence. If an event (such as terror attacks) frequently happens in a destination, tourists will perceive a higher likelihood of such an event happening again than in the case of a one-time natural disaster.

### Awareness and Imagination

Tourists make judgements about the likelihood of a dangerous event based on how easily they come to mind. This psychological short-cut of availability heuristic (Tversky & Kahneman, 1973) explains why risks that are frequently portrayed in the media are perceived as riskier. For example, the risk of shark attacks is often

overestimated because of intense media coverage of rare attacks and vivid portrayals of shark attacks in movies. In addition to the increased awareness, tourists also overestimate risks that are more fearsome or scary (Sunstein & Zeckhauser, 2011), such as a shark attack, even if the probability of something happening is low (i.e., probability neglect). Psychologists argue that this bias in risk perception is due to the vividness of imaginations of such events. However, if a risk is invisible or difficult to understand, hence, difficult to imagine, people also overestimate the risk (Slovic, 1987). Tourists may, therefore, be reluctant to visit destinations that are affected by risk types that do not occur in their home country because they perceive them as riskier (Reisinger & Mavondo, 2006).

### Familiarity

Tourists have heightened risk perceptions if a risk is less known (or information is difficult to access). Hence, risks that tourists are not familiar with, such as COVID-19 or new technologies in tourism, are perceived as riskier. Karl (2018) operationalised the concept of familiarity to investigate tourists' destination choice in the context of risk. Tourists differ in their ability to deal with this uncertainty and to avoid uncertainty while travelling tourists adopt different strategies, such as travelling with a tour group or visiting fewer destinations on holiday (Money & Crotts, 2003).

### Uncertainty

Although often used interchangeably, risk and uncertainty are two distinct concepts about "the limits of knowledge that are inherent in tourism as in any activity" (Williams & Baláž, 2015, p. 271). In contrast to risk, which assumes knowledge of the situation to assess the risk level, uncertainty arises from partial knowledge. Sharifpour et al. (2014) explored the relationships between risk perception and two types of knowledge. They found that only people who feel familiar with a destination (i.e., subjective knowledge) will perceive the destination as less risky. How much people actually know about a destination was not related to the level of risk perception, however.

### Personal Impact

Tourists perceive risks that affect them personally as more threatening than those that affect strangers. Ritchie et al. (2014) propose a theoretical framework to explain this observation. They propose tourists who tend to believe that bad things are less likely to happen to them than to the average person (i.e., self-positivity bias) have lower risk perceptions, at least considering the risk of being personally affected by the risk.

### Voluntary and Personality Traits

Tourists who voluntarily engage in risky behaviour tend to perceive the situation as less risky. Several studies have confirmed this assumption by applying the psychological constructs of risk-taking propensity (Jonas et al. 2011; Pizam et al., 2004; Yang et al., 2018), risk affinity (Hajibaba et al., 2015) and sensation-seeking (Lepp & Gibson, 2008; Meng & Han, 2018).

### Other Determinants

Some other factors can also influence tourism risk perception, for example, individuals' experience of risk, expertise, personal belief and value (Breakwell, 2014). However, there has been relatively little research on the relationship between these factors and tourists' risk perception. Socio-demographic differences (such as gender, age, tourist type) are also important factors in understanding and reducing perceived risk in tourism (Wang et al., 2019b).

The long list of factors that are discussed in this section has demonstrated the complexity of developing a comprehensive understanding of travel-related risk and related reactions.

## *The Role of Emotions in Tourists' Risk Perception*

Traditionally, emotions have been ignored when theories of risk perception were first developed. The traditional dominance of cognitive models in explaining risk estimates and risk-taking behaviour has been challenged, since emotional responses to risk highly impact decision-making, such as the *risk-as-feelings* hypothesis (Loewenstein et al., 2001), as well as the interaction of feeling and cognition in the perception of risk (Slovic, 2010). From an evolutionary psychology perspective, two affective constructs related to risk need to be considered. *Fear* and *anxiety* are both associated with emotional responses to threat and can cause potential harm to social, psychological or physical wellbeing. Fear is defined as the emotional response to immediate perceptible or manifest threats, while anxiety refers to emotional responses to potential threats (Bulley et al., 2017). Even if no visual or sensory cues exist, such as the case of the COVID-19 threat, people still feel threatened or anxious because they create their own mental representation of the imminent or potential threat. Several studies in tourism have investigated the perceived threat and the emotional or behavioural responses (e.g., Dolnicar, 2005), but interest in this topic is likely to grow with the COVID-19 health risk and the threat it poses to tourists' wellbeing. Studies show that perceived threats of an infectious disease are associated with negative emotions, and can make tourists behave risk-averse (Zhang et al., 2020).

The second main affective construct related to risk perception was introduced into tourism research by Larsen et al. (2009, p. 263), who defined and operationalised *tourist worry* as "individual's attempts to engage in mental problem solving regarding tourist trip-related issues where outcomes are thought to be uncertain and contain possibilities for negative results". In contrast to locus of control or self-efficacy, tourist worry is not a personality trait, but a momentary state that depends on situational factors and tourists' expectations (Larsen et al., 2009). Wang et al. (2019b) found that situation-specific worry varied by segments and significantly influenced decision-making related to safety behaviours in tourism.

## Tourists' Response to Risk: A Tourist-Destination Relationship Framework

Behavioural geography (closely related to environmental psychology) is a field of human geography that combines psychological and geographical concepts and theories of decision-making and environmental perception to explain people's behaviour as a result of the context in which it takes place. Behavioural geography emphasises the role of cognitive processes in shaping decision-making and behaviour (Gold, 2019). It assumes that people's behaviour is based on their perception and subjective images of the real world rather than objective knowledge.

Behavioural geography provides an overarching conceptual framework for the study of risk perception and travel decision-making for two main reasons. First, behavioural geography emphasises the context in which perception takes place (Gold, 2019). It understands perception as part of an interrelated system where behaviour results from the perceived reality as the "mediating link between environment and man" (Bunting & Guelke, 1979, p. 449). Travel decision-making in the context of perceived risk depends on who is making a decision, and which destination the decision is made about (Karl, 2018). From a behavioural geography perspective, the definition of travel risk perception needs amendment to include place and the spatial context that tourists are assessing.

Second, behavioural geography assumes that behaviour is a result of perceived reality rather than an objective environment (Argent & Walmsley, 2009; Gold, 2019; Kirk, 1952). Early studies on risk in tourism have emphasised that travel behaviour is shaped by individual risk perception rather than objective risk levels (Mansfeld, 2006; Reichel et al., 2007). Since people see the world through their perceptual lens (Argent & Walmsley, 2009), the same environment can be perceived differently—resulting in different behaviours. In tourism research, clear evidence shows that risk perception and travel behaviour depend on the tourists' personality traits (Pizam et al., 2004; Sharifpour et al., 2013), their past experiences (Kozak et al., 2007), and socio-demographics (Karl, 2018; Lepp & Gibson, 2008; Sönmez & Graefe, 1998).

Beyond these individual characteristics, tourists' risk perception is also impacted by the social and cultural background (Reisinger & Mavondo, 2006), where the

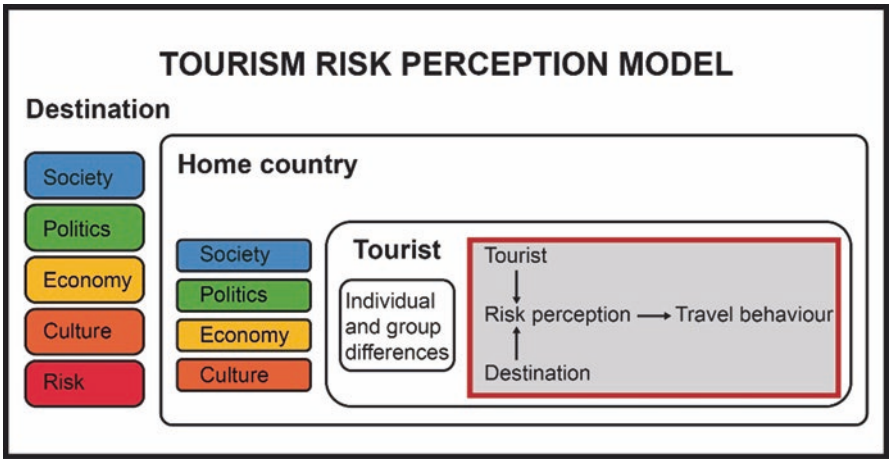


**Fig. 1** A tourism risk perception model from the behavioural geographic perspective

decision takes place. In a tourism context, this social and cultural background may include the social, economic and political context (Bunting & Guelke, 1979) of the tourists' home country as well as the destination where the tourist travels to. In summary, we propose behavioural geography as an overarching theoretical framework for studying risk perception in tourism. Our developed tourism risk perception model (see Fig. 1) suggests that tourists' behavioural change in reaction to risk depends on how tourists perceive the risk level at a destination based on their personal characteristics (e.g., gender, experience, risk affinity) and from their home country (e.g., familiarity with certain risk categories).

## Factors That Influence Tourists' Health Risk Perception and Decision-Making

Amidst all the fun and benefits that travel can bring, travel can pose various risks to health, depending on many factors, including the tourist and the destination (Leggat & Franklin, 2013). Following the tourism risk perception model, tourists may encounter different types of health risks which vary depending on the tourists (e.g., underlying health of the tourist, behaviour of the tourist), and their destination (e.g., animal and insect bites, inadequate medical services, foodborne and waterborne diseases, injuries from road traffic accidents or recreational activities) (WHO, 2020).

Tourists may encounter sudden and significant changes in altitude, humidity, microbes, and temperature, which can result in ill-health (Richter, 2003). Serious health risks may also arise in destinations where accommodation is of low quality, hygiene and sanitation are inadequate, medical services are not well-developed, and clean water is unavailable (WHO, 2020). Although 30–50% of tourists get ill or are

injured during their trip (Briggs & Habib, 2004), less than half of tourists obtain pre-travel health consultations, receive pre-travel vaccinations, or purchase travel insurance to reduce health risk in tourism (Wang et al., 2019a).

The World Health Organization (2020) recommends tourists to seek health advice before any form of travel, in particular before international trips. To determine the health risks of international travel, tourists and health professionals (e.g., travel doctors) need to consider many factors for their health risk assessment, generally focusing on the probability of occurrence of a health risk and the severity of possible consequences for the tourists' wellbeing during or after travel (see also *Part I Health: Pre and Post-Travel Medical Consultations*).

Tourists' health risk perceptions are shaped by pre-existing knowledge and beliefs about diseases, as well as their sociocultural contexts (Leggat & Franklin, 2013). Experience and confidence in their health are also the main reasons why travellers perceive a certain level of health risks (Wang et al., 2019a). For example, health risk related to infectious diseases (e.g., COVID-19) is relatively new to most tourists, people will likely perceive high levels of risk which can cause the public "travel fear" and affect their travel decision-making (Zheng et al., 2021) (see Fig. 2).

Searching for information about a destination and the potential risks that may occur during a holiday is one of the most efficient strategies to reduce the level of perceived risk when it comes to travelling (Lo et al., 2011). In the context of health risk, travellers can seek information to help estimate the risk at their future travel destination, facilitate their destination choice, and support their preparation and


**Fig. 2** The COVID-19 checkpoint at Guangzhou Tourist Information Centre. (Image courtesy of Ms. Xueting Zhai)

planning process to reduce risk levels. The health information sources include home countries travel advisories of the government (e.g., smartraveller.gov.au), third party risk assessment tools (e.g., International SOS Travel Risk Map), and media communication from destinations. In addition, travel medicine professionals can play an important role in presenting updated and accurate health information and advising necessary action plans to protect tourists when they are travelling (see Fig. 3).

In the tourism literature, the antecedents and consequences of health-related risk perceptions have been discussed mainly from a consumer psychology perspective (Menon et al., 2008). The antecedents of health risk perceptions can be classified into five major types of psychological factors: motivational (e.g., *Self-Positivity*, *Social Desirability*, *Self-Control*), cognitive (e.g., *Information Accessibility*, *Information Diagnosticity*), affective (*Positive vs Negative Affective States, Discrete Emotions*), contextual (*Response Alternatives*, *Proxy Information*, *Alternative Information*, *Framing*), and individual differences (*Depressive Tendency*, *Gender*, *Personality*, *Culture*, *Priors*) (Menon et al., 2008). The consequences of health-related risk perceptions can include people's awareness and adoption for medical treatment, as well as many healthy behaviours promoted by the authorities or medical doctors.

It is noted that travel-related health risk perceptions and decisions have a lot in common with other mainstream consumer decisions that are well-studied. Tourists' likelihood of taking actions to protect themselves is determined by their appraisal of threats (i.e., the susceptibility to and severity of the threat, the rewards of not taking action) and coping and preventative strategies (i.e., the costs of taking preventive action, their own ability to successfully undertake the action) (Wang et al.,


**Fig. 3** Public notice reminder for social distancing. (Image courtesy of Dr. Marion Karl)

2019a). Factors such as *performance* of a test or treatment or health products (e.g., the effectiveness of sunscreens in reducing skin cancer risk), as well as external financial, physiological or psycho-social risks can further moderate the health risk perceptions-behaviour relationship, leading to different behavioural outcomes (Menon et al., 2008). To illustrate travel-related health risks, a case study is introduced in the next section, which examines health risks perceived by Australian outbound tourists.

## Tourists' Health Risk Perception: An Australian Perspective

### *Study Context*

Australians undertook 11.2 million outbound international trips in 2018–2019 (year ending 30 June) (Australian Bureau of Statistics [ABS], 2019). As the number of Australians departing on international trips increases, Australian travellers are more likely to acquire or import infectious diseases (WHO, 2020). The South-East Asian sub-region, particularly Indonesia, Thailand and Vietnam are the top tourism destinations for Australian tourists; however, measles, rabies, and mosquito-borne diseases (e.g., Japanese Encephalitis) are still common in the local population in these three countries (DFAT, 2019). For example, as one of the most ancient diseases with one of the highest fatality rates of all infectious diseases, rabies is 99.9% fatal. Indonesia has been the number one leisure destination for Australians since 2010 (ABS, 2017); unfortunately, it is not free of rabies. It is therefore important to understand Australian tourists' awareness of travel-related risks (e.g., diseases or illnesses that raise the probability of adverse health outcomes) when they travel abroad in these popular destinations (Wang et al., 2019a). To achieve this objective, a survey was conducted to examine Australian tourists' health risk perception.

### *Survey Method and Sampling*

A self-administrated survey was conducted in November 2017, through an online panel provided by a research company. A pilot test ($N = 51$) was conducted, together with consultations with travel doctors to enhance the reliability of the study. A total of 565 completed survey responses were included in the study. The sample consists of Australian tourists who had been to Indonesia, Thailand, or Vietnam in the preceding 3 years ($N = 279$, named the *past group*), and those who were planning to visit any of these three countries in the next 6 months ($N = 286$, named the *intention group*). A total of 47% of participants were male. Regarding the highest education level, 24% had a high school certificate, 38% a diploma, 26% an undergraduate degree, and 12% a postgraduate degree. More than half (52%) of respondents were married, and 64% had one or more children.

## *Results and Discussion*

The survey first examined participants' past experience of travel-related diseases or illnesses, because past experience can affect tourists' risk perception (Kozak et al., 2007). Findings indicate that half of the respondents (50%) had not experienced any diseases or illnesses in the list during or as a result of travelling in the past (see Table 1). The most commonly encountered medical issues while or resulting from travelling were gastrointestinal problems (25%), such as diarrhoea, followed by

**Table 1** Past experience of travel-related diseases or illnesses

| Have you experienced any of these diseases/ illnesses during or as a result of any of your previous trips? (PE) | Total | % | Past group | % | Intention group | % | Pearson Correlation coefficients: PE with RP | *P* value |
|---|---|---|---|---|---|---|---|---|
| None of these above | 283 | 50.1 | 133 | 47.7 | 150 | 52.4 | – | – |
| Gastrointestinal problems (e.g., Travellers' diarrhoea) | 142 | 25.1 | 75 | 26.9 | 67 | 23.4 | 0.069 | 0.103 |
| Pain (e.g., Headache, muscle pain) | 137 | 24.2 | 66 | 23.7 | 71 | 24.8 | 0.147** | .000 |
| Respiratory problems (e.g., Influenza/flu, Cold, Bronchitis, Sinusitis) | 83 | 14.7 | 37 | 13.3 | 46 | 16.1 | 0.064 | 0.127 |
| Wounds | 47 | 8.3 | 21 | 7.5 | 26 | 9.1 | 0.076 | 0.07 |
| Psychological discomforts/ Mental discomforts (e.g., Anxiety/ Mood disorders, Disorder due to psychoactive substance use) | 34 | 6.0 | 12 | 4.3 | 22 | 7.7 | 0.192** | .000 |
| Mosquito-borne diseases (e.g., Dengue, Chikungunya, Zika, Malaria, Japanese Encephalitis) | 31 | 5.5 | 21 | 7.5 | 10 | 3.5 | 0.085* | 0.045 |
| Deep Vein Thrombosis | 18 | 3.2 | 14 | 5 | 4 | 1.4 | 0.074 | 0.079 |
| Measles | 16 | 2.8 | 10 | 3.6 | 6 | 2.1 | 0.156** | .000 |
| Rabies | 12 | 2.1 | 9 | 3.2 | 3 | 1 | −0.037 | 0.381 |
| HIV/AIDS | 10 | 1.8 | 10 | 3.6 | 0 | 0 | 0.040 | 0.344 |
| Typhoid | 7 | 1.2 | 7 | 2.5 | 0 | 0 | 0.003 | 0.940 |
| Hepatitis | 5 | 0.9 | 3 | 1.1 | 2 | 0.7 | 0.038 | 0.367 |
| **Total** | **565** | **100** | **279** | **100** | **286** | **100** | **–** | **–** |

Note: RP (Risk perception) = Risk likelihood × Risk severity, PE = Past experience of each disease or illness

Risk likelihood was measured on a scale: 1 = *Extremely unlikely*, 2 = *Unlikely*, 3 = *Neutral*, 4 = *Likely*, 5 = *Extremely likely*. Risk severity was measured on a scale1 = *Definitely not serious*, 2 = *Not serious*, 3 = *Hard to tell*, 4 = *Serious*, 5 = *Extremely serious*. Past experience was measured on a scale: 0 = *No*, 1 = *Yes*

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

pains (24%), such as headaches or muscle pains. Only 1% of respondents had experienced hepatitis.

Looking further into the relationship between past experience and risk perception using Pearson Correlation, respondents who had experienced psychological or mental discomfort [$r(563)_{psych} = 0.19$, $p < 0.001$], measles [$r(563)_{measles} = 0.16$, $p < 0.001$], pain [$r(563)_{pain} = 0.15$, $p < 0.001$], and mosquito-borne diseases [$r(563)_{mosquito} = 0.09$, $p < 0.05$] while travelling perceived significantly higher levels of risk regarding these specific medical issues.

In evaluating the subjective knowledge of travel-related diseases or illnesses, this study revealed that most respondents feel they can explain pain or wounds, but only one-third can explain typhoid (see Table 2). There are not many differences between the past and intention groups. The correlations between knowledge and risk perception indicate that people with increased knowledge on Deep Vein Thrombosis

**Table 2** Tourists' subjective knowledge of travel-related diseases or illnesses

| Could you explain what these diseases/ illnesses are to your friends or family? | Yes, I can explain | % | Past group | % | Intention group | % | Pearson Correlation coefficients: Knowledge with RP | *P* value |
|---|---|---|---|---|---|---|---|---|
| Rabies | 349 | 61.8 | 173 | 62 | 176 | 61.5 | −0.03 | 0.477 |
| Measles | 396 | 70.1 | 185 | 66.3 | 211 | 73.8 | 0.075 | 0.073 |
| Typhoid | 197 | 34.9 | 95 | 34.1 | 102 | 35.7 | −0.016 | 0.701 |
| Hepatitis | 315 | 55.8 | 146 | 52.3 | 169 | 59.1 | −0.04 | 0.34 |
| Deep Vein Thrombosis | 346 | 61.2 | 172 | 61.6 | 174 | 60.8 | −.177** | .000 |
| HIV/AIDS | 390 | 69.0 | 183 | 65.6 | 207 | 72.4 | 0.056 | 0.185 |
| Pain (e.g., headache, muscle pain) | 512 | 90.6 | 249 | 89.2 | 263 | 92 | 0.081 | 0.054 |
| Wounds | 513 | 90.8 | 249 | 89.2 | 264 | 92.3 | 0.017 | 0.693 |
| Mosquito-borne diseases (Dengue, Chikungunya, Zika, Malaria, Japanese Encephalitis) | 348 | 61.6 | 163 | 58.4 | 185 | 64.7 | 0.007 | 0.872 |
| Respiratory problems (e.g., Influenza/flu, Cold, Bronchitis, Sinusitis) | 85.3 | 85.3 | 229 | 82.1 | 253 | 88.5 | −0.022 | 0.598 |
| Gastrointestinal problems (e.g., Travellers' diarrhoea) | 456 | 80.7 | 224 | 80.3 | 232 | 81.1 | −.088* | 0.036 |
| Psychological discomforts/ mental discomforts (Anxiety disorders, mood disorder, disorders due to psychoactive substance use,etc.) | 345 | 61.1 | 151 | 54.1 | 194 | 67.8 | −.084* | 0.046 |
| | **565** | **100** | **279** | **100** | **286** | **100** | **–** | **–** |

Note: *Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

[$r(563)_{DVT} = -.18$, $p < 0.001$], Gastrointestinal problems [$r(563)_{Gastrointestinal} = -.09$, $p < 0.05$], or Psychological or mental discomforts [$r(563)_{Psycho} = -.09$, $p < 0.05$] had significantly lower levels of perceived risk of these diseases or illnesses.

Following the definition of risk as the probability of occurrence (i.e., likelihood that an event takes place) and the severity of the consequences (i.e., negative impact of an event for the individuals' wellbeing, infrastructure, etc.), this study measured travel-related health risk perception. T-test results show significant differences between the past group and intention group, indicating that tourists who have visited Indonesia, Thailand, or Vietnam in the last 3 years perceived higher risk of experiencing measles and HIV/AIDS than the intention group (see Table 3). No

**Table 3** Tourists' perceived likelihood of travel-related diseases or illnesses

| If you are taking a trip to Indonesia/Thailand/Vietnam in the next 6 months, how likely do you think you would experience these diseases/ illnesses? | Mean All (*SD*) | Mean Past group (*SD*) | Mean Intention group (*SD*) | t value (*df* = 563) | *Sig.* (2-tailed) |
|---|---|---|---|---|---|
| Rabies | 2.45 (−0.996) | 2.50 (1.021) | 2.4 (−0.971) | 1.19 | 0.235 |
| Measles | 2.34 (−0.97) | 2.44 (−0.99) | 2.25 (−0.943) | 2.323* | 0.021 |
| Typhoid | 2.49 (−1.01) | 2.56 (−1.044) | 2.42 (−0.972) | 1.686 | 0.092 |
| Hepatitis | 2.54 (−1.044) | 2.61 (−1.049) | 2.47 (−1.035) | 1.686 | 0.092 |
| Deep Vein Thrombosis | 2.54 (−0.986) | 2.58 (−0.981) | 2.49 (−0.99) | 1.142 | 0.254 |
| HIV/AIDS | 2.08 (−1.106) | 2.18 (−1.156) | 1.98 (−1.048) | 2.156* | 0.032 |
| Pain (e.g., headache, muscle pain) | 3.29 (−0.951) | 3.24 (−0.965) | 3.34 (−0.936) | −1.194 | 0.233 |
| Wounds | 3.02 (−0.921) | 3.02 (−0.927) | 3.02 (−0.917) | −0.039 | 0.969 |
| Mosquito-borne diseases (Dengue, Chikungunya, Zika, Malaria, Japanese Encephalitis) | 3 (−1.052) | 2.95 (−1.045) | 3.04 (−1.059) | −1.041 | 0.298 |
| Respiratory problems (e.g., Influenza/flu, Cold, Bronchitis, Sinusitis) | 3.01 (−0.984) | 2.96 (−0.988) | 3.06 (−0.979) | −1.109 | 0.268 |
| Gastrointestinal problems (e.g., Travellers' diarrhoea) | 3.5 (−0.996) | 3.45 (−1.009) | 3.55 (−0.982) | −1.163 | 0.245 |
| Psychological discomforts/mental discomforts (Anxiety disorders, mood disorder, disorders due to psychoactive substance use etc.) | 2.45 (−1.085) | 2.48 (−1.069) | 2.41 (−1.101) | 0.741 | 0.459 |

Note: Risk likelihood was measured on a scale: 1 = *Extremely unlikely*, 2 = *Unlikely*, 3 = *Neutral*, 4 = *Likely*, 5 = *Extremely likely*

*Correlation is significant at the 0.05 level (2-tailed)

**Table 4** Tourists' perceived severity of travel-related diseases or illnesses

| How severe do you think the consequences of the following health risks may be regarding your trip to Indonesia/Thailand/Vietnam? | Mean All (*SD*) | Mean Past group (*SD*) | Mean Intention group (*SD*) | t value (*df* = 563) | *Sig.* (2-tailed) |
|---|---|---|---|---|---|
| Rabies | 3.99 (−0.909) | 3.93 (−0.917) | 4.05 (−0.899) | −1.486 | 0.138 |
| Measles | 3.62 (−0.924) | 3.64 (−0.89) | 3.6 (−0.957) | 0.562 | 0.575 |
| Typhoid | 3.9 (−0.931) | 3.88 (−0.931) | 3.91 (−0.932) | −0.349 | 0.727 |
| Hepatitis | 3.99 (−0.905) | 3.98 (−0.889) | 4.00 (−0.921) | −0.282 | 0.778 |
| Deep Vein Thrombosis | 3.84 (−0.965) | 3.86 (−0.96) | 3.83 (−0.971) | 0.344 | 0.731 |
| HIV/AIDS | 4.13 (−1.019) | 4.16 (−0.974) | 4.09 (−1.062) | 0.82 | 0.412 |
| Pain (e.g., headache, muscle pain) | 3.04 (−0.972) | 3.11 (−0.996) | 2.98 (−0.946) | 1.66 | 0.097 |
| Wounds | 3.27 (−0.848) | 3.31 (−0.831) | 3.23 (−0.865) | 1.087 | 0.278 |
| Mosquito-borne diseases (Dengue, Chikungunya, Zika, Malaria, Japanese Encephalitis) | 3.99 (−0.864) | 3.96 (−0.899) | 4.01 (−0.829) | −0.734 | 0.463 |
| Respiratory problems (e.g., Influenza/flu, Cold, Bronchitis, Sinusitis) | 3.52 (−0.931) | 3.53 (−0.936) | 3.5 (−0.928) | 0.298 | 0.766 |
| Gastrointestinal problems (e.g., travellers' diarrhoea) | 3.48 (−0.925) | 3.46 (−0.924) | 3.49 (−0.928) | −0.439 | 0.661 |
| Psychological discomforts/mental discomforts (Anxiety disorders, mood disorder, disorders due to psychoactive substance use etc.) | 3.36 (−1.003) | 3.43 (−0.99 | 3.28 (−1.012) | 1.786 | 0.075 |

Note: Risk severity was measured on a scale: 1 = *Definitely not serious*, 2 = *Not serious*, 3 = *Hard to tell*, 4 = *Serious*, 5 = *Extremely serious*

significant differences between the past group and intention group in their perceived severity of travel-related diseases or illnesses was found (see Table 4).

Overall, respondents felt that they were most likely to experience gastrointestinal problems when travelling in South-East Asia ($M$ = 3.50, $SD$ = 0.10) but did not perceive these to have a severe consequence ($M$ = 3.48, $SD$ = 0.93). In contrast, HIV/AIDS was perceived as a least likely disease to be experienced during a trip to Indonesia/Thailand/Vietnam (M = 2.08, $SD$ = 1.11), but it would have severe consequences for the traveller ($M$ = 4.13, $SD$ = 1.02). Surprisingly, many Australians are lacking awareness of the severity of many fatal diseases when they travel to some popular destinations in South-East Asia. This is especially true in case of fatal diseases which are not endemic in Australia, such as rabies.

A further investigation of the affective constructs related to risk perception showed that Australian tourists were most worried about gastrointestinal problems ($M$ = 3.36, $SD$ = 1.01) and mosquito-borne diseases such as Dengue Fever or Malaria ($M$ = 3.30, $SD$ = 1.06); while they were least worried about HIV/AIDS ($M$ = 2.58, $SD$ = 1.22). The past group had a significantly higher level of worry towards measles than the intention group (see Table 5). However, overall Australian tourists indicate very low level of worry towards many diseases and illnesses.

**Table 5** Tourists' level of worry about travel-related diseases or illnesses

| How worried are you regarding the following health issues regarding your trip to Indonesia/ Thailand/ Vietnam? | Mean $_{All}$ (SD) | Mean $_{Past\ group}$ (SD) | Mean $_{Intention\ group}$ (SD) | t value ($df$ = 563) | $Sig.$(2-tailded) | Pearson Correlation coefficients: Worry with RP ($P$ value) | Pearson Correlation coefficients: Worry with PE ($P$ value) |
|---|---|---|---|---|---|---|---|
| Rabies | 2.79 (1.062) | 2.85 (1.075) | 2.74 (1.049) | 1.291 | .197 | .375** (.000) | .005 (.899) |
| Measles | 2.65 (1.068) | 2.76 (1.098) | 2.53 (1.028) | 2.512* | .012 | .462** (.000) | .147** (.000) |
| Typhoid | 2.78 (1.075) | 2.85 (1.072) | 2.71 (1.075) | 1.585 | .114 | .443** (.000) | .068 (.107) |
| Hepatitis | 2.87 (1.103) | 2.95 (1.108) | 2.79 (1.095) | 1.723 | .086 | .418** (.000) | .080 (.058) |
| Deep Vein Thrombosis | 2.80 (1.040) | 2.86 (1.015) | 2.74 (1.062) | 1.360 | .174 | .452** (.000) | .065 (.125) |
| HIV/AIDS | 2.58 (1.217) | 2.68 (1.176) | 2.48 (1.250) | 1.943 | .053 | .477** (.000) | .113** (.007) |
| Pain (e.g., headache, muscle pain) | 2.86 (.982) | 2.94 (1.012) | 2.79 (.948) | 1.804 | .072 | .503** (.000) | .211** (.000) |
| Wounds | 2.89 (.978) | 2.96 (1.006) | 2.83 (.946) | 1.604 | .109 | .410** (.000) | .126** (.003) |
| Mosquito-borne diseases (Dengue, Chikungunya, Zika, Malaria, Japanese Encephalitis) | 3.30 (1.063) | 3.26 (1.045) | 3.35 (1.080) | −.985 | .325 | .474** (.000) | .048 (.250) |
| Respiratory problems (e.g., Influenza/flu, Cold, Bronchitis, Sinusitis) | 3.01 (1.029) | 3.04 (1.052) | 2.98 (1.007) | .696 | .486 | .419** (.000) | .090* (.032) |
| Gastrointestinal problems (e.g., Travellers' diarrhoea) | 3.36 (1.011) | 3.34 (1.016) | 3.38 (1.007) | −.394 | .694 | .445** (.000) | .084* (.047) |

(continued)

**Table 5** (continued)

| How worried are you regarding the following health issues regarding your trip to Indonesia/ Thailand/ Vietnam? | Mean $_{All}$ (SD) | Mean $_{Past\ group}$ (SD) | Mean $_{Intention\ group}$ (SD) | t value ($df$ = 563) | *Sig.*(2-tailded) | Pearson Correlation coefficients: Worry with RP (*P* value) | Pearson Correlation coefficients: Worry with PE (*P* value) |
|---|---|---|---|---|---|---|---|
| Psychological discomforts/ mental discomforts (Anxiety disorders, mood disorder, disorders due to psychoactive substance use, etc.) | 2.66 (1.127) | 2.74 (1.109) | 2.58 (1.142) | 1.630 | .104 | .529** (.000) | .195** (.000) |

Note: Worry was measured on a scale: 1 = *Not worried at all*, 2 = *Not worried*, 3 = *Neutral*, 4 = *Worried*, 5 = *Extremely worried*
RP (Risk perception) = Risk likelihood × Risk severity
PE = Past experience of each disease or illness
*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Correlations between worry and past experience indicate that respondents with past experience of specific health issues (such as measles, HIV, pain, wounds, as well as respiratory, gastrointestinal, and psychological problems) perceived higher levels of worry regarding these specific medical issues. Correlations between worry and risk perception indicate that the worry level of all the listed diseases and illnesses strongly correlated with the risk perception of each medical issue. Worry can be seen as a route to risk reduction by preparing the tourist for potential risk at the destination. Hence, it can change behaviour and thereby remove the individual from the path of risk (Breakwell, 2014). For example, tourists might worry about the possibility of *Travellers' Diarrhoea*, and as a result they do not consume street food and avoid raw or undercooked seafood during travel.

## The Change of Tourists' Risk Perception in the Post-COVID-19 Era: A Future Interdisciplinary Research Agenda

In this chapter we have reviewed current knowledge in tourists' risk perception, and developed a risk perception model from a behavioural geographic perspective to illustrate the crucial elements—*people* and *destination*—for risk assessment. We

also reviewed tourists' health risk perception and its antecedent factors and consequences, followed by a case study to illustrate health risk perceptions of Australian tourists. In the following, the change of tourists' risk perception in the post-COVID-19 era is discussed, together with a future research agenda for tourist health, safety and wellbeing calling for interdisciplinary research in the *new normal*.

The scope of the COVID-19 pandemic as a global health crisis had unprecedented consequences for tourism. In the first 5 months of 2020 alone, AU$450 billion in exports from tourism were lost (UNWTO, 2020). In comparison, the economic loss due to the Global Economic Crisis of 2009 was only one-third of this. Beyond the economic impact, the COVID-19 pandemic also has changed tourists' thinking and feeling about health risks, and consequently changed how tourists travel (Zenker & Kock, 2020). Safety and hygiene are becoming key criteria to select destinations and tourism activities (OECD, 2020); therefore, understanding tourists' health risk perception is crucial for post-COVID-19 tourism recovery and the development of travel products that make tourists feel safe (again) while travelling.

Tourists will likely become hygiene sensitive and pay more attention to health-related restrictions and safety protections provided by destinations, the accommodation sector or airlines. Such an increased demand for hygiene and safety during the travel process also means increased operating costs for the tourism industry in improving regularly updated health and hygiene protocols and measures, and providing education and communication for staff, tourists, and the community (Queensland Tourism Industry Council [QTIC], 2020). To address the future challenges of health-related risk and in particular tourists' perceptions of such risks, we propose a research agenda, including future research themes and topics.

As Squazzoni et al. (2020) indicate, the complexity of human behaviour and uncertainty of future development in times of COVID-19 is a challenge for researchers which can only be met through interdisciplinary research. For the tourism context, research collaborations between travel medicine, tourism management and health sciences could be particularly beneficial for future studies on health risk and tourism (Wen et al., 2020). For medicine and health sciences, research can be involved to develop effective medical advice for tourists based on the understanding of their psychological and physical needs. Other important issues are how to engage tourists in taking the necessary actions towards protecting them from health-related risk while travelling, even more so in the aftermath of a pandemic. Future opportunities in research methodology can include integrated approaches, multi-destination studies or meta-analysis of different case studies, as well as longitudinal studies to track changes in risk perceptions over time. Integrating theoretical frameworks and methodological approaches from the disciplines psychology, geography and sociology may provide additional insight to fully understand tourists' health risk perception.

Involving *psychology* theory and methods will allow tourism researchers to study the underlying psychological process of travel decision-making, and to examine how motivational, cognitive, affective, contextual and individual differences influence tourists' health risk perception and their response to the risk. Knowledge on

the role of emotions in travel decision-making as a mediator of risk perception can directly flow in the development of marketing strategies in the post-COVID-19 era.

Insight from the *geography* discipline is needed to infuse place and space into tourism risk research. Considering the enormous impact of COVID-19 on tourism, our traditional assumption of mobility has to be questioned, and new mental models are needed to rethink place, travel, and associated risk. For example, the COVID-19 pandemic has triggered a strong demand for domestic travel (Romagosa, 2020), because tourists perceive their home country as particularly safe due to the high level of familiarity. It is unclear if this trend towards domestic travel will be permanent or if/when tourists resume their quest for novelty provided by international and unfamiliar destinations. Future research from a geographic perspective can explore the familiarity of place and its role in risk perception and travel decision-making. The COVID-19 travel restrictions and stigmatisation of tourism hotspots as high-risk centres have changed tourists' preferences for travel destinations (OECD, 2020). For example, tourists switch from travelling to traditional destinations (e.g., cruise ships, city destinations) and tourist activities (e.g., shopping) to low-density destinations and outdoor activities. Camping holidays became a popular—and perceived to be safer—alternative for many tourists, who were suddenly required to spend their holiday in their own country during the COVID-19 pandemic instead of going on an international holiday (Bryant, 2020).

Since travel decision-making is strongly embedded in a certain social context and risk perceptions vary depending on the cultural background (Reisinger & Mavondo, 2006), theories from *sociology* can help to better understand health risk perception in the post-COVID-19 era. In fact, what societies choose to call risky is determined not by nature but by social and cultural factors (Breakwell, 2014). Sociologists, particularly from the field of cultural studies, can support tourism researchers who investigate these contextual factors, and explore how these factors influence tourists' risk perception and travel decision-making in the post-pandemic stage.

From an applied science perspective, future research in the *business* discipline can help the tourism industry to develop COVID-19 management processes which are suitable for different types of organisations in various tourism sectors, such as hotels, restaurants, cruise ships, airline, sports and events. Another research question to be addressed by business researchers is how stakeholders from the tourism industry can work collaboratively and efficiently with the public health sector to review risk management plans, and to operate in compliance with the health management plan. This collaboration between the health sector and tourism can also help address how to implement, monitor and review the risk control measures and performance to ensure health and safety of employees and customers.

It is too early to say what the long-term implications of the COVID-19 pandemic are for tourism, but it is clear that understanding tourists' perceptions and responses to risk (particularly health risk) will become more important than ever, with health and safety considerations more prominent.

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# Safety Management in the Adventure Tourism Industry

**Damian Morgan**

**Abstract** The growth of commercial adventure tourism products globally over the last half-century has coincided with increasing levels of professionalism. By nature, engagement in an adventure encompasses challenges to be overcome; some of which may carry a real risk of harm to participants and employees. The chapter describes the nature of adventure experiences within the commercial operating environment. With a focus on activity safety, selected national and international standards available to the adventure tourism operators are described along with a national safety auditing scheme. The industry's future is discussed, with the outlook bright in provisioning quality tourist experiences.

**Keywords** Adventure tourism · Safety · Management · Risk · COVID-19

## Introduction

Over the last half-century, commercial adventure tourism has grown from activity-based experiences provided to niche markets to what has become a *bona fide* component of mass tourism delivery. Opportunities for adventurous episodes over short or long time periods are now commonplace across the globe on both land and sea. New opportunities are likely to open also through the provision of new tourist experiences of outer space.

In simple terms, phenomenal growth of tourist adventures represents market forces responding to client demand. This chapter's purpose is to describe forces driving this demand along with implications and some resources available for the development of high-quality commercial adventures offered to tourists. A key concern here is ensuring safe experiences and safe travels of tourists while engaged in adventure experiences. The chapter provides a review and update of earlier work in

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_15

this field by the present author (Morgan & Dimmock, 2006; Morgan & Fluker, 2006). A plethora of valuable work, with examples cited within the chapter, has been reported by others in the field before and since these publications. Other cited studies conducted and reported by Morgan are summarised to highlight aspects changing, and those remaining unchanged, in the pursuit of safety and quality in the conduct of commercial adventure tourist experiences.

Regarding chapter structure, the adventure tourist experience is first specified. The adventure tourism industry is then described within the operating environment. To highlight some of the negative consequences of misadventures, a brief and selective history of adventure is then offered. The chapter then moves to safety analysis through a discussion of the *public health approach* to injury problems, industry standards and regulations, and then an example of safety audits. The chapter concludes with an assessment of the future for commercial adventure tourism products, clearly impacted by the COVID-19 pandemic, with a specific focus on safety implications.

## Specifying the Adventure Tourism Experience

Being a tourist involves travel away from home, normally overnight or longer, where travellers are typically motivated to seek and engage in some form of pleasurable experience. While tourist motivations are complex, and may encompass needs for escape, relaxation or educative experiences, seeking novelty through new experiences will be paramount for many travellers. Pleasures arising from novel experiences may be had by tourists during their travels and re-experienced, though perhaps in different ways, after the travel episode through reflections or captured images. Products provided by the global adventure tourism industry provide numerous sources for tourists to experience novel and perhaps challenging experiences.

At the heart of adventure is an experience of challenge. Challenge is created through uncertainty as to how obstacles within the adventure may be overcome. Some obstacles experienced in the adventure may present as hazards in the sense that a failure to overcome them carries a possibility of harm. Harm will be usually thought of as being of a physical nature such as injury events, though mental harm is similarly a real possibility. The quantified chance of not overcoming an obstacle may be thought of in terms of real risk. Rigorous and valid epidemiological data are typically used to quantify the real risk for injury problems.

Regardless, the challenge, together with uncertain outcomes, forms the adventure tourism experience. Key to this experience is the adventure participant's use of their own abilities, both physical and mental, to control and overcome manifest challenges posed by obstacles present in the adventure. Adventure-related outcomes then provide the desired psychological experiences sought after by involved adventurers. These psychological outcomes go beyond simply the experience of thrills. Deeper and longer lasting outcomes such as a sense of achievement, self-growth and raised self-efficacy can be realised through engagement in adventurous activities.

In an early study, Morgan (2001) attempted to demonstrate empirically elements in the adventure experience, and how these elements link to psychological outcomes for participants engaged in commercial adventure activities. Building on the previous conceptual work in the adventure field and psychological arousal, the study was based on the notion that challenge manifest in adventures stems from client perceptions of situational risk and personal competence.

Priest (1992) has illustrated this balance between risk and competence through the adventure experience paradigm. Under this paradigm, risk at maximum and competence at minimum produces *deviation* and *disaster*. Where risk is reduced or competence rises, but the former continues to outweigh the latter, a *misadventure* results. Conversely, competence at maximum and risk at minimum produce *exploration and experimentation*, and where the former is reduced or the latter rises but competence continues to outweigh risk, an *adventure* experience is produced. A *peak adventure* is predicted where risk matches competence (cf. the concept of *flow*; Giddy, 2020). Priest hypothesised that peak adventures would predict attendant psychological experiences of the adventure.

Based on a sample of white-water rafters in New Zealand participating in a commercial adventure experience, Morgan's (2001) study demonstrated that perceptions of fear, danger and anxiousness increased, and perceived control decreased, where participants' perceptions of risk and competence moved into alignment. The implication for commercial operators, raised in this paper, was to determine and perhaps manipulate client perceptions of risk to provide participants with psychological benefits from their adventure experience.

A related study (Morgan et al., 2005) posed a *before*, *during* and *after* adventure framework to evaluate psychological elements associated with commercial adventures. Key influencers were expectations (including injury likelihood; before), interactions of perceived risk and competence together with attendant emotions (during), and psychological outcomes (e.g., enjoyment; after). The study assessed differences between participants on relatively longer duration commercial sea-kayaking adventures and those on shorter duration white-water rafting trips. Based on study findings from this group comparison, a segmentation was proposed for commercial adventure tourists according to desired level of challenge in the adventure and length of the adventure activities. Group labels were: fearless thrill-seekers (short duration, low challenge), daring thrill-seekers (short duration, high challenge), eco-seekers (long duration, low challenge), and competence testers (long duration, high challenge). The study found that perceptions of risk were not a key element to providing a beneficial adventure experience. And importantly, while clients appear to accept the risk of minor injury (bruises, scratches), real risk of serious injury was neither desired nor accepted.

Both these early studies by the present author, along with eminent works cited within the reporting for each, support the viewpoint that most tourists, including those participating in adventures, do seek safe injury-free experiences. Essentially, none seek or wish to experience serious harm. Yet clients do seek challenges, with many of these containing an inherently potential risk of harm stemming from hazards present in natural environments. The conundrum raised here concerns the

**Fig. 1** White-water rafting can be an exciting but safe experience. (Image courtesy of Professor Donna Pendergast)

mechanism used by adventure providers to offer bona fide adventures where the risk of harm to clients remains at acceptable and controllable levels. Under this scenario, the desired adventure outcomes sought by participants are realised through their perceptions of risk calibrated by operators to be at suitable levels. These levels are set where clients have opportunity to exert appropriate control over perceived risk, while the operator retains full understanding the real risk faced by clients. This real risk is controlled to ensure that the chance of clients sustaining actual harm remains very low or negligible (see Fig. 1).

## Defining the Adventure Tourism Industry and Operating Environment

The onus rests with the adventure tourism operators, acting within a commercially regulated environment, to meet the needs of adventure tourist clients. Morgan (2016, para. 1) has offered a definition of adventure tourism consistent with the previous section that defines the phenomenon according to the client experience:

> Adventure tourism encapsulates a broad range of structured and unstructured tourist products. An adventure takes place when participants use their skills and abilities to face uncertain and often novel challenges. Participants, whether novices or experienced, may require sufficient personal fitness to engage both real and perceived risks, including risk of injury, during adventures.

Morgan and Dimmock (2006) provide examples of various types of commercial adventure activities according to whether they are based on land, sea or in the air. Examples include sky diving, mountain biking and surfing. To facilitate adventure activities for clients, commercial operators typically provide access to the activity location, equipment, training and client monitoring. For example, commercial clients engaged in a snorkelling activity may be provided with boat transport to a coral reef, facemask, snorkel, wetsuit and personal flotation device, instruction on breathing and facemask use as well as directions for the location of activity limits (e.g., not going beyond the reef edge). Other safety activities may take place, of which the clients are unaware, such as head counts, recording, and observations of participants and conditions.

Commercial adventure tourism operations do not however take place in isolation. Morgan and Fluker (2006) have illustrated the commercial adventure tourism operating environment regarding the broader legal concerns. Within the legal framework are elements consisting of the local economy, industry accreditation (e.g., standards, employee certification, required insurance), public policy and injury patterns. These elements represent zones of operator concern. Falling within the legal context is the zone of commercial operator influence. Elements within the zone of influence, where the commercial adventure operator has control, include business operations elements incorporating aspects such as employee recruitment and local knowledge of activity conditions. The operator also has direct influence for the nature of the activity including the level of real risk to which clients will be exposed.

As noted above, within commercial adventure operations, operators must match client expectations with the provisioned experience. Morgan (2000) cited a case in New Zealand where the cause of death of an international tourist was due to a mismatch in such expectations. A direct quotation from the Maritime Safety Authority's (1995) investigation into this white-water rafting accident at the time stated:

> Personnel in the industry are predominantly young men with a desire for excitement and adventure. Many are quite immature and live life "on the edge". This severely affects safety judgements and assessments of client capability. There is a significant difference between the guides' perception of an exciting trip; the guides' perception of client expectations and the actual clients' concept and expectations of an exciting trip. This leads to guides running trips for their own entertainment without due regard for the needs of their clients.

To facilitate research in commercial adventure tourism safety, Morgan (2000) proposed an Adventure Tourism Process model. Based on perceptions of fear, control and risk held by both operators and participants, the model identified gaps between these actors that may have implications for the provision of safe experiences. Although the model has not been subject to empirical testing (to the present author's best knowledge), a more recent qualitative study by Clinch and Filimonau (2017) has focussed on the instructor training and decision making in adventure tourism. Key findings reported include requirements for appropriate policies around risk management and provision of suitable training opportunities (Fig. 2).

This opening section has provided a brief introduction to the adventure experience and the role of the commercial adventure operators, with particular regard for aspects of client safety. Safety issues in the provision of commercial adventure

**Fig. 2** Training and supervision are critical for safe adventure tourism experiences. (Image courtesy of Tourism Queensland, used with permission)

tourism, identified by researchers and others some two decades previous and earlier, remain just as relevant today. Nevertheless, as described later in this chapter, clear examples can be found to demonstrate that the commercial adventure industry has increased in professionalism through the implementation of astute regulations, standards and practices this century, and so offer to clients more safe experiences. These initiatives reflect recognition of the commercial importance of adventure tourism for many nations.

Before delving further into aspects of safety management, and in particular, implications for the future of the commercial adventure tourism industry arising from the COVID-19 pandemic, the chapter makes a short digression to the history of adventure with a focus on specific incidents (which of course litter history) to highlight and underpin consequences that may arise from misadventures.

## A Brief History of Adventure Travels and Some Negative Consequences

The word adventure emerging from Latin origins is said by Arnould (2015, para. 1) to refer "to the fate of individuals, to what would befall them". Adventures, both those real and fictitious, have long captured the imagination of the general public through vicariously experiencing travels to the unknown, while eliciting in readers feelings of arousal and related emotions. Great adventurers well-known to history include Leif Erikson, son of an equally famous father who undertook in the eleventh century ventures to North America, Ibn Battuta's fourteenth century travels across

dozens of countries, and Zheng He's fifteenth century sea voyages traversing several oceans. These and other great explorers overcame uncertainty and real risks to discover new worlds and new peoples (DNews, 2011). Yet the same human desires in the not so famous can be identified through historical record. Books, reports, and news stories can be readily found for adventure-related incidents, with these often being of note due to the tragic outcomes they describe.

One such incident, well-remembered today, occurred in the small Australian town of Daylesford in 1867. Known as *Daylesford's lost boys*, the tragedy's location can be found today marked by a stone monument (Carrubba, 2019). Three boys, with the leader being all of seven years, left early-morning the small township in mid-winter for a bush journey to seek wild goats; likely this experience would have felt to them an exciting adventure. While the boys were seen later in that day, and provided directions homeward, these were ignored. Despite extensive searchers, the trio's bodies were not found for some 25 days, huddled in a tree hollow to (presumably) escape the freezing conditions. Such misadventure has ramifications for those surviving well beyond their occurrent.

Tragic events similarly occur despite being provisioned and supervised by professionals. Morgan and Fluker (2006) described the 1999 Interlaken tragedy where 21 activity participants lost their lives during a commercial adventure tourism activity. This activity required that participants, under the guidance of instructors, rappel and body raft a short stretch of river rapids and waterfall. Cited in Morgan and Fluker, Bita (2001, p. 13) reported at the time the ensuing Swiss court judgement that laid the blame on the adventure company and guides:

> Judge Thomas Zbinden found that most of the participants didn't know what canyoning was, let alone have any experience of it. The guides' supervisors ignored signs of a thunderstorm brewing in the Valley, he said, even though storms had been predicted in the local newspaper and on radio. They [the canyoning tour operators] had time to cancel the trip but went on regardless. The junior guides were not properly trained, the judge concluded, because they had not been instructed on how to read all the danger signs of an impending flood.

Commercial adventure tourism typically takes place in dynamic natural environments. A key question associated directly with participant safety is whether events are predictable, and so may be managed or countered to prevent harm to participants or employees. The 2019 Whakaari/White Island Volcano disaster provides a pertinent example. Chappel (2020) reports that on December 9th, 2019 47 persons were visiting the volcanic island located off the eastern coastline of New Zealand's North Island. Twenty-two persons lost their lives as a result of a volcano eruption with others suffering severe injury (Worksafe New Zealand, 2020). In response to the incident, a Worksafe New Zealand (2020) investigation concluded that parties involved in taking tourist to the Island did not meet their obligations under the *Health and Safety at Work Act 2015*. Worksafe New Zealand report further:

> 22 people have lost their lives in this tragic event. WorkSafe is tasked with investigating workplace incidents to determine whether those with health and safety responsibilities met them. This was an unexpected event, but that does not mean it was unforeseeable and there is a duty on operators to protect those in their care (2020, para 2).

Thankfully, loss of life due to misadventures suffered by commercial adventure tourists, are relatively infrequent events. On this positive note, opportunities for overcoming challenges and risks may still be found and fulfilled today with ready-made options available through commercial adventure tourism products across the planet. Such adventures on offer today provide to participants levels of safety that far exceed, through being informed by greater knowledge and technical advances, those experienced by the great explorers or others suffering misfortune in previous centuries. Yet relatively recent tragedies, including those reported here, indicate that safety remains a pertinent issue for commercial adventure operators.

Therefore, examination remains warranted to assess current provisions of adventure tourism experiences in regard to the likelihood of harm being experienced by participants. To facilitate this assessment, a review of the public health approach to unintentional injury problems is now described.

## The Public Health Approach Towards Reducing the Potential for Harm

Morgan (2015) provides an application of the public health approach (PHA) to the commercial adventure activity of river tubing. In this activity, now banned in some countries, tourists have opportunities to float on inflated tyres down seemingly tranquil rivers while sipping alcoholic drinks purchased along the way (Tisson, 2015). Through methods applied frequently to a range of injury problems, the risk of harm inherent to this activity and strategies for prevention may be assessed. Morgan notes though that the feasibility of a PHA application should account for likely costs and benefits of implementing the process.

At a basic level, the PHA process follows a five-step implementation to assess an injury problem (Morgan, 2015). Morgan (2011) provides an example of this for drowning events (Table 1). The first step is injury surveillance. Rigorous surveillance, which may be in some instances costly or impractical, requires a clear definition of the injury problem addressed, plus measurement of risk factor manifestation

**Table 1** PHA to researching injury problems using a drowning example

| PHA steps | | Knowledge base required with respect to drowning |
|---|---|---|
| 1. Conduct injury surveillance | ⇨ | Clear definition of drowning including circumstantial criteria<br>Measures of drowning risk accounting for risk exposure |
| 2. Identify injury causes and risk factors | ⇨ | Identification of drowning risk and protective factors, their roles, dependencies, interactions and potential for control |
| 3. Develop and evaluate interventions | ⇨ | Determine risk to be reduced or modified<br>Develop and test drowning countermeasures for effectiveness |
| 4. Implement beneficial interventions | ⇨ | Implement drowning prevention programs for *at-risk* populations |
| 5. Review residual injury problem | ⇨ | Feedback loop to PHA Step 1 injury surveillance |

and exposure to that factor. The second step is identification of causal risk factors and potentials for control. This step typically requires application of rigorous epidemiological designs focusing on the injury problem at hand. The third step is the development and evaluation of interventions designed to prevent injury. The fourth step follows where beneficial interventions are implemented with the final step (step 5) providing a feedback loop through review.

In practice, safety regulators or activity operators may move straight to the PHA step 4. Interventions here may be made based on evidence or knowledge sources from other activities or taken up through a common-sense approach. Examples may be the mandatory wearing of personal flotation devices for water-based activities or carrying of satellite communication devices for remote travels. Where a full PHA approach cannot be implemented, Morgan (2006) suggests a starting point for assessing possible injury problems is through application of Haddon's matrix.

Applications of Haddon's matrix have been described for adventure tourism as well as natural settings (Heggie, 2006; Senthilkumaran & Pratim, 2017). The matrix is used to identify candidate causal risk factors associated with a commercial adventure activity manifest before, during or after the event. In this analysis, causal risk factors should be distinguished from risk markers, where the latter may be associated with causal factors (e.g., male gender *marking* the causal risk factor of overconfidence; Morgan, 2006). Causal risk factors, specified pre-event, event, or post-event, may then be categorised as to whether they are associated with the participant, the activity or the environment.

As proposed by Morgan (2015) in regard to river tubing, alcohol use may be a causal risk factor associated with the participant pre-event. Engaging in the activity while unsupervised may be an associated event factor. Transport links facilitating first aid may be associated with the environment post-event. Such analysis should also recognise that some causal factors may interact, compounding the risk of injury (Morgan & Ozanne-Smith, 2019). For example, poor swimming ability may exacerbate the risk of river tubing under the influence of alcohol or failure to wear a personal flotation device. Once specified, options for control of those factors may be considered. Candidate strategies implemented for this example, which should be subject to rigorous assessment, might include alcohol bans, wearing personal flotation devices and provision of emergency communication equipment (see also *Part II Safety: Tourist Injury*).

## Industry Standards and Regulations

To prevent injury and promote safety, including requirement for forms of risk analysis as described above, standards and regulations provide a guide or mandatory requirement for commercial adventure tourism operators. Operators in Australia, for example, may review standards pertaining to risk management, standards pertaining to activities, as well as international standards (Morgan & Dimmock, 2006). An overview to example each standard is now provided.

Guidelines for risk management available to organisations and individuals are available through Standards Australia Limited. For commercial adventure tourism operators, a critical source to guide the implementation of safety is provided by AS ISO 3100:2018: Risk Management—Guidelines (Standards Australia, 2018). The standard is grounded in an organisation approach where the management of risk is considered as a component of leadership and governance. Safety implementation is facilitated through three interrelated principles: value creation and protection; leadership and commitment; and, recording and reporting. The standard describes components or elements within each of the three principles.

The process principle in this standard specifies a procedure to manage risk. The current schema reflects that reported by Morgan and Fluker (2006). This incorporates at the core a risk assessment where these events are identified, analysed according to factors including likelihood and consequence and then evaluated against an established risk criteria. Risk events are treated or addressed through options that may include removing risk, retaining risk and sharing risk (e.g., through insurance). Monitoring risk and recording are also key elements in risk management planning. Several complementary standards are also available on *risk assessment techniques*, *project risk* and *guidelines for sporting and recreational organisations*.

Commercial adventure tourism operators may also refer to the Australian Adventure Activity Standard (AAAS; Outdoor Council of Australia, 2019). This standard, specific to a range of outdoor recreational activities, applies to activities that encompass those being led, where these participants have a level of dependence on the leaders. The components of the AAAS framework are: the management of risk; planning for the activity (including emergency planning); communication and managing participants; being responsive to the environment and conditions, equipment and logistics; and, leadership. The Standard has been adapted for an array of activities including angling, canyoning and snorkelling. The standards are not legally binding per se, but may be required by regulators to be met before access to an activity location is granted.

An international standard for adventure tourism operations is provided by the International Organization for Standardization. This is the *Adventure Tourism—Safety Management Systems—Requirements* (ISO, 2014). The Standard is designed to assist adventure tourism operators in the delivery of safe activities.

The Standard provides guidance on: the organisational context; leadership; planning (including addressing risks); aspect of support (including communication and documentation); operations (including emergency preparation); performance evaluation; and mechanisms for continual improvement. A complementary handbook has also been developed (Lazarte & Rojas, 2016). This handbook underpins the aims of the Standard to implement and demonstrate safety, meet participant and staff expectations and support legal compliance.

In recognising the growing importance of commercial adventure tourism, many countries have implemented processes and standards in the promotion of safety. In Brazil, for example, the Brazilian Ecotourism and Adventure Travel Trade

Association (ABETA) has implemented, in partnership with government and industry, a Safe Adventure Program to certify commercial operators across 16 adventure destinations (Adventure Travel News, 2010). More generally, across the globe, a recent snapshot survey of adventure tour operators reported that 74% had a documented safety and risk management plan (Adventure Travel Trade Association [ATTA], 2020).

## Safety Audits

New Zealand provides a model for adventure safety that likely represents world best practice. The model is designed and implemented to provide for safe participant experiences in the adventure tourism industry. Full details, in addition to those described below, are provided at the SupportAdventure (2021) website. New Zealand adventure tourism operators in this legal framework are certified under the *Health and Safety at Work (Adventure Activities) Regulations 2016*. Certification falls under the New Zealand Adventure Activities Certification Scheme (Joint Accreditation System of Australia and New Zealand [JAS-ANZ], 2021) developed by WorkSafe New Zealand and JAS-ANZ (with the former-named body being the Scheme owner).

SupportAdventure (2021) provide publicly available information and documentation used for Scheme implementation. To determine whether their businesses fall within the regulatory framework, commercial adventure (and other) operators may access a decision tree from the site which provides a guide for those requiring registration and safety audits. Key characteristics of regulated activities within this decision tree are the charging of fees to clients for the adventure, providing guidance or teaching to clients, being classified as a land- or water-based recreational or educational experience, and importantly, where the participant experience exposes participants to serious risk that requires operator management.

Under the New Zealand regulatory system, qualifying commercial adventure tourism operators must develop and implement a Safety Management Plan. The Safety Plan is supported through commercial operators embedding a culture of safety throughout their organisation and operations underpinned by a safety management system. Key system aspects recommended include planning for safety incorporating specification of staff responsibilities, developing a hazard and risk register underpinned by communication, staff management, emergency response, incident reporting, and specific attention to issues associated with drugs or alcohol. The process bears costs in the order of NZ$5000, with operators having access to financial support through *Tourism Industry Aotearoa* (Radio New Zealand, 2020).

## The Post-Pandemic Future of Commercial Adventure Tourism

The COVID-19 pandemic has seen tourism revenues plunge globally (Madden, 2021). Reduced mobility both across borders and within countries has clear ramifications for adventure tourism operator revenue. Lower demand for adventure experiences has been exacerbated further by operators having reduced access to public liability insurance (Mitchell & Lynch, 2020). Presumably, the *hardest hit* commercial adventure tourism operators would be those reliant on international markets not able to be replaced by domestic demand (including small island nations). Being realistic, the industry may never return to pre-pandemic economic levels, where prior to COVID-19 global adventure tourism expenditures had been estimated at $683 billion, some 30% of total tourism expenditure at that time (ATTA, 2021a).

To assist commercial operators, the World Travel & Tourism Council has provided protocols for the new normal in adventure tourism (Mirashi, 2020). These protocols concern: preparedness for operations and staff; safe experiences; trust and confidence; and, enabling policies. To meet each protocol, measures taken by both companies and the industry are specified. This document provides both a complementary guide and checklist available to adventure tourism operators to ensure effective and safe practices.

Surviving adventure operators may seek to use downtime for a re-appraisal of their safety practices in line with available standards and regulations described above. Information such as the *Adventure Travel and Trade Association Guidelines*, containing activity-specific information relevant to COVID-19 may be used to inform this outcome (ATTA, 2021b). Following available guidelines may assist to raise the quality of experiences offered to participants. Operators should be mindful too that new health-related COVID-19 practices including hygiene measures and social distances do not detract from, obfuscate or replace other standard requirements for safety (Wilks, 2021). Hence, this major global pandemic challenge should be looked on as an opportunity to review and improve the practice of adventure tourism provision. Improved safety practices will facilitate providing clients with peak adventure experiences (Fig. 3) while not placing them at risk of serious harm.

## Conclusion

### *Finding Quality Through Embedded Safety*

Commercial adventure tourism, in many forms, will seek to *balance* the level of adventure to which participants are exposed with requirements for the provision of a safe experience. Where the balance is not realised, misadventures resulting in injury may follow. Such events are not only tragic for involved participants but also


**Fig. 3** During COVID-19 adventure groups continued to promote the fun and excitement of their activities, while also highlighting the important message of social distancing. (Image provided by the Diving Equipment & Marketing Association (DEMA), used with permission)

have obvious financial and brand ramifications for responsible operators and the wider industry. Nonetheless, the present author sees no reason why aspects of high adventure and responsible levels of safety should be viewed as opposing forces.

The aim for operators is to provide quality in the provision of the adventure experience, a standard that incorporates responsible safety practice. This chapter documents a range of sources that can be used to support adventure operators in this quest with many available freely from the Internet. Other sources of valuable information informing on safety may be provided through professional expertise and industry associations. While the foreseeable provision of commercial adventure experiences may be changing across the globe, safety remains a fundamental concern for surviving operators and an essential desire for participants when engaged in their adventure activities.

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# Managing Visitor Risk in National Parks

**Anna Gstaettner, Kate Rodger, and Diane Lee**

**Abstract** In a context where visitors seek enjoyment, adventure and fun, re-occurring injury and death represents a complex reality for national park management agencies. At one level, there is a need to understand why visitor incidents and accidents occur. Yet, arising at another level is the issue concerning who is responsible for preventing incidents. This chapter presents an overview of the current state of research on the complexities involved in managing risk in national parks from the pre-COVID-19 era and explores implications from the analysis under the *new normal* paradigm. Using Western Australia (WA) as a case study, we ponder what a new normal might look like in times when international travel restrictions coincide with government initiatives promoting regional tourism, and what this may mean for managing risk in our parks.

**Keywords** Tourism · Visitors · National parks · Risk management · COVID-19

## Introduction

In addition to biodiversity conservation and the preservation of cultural and natural resources, the use of natural areas for relaxation, exercise, mental wellbeing, and psychological restoration is a key driver of support for national parks around the globe (Stolton et al., 2015). Being outdoors in the natural environment has been linked to a wide variety of benefits (Bowler et al., 2010; Keniger et al., 2013; Moyle & Weiler, 2017). Visiting national parks is considered a strategic opportunity to enhance public health and wellbeing, foster productivity and enhance social

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_16

resilience (Maller et al., 2009). However, through participating in activities such as hiking, rock climbing, swimming or snorkelling, visitors to national parks are exposed to challenging environmental conditions and a variety of physical hazards presenting injury risk.

With the aim to maximise social benefits and minimise costs, management agencies of recreational protected areas are urged to make these locales accessible and safe to visitors (Buckley, 2002; Eagles, 2014). Recreational protected areas such as national parks are increasingly modelled as managed tourism and recreation products (high visitation numbers combined with managed infrastructure provision) which may prompt visitors to expect that nature-based experiences in parks are always safe to enjoy (Gstaettner et al., 2017; Puustinen et al., 2009). Consequent to these expectations, injury-related incidents occurring in these areas may instigate litigation action against land managers (Sadler, 2004; Shibasaki et al., 2010). While considered a personal misfortune, visitor injury may also prompt accusations of negligence through failures of management intervention (Burton & Kates, 1964; McDonald, 2003).

While the world is reacting and responding to the effects of the global pandemic COVID-19, it is timely to reimagine the complexities of managing risk in the context of nature-based tourism in national parks. Many countries have issued some form of lockdown and social distancing measures to reduce rates of community transmission, and many introduced international travel bans to reduce the spread of the disease (see *Part V Government and Industry Activity: Government Travel Advisories*). These restrictions and an associated focus on locally-based tourism have changed how people travel and where they can go. Preliminary research shows that people seek to connect or reconnect with nature in times of stress and crisis, with recent reports indicating an upsurge in park and forest visitation levels (Derks et al., 2020; Geng et al., 2020).

This chapter presents an overview of the current state of research on the complexities involved in managing risk in national parks from the pre-COVID-19 era and explores implications of the findings under the new normal paradigm. As researchers from the Australian state of Western Australia (WA), a geographically isolated state within a geographically isolated country, we take this opportunity to explore risk management issues from a proactive rather than reactive standpoint. As a country, Australia closed its borders to international tourists at 9:00 pm AEDT, 20th March, 2020 and WA borders were closed to the rest of the country on midnight, 5th April 2020. As of late 2020, these restrictions were still in place. This action likely contributed to WA experiencing no community transmission of COVID-19 since April 2020, a rare outcome in current global conditions. Much of the domestic tourism industry is thriving and visitation to national parks is at an all-time high.

## Risk of Injury in National Parks

Tourist safety is considered a growing field of research that includes investigations into patterns of tourist activities and associated injury, appropriate management of risk, and issues of litigation where incidents and accidents occur (Page, 2009). Descriptive epidemiological analyses of recreational injury have been undertaken to identify trends and patterns of incident causes (Golding et al., 2002; Gstaettner, 2020; Heggie & Heggie, 2004, 2008, 2009), propose incident prevention opportunities (Boore & Bock, 2013; Kortenkamp et al., 2017) and to determine whether and how much visitors adopt preventative measures to reduce their risk of injury (Bird et al., 2010; Brandenburg & Locke, 2017; Gstaettner et al., 2020).

However, statistical evidence on tourist morbidity and mortality in national parks should be treated with caution given the difficulty in establishing a comprehensive reflection of incident occurrence in parks around the world. Published studies capturing trends and patterns of visitor incident occurrences tend to be confined to the context of a particular country, to specific park areas, or particular activity types. Bentley and Page (2008) for example examined the scope of tourist accidents in the New Zealand adventure tourism industry; Uriely et al. (2002) focused on hikers in Israel's deserts; and Heggie and Heggie (2004) investigated injury and illness of park visitors in Hawaii. The degree of detail also varies between different studies. Incident analyses have been conducted using a variety of data sources such as coronial death reports (Tiemensma, 2019), park search and rescue statistics (Boore & Bock, 2013), records of medical centres (Ramanpong et al., 2020) or incident databases of park management agencies themselves (Gstaettner, 2020). Information obtained from each of these sources varies significantly in depth and usability; and even if only one single data source is used, inconsistencies exist when comparing incident trends and patterns between two different parks (Gstaettner et al., 2019a).

Recreational visits to natural settings can involve exposure to a variety of environmental hazards, ranging from tripping and slipping accidents associated with relatively minor injury to incidents causing severe trauma or death (Bentley et al., 2008; Heggie et al., 2008; Soulé et al., 2017). Visitor risk greatly differs between parks where it mainly arises from particular environmental conditions that people are exposed to. Environmental hazards that affect visitor risk in national parks include:

- Cliffs or waterfalls (Flaherty & Caumes, 2018; Girasek et al., 2016)
- Dangerous animals (Appleby et al., 2018; Cherry et al., 2018; Gunther & Haroldson, 2020)
- Extreme climate or weather conditions, lightning (Jeuring & Becken, 2013; Ströhle et al., 2018)
- Floods or flash-floods (Espiner, 2001; Sakals et al., 2010)
- Remoteness (Gstaettner et al., 2019a; Saxon et al., 2015)
- Rivers and lakes (Heggie, 2018; Peden et al., 2016a, b)

- Rockfalls, landslides (Muzzillo et al., 2018; Stock et al., 2014)
- Tree falls (Shibasaki et al., 2010)
- Volcanoes (Erfurt-Cooper, 2014; Bird & Gísladóttir, 2020; Heggie & Heggie, 2004)
- Water currents or rips (Ménard et al., 2018; Wilks, 2017).

Safety also depends on how visitors behave in parks and the activities that they participate in. Hiking for example, which is commonly classified in the low-risk spectrum of outdoor adventure tourism, has in fact one of the highest rates of accidents and injury occurrences (Bentley et al., 2008; Boore & Bock, 2013; Heggie & Heggie, 2009). Some researchers suggest that this outcome may result from these activities being perceived to be low in risk and therefore considered suitable for "normal" (i.e., potentially rather inexperienced) visitors (Bentley et al., 2010; Rickard, 2014a; Wilks, 2008). Water-based activities such as swimming and snorkelling are also of relatively high risk, with drowning being one of the leading causes of visitor deaths related to nature-based tourism and recreation in Australia (Gstaettner, 2020; Leggat & Wilks, 2009; Peden et al., 2016b).

The possibility of injury in national parks arises particularly when park visitors have a limited understanding of local hazard conditions. Here the potential for harm is magnified, for instance, when international visitors find themselves in unfamiliar environments or participate in unfamiliar activities during their visit (Wilks, 2008). Previous research has shown that in-experienced visitors (Heggie & Heggie, 2004), particularly those that are younger and less fit (Mason et al., 2013), and/or those engaging in nature-based tourism activities without tour guidance (Bentley & Page, 2008), are considered most vulnerable.

Many accidents and injuries are considered preventable, or their negative impacts reducible, where recommended safety advice is adhered to (McDonald, 2003; Ritchie et al., 2014). Boore and Bock (2013), for example, suggest that being prepared by wearing appropriate footwear and taking appropriate amounts of water could prevent many of the hiking-related injuries recorded in United States national parks. Mason et al. (2013) propose that hiker preparedness includes carrying a map and a compass, extra clothing and rain gear, a fire starter and a light source, extra food and water, a knife, a first aid kit and a whistle. Assessed against these standards, however, they found that most hikers interviewed were significantly underprepared, often with the belief that the hiking trip was only of short duration/length and therefore these items were not needed (see Fig. 1). Deficiencies in preparedness for risk were also found in a study assessing preparedness of mountain climbers (Brandenburg & Davis, 2016) and in relation to swimming ability in ocean waters (Gstaettner et al., 2017; McCool et al., 2008).

There is also growing concern that carrying electronic devices such as lightweight GPS units, satellite-based personal locator beacons (PLB), or satellite- or smart-phones may reduce individual preparedness and capability to cope with risk. Carrying these devices may provide recreationalists with a sense of security and is thought to potentially lower the perceived need to possess wilderness skills when

**Fig. 1** Hikers are often unprepared for conditions in national parks. (Image courtesy of Dr Anna Gstaettner)

venturing outdoors (Dustin et al., 2017). Visitors may fully rely on these devices to navigate them through remote park areas and provide an option to access emergency services, raising concerns that this may lead to an increased expectation that emergency rescue is always readily available, even in remote areas (Wick, 2016). Dangerous selfie-taking in parks may also be of concern (Weiler et al., 2021). Taking a selfie inherently means that park visitors turn their back to the natural environment (see Fig. 2) drawing away attention from possible dangers as they are transfixed by the images on their media device (Kohn, 2018).

Heggie and Amundson (2009) proposed that while inappropriate equipment or clothing was one major driver of park incidents, personal errors of judgement, insufficient physical conditioning, and lack of experience also play a significant role. Park visitors generally tend to focus on the benefits of the park experience rather than injury risks (Gstaettner et al., 2017). Previous research has shown that visitors may behave irresponsibly in regards to their own safety, sometimes deliberately choosing to neglect or ignore safety advice (Parkin & Morris, 2005). *Visitor-Related Risk Factors* provides a summary of a review of the literature for visitor-related factors that may contribute to the occurrence of recreational incidents in nature-based tourism.

**Fig. 2** Dangerous selfie-taking in national parks is also of concern. (Image courtesy of Dr Anna Gstaettner)

**Visitor-Related Risk Factors**

| | |
|---|---|
| • age, gender | • not carrying enough water |
| • being in a group | • unnecessary risk-taking |
| • exposure to hazard (proximity, length) | • overestimation of own abilities |
| • lack of knowledge/experience, unfamiliarity with environment/activity | • heuristic traps in decision making |
| | • ignoring safety warnings/instructions |
| • lack of abilities (skills/fitness) | • not accepting responsibility for safety |
| • lack of situational awareness | • low risk perceptions; false sense of safety/security |
| • language/cultural factors | |
| • insufficient acquisition of safety information | • leisure feeling |
| • lack of protective equipment/suitable clothing/shoes | • intoxication, alcohol consumption |

Source: Gstaettner et al. (2018)

## Managing Visitor Risks in Parks

Managing the safety of people who visit national parks is a major component of management obligations for park agencies. At one level, there is a need to understand the phenomenon of unintentional injury in national park environments.

Incident reporting and analysis are considered a core element of visitor management systems, which play a significant role in identifying contingent safety concerns (Gstaettner et al., 2019a). Information of incident patterns and trends can be used to evaluate current risk management approaches and can help park managers to identify ways for improvement. Records of incidents provide an important learning platform from which candidate risk factors can be identified and organisational structures reviewed.

Yet, at another level, there is also the issue of who should be responsible for preventing incidents in national parks. Visitor incidents and accidents can have devastating and sometimes long-term impacts on the lives of victims, often imposing high costs of medical treatment and rehabilitation (Forrester et al., 2018). Costs also include a variety of indirect costs to society that cannot be easily measured, potentially affecting work productivity, personal independence and social capital (Butcher, 2004). On top of that, the requirement to respond to incidents and accidents in recreational protected areas can negatively impact the psychological wellbeing of rescue teams and park staff (English, 2018). Costs associated with incidents and accidents also include the financial costs of search and rescue operations, which can be particularly high when aircraft are involved to access difficult terrain (Small et al., 2018).

In a context where visitors seek enjoyment, adventure and fun, re-occurring visitor injury and death represents a complex reality for national park management agencies. Table 1 provides a synopsis of recent studies on this topic.

For park management agencies, responsibility for visitor safety is fundamentally framed around the legal principle of *duty of care*; a legal principle that is based on the requirement to consider potential consequences for others, and to take

**Table 1** Selected works on responsibility for visitor safety in national parks

| Author(s) and year | Study Focus | Findings |
|---|---|---|
| Espiner (2001) | Risk and responsibility in park management | Nature-based tourism experiences in parks are increasingly linked with high service expectations. Visitors have relatively low awareness of hazards. In contrast to visitors, park managers consider risk of harm to be significant. |
| McDonald (2003) | Financial liability of park managers | Review of uncertain legal environment when managing visitor risks in parks. |
| Rickard et al. (2011) | Responsibility attribution, risk, and support for risk management | Most visitors perceive themselves as responsible for their own safety. Those visitors who expressed strong feelings of individual responsibility were less likely to support preventative risk management. |
| Jeuring and Becken (2013) | Responsibility for information seeking | Attributions of responsibility vary among tourists; a small group exists with a relatively high reliance on external safety measures.<br>Perceived lack of knowledge about severe weather conditions was not necessarily related to increased personal information-seeking behaviour. |

(continued)

**Table 1** (continued)

| Author(s) and year | Study Focus | Findings |
|---|---|---|
| Rickard (2014a) | Risk and responsibility in park management | Park managers perceive visitors as responsible for avoiding undesirable risk through information seeking and awareness, but also recognise that these actions might be considerable barriers.<br>Physical cues such as handrails, trails and signs in parks construct the appearance of safety provision in parks. |
| Rickard (2014b) | Responsibility attribution and risk | People tend to attribute responsibility for a hypothetical accident to internal (related to characteristics of the victim), rather than external (related to characteristics of the park or park management) causes.<br>Having experienced a similar accident increased internal causal attribution. |
| Gstaettner et al. (2018) | Risky behaviour in parks and support for management | Park visitors focus on benefits rather than risks.<br>Visitors support risk management intervention as long as it does not impede their experience but enables safe enjoyment of nature's qualities. |
| Gstaettner et al. (2019b) | Responsibility to prevent accidents | Responsibility for visitor safety is shared between park managers and visitors. For management agencies, responsibility is based on the legal principle of *duty of care*.<br>Responsibility parameters can be established by the park visitation context, including geographical attributes, level of service development, and promotion and marketing. |
| Gstaettner et al. (2020) | Responsibility to prevent accidents and visitor preparedness | Visitors accept responsibility for their safety, but this did not necessarily translate into the view that management agencies are not responsible for visitor safety.<br>Greater attribution of responsibility to park management agencies was linked to lower visitor confidence to deal with a potential emergency event themselves. |

reasonable steps to not cause foreseeable harm (see *Part V Government and Industry Activity: Safe Travel–The Legal Duty of Care to Keep Tourists Safe*). Park management agencies have a duty to ensure that premises are fit for purpose, and to take reasonable care to maintain and repair the premises and facilities to avoid accidents. Moreover, responsibility for visitor safety also arises because of managers' specialist knowledge of hazards and associated risk in parks (Gstaettner et al., 2019b). This "superior knowledge", stemming from a professional involvement in managing these environments, manifests in manager responsibility to assess risks from static and dynamic hazards, and their interactions, and consider these risks in accordance with factors of exposure (frequency of use and type of visitor) and potential budget constraints when making visitor risk management decisions.

While the above description of responsibility is largely built upon mandated obligations established under occupiers' liability legislation and laws of negligence (Atherton & Atherton, 2010), other stakeholder groups also share responsibility for visitor safety (Gstaettner et al., 2019b). Close collaboration with other government agencies as well as local emergency services and tourism businesses is central to the development of an effective risk management and incident response system. Moreover, tourism support organisations or social media communicators share some responsibility for park visitors' safety, having moral obligations to promote tourism activity in a safe and responsible way (Gstaettner et al., 2019b). The coordination of multiple sources of information, including social media, to avoid inconsistencies in how particular park settings are promoted is a challenge in visitor safety management (Saunders et al., 2019). Collaborative efforts for safety management should therefore also include sources of third-party communications.

**How Much Risk Is Acceptable?**
Conflicts of responsibility often only become apparent in the event of a traumatic incident. Never is there only one stakeholder capable of managing all risks in any circumstance and it is difficult to identify the particular actions of each party that have contributed to the outcome. When visitors are known to lack the required knowledge and skills to approach dangerous situations in parks, uncertainty remains where responsibility for safety begins and where it ends.

A large part of the complexity of managing safety in park areas stems from the dual connotation of risk when linked to the natural environment. For example, Hill et al. (2014) suggested that nature-based experiences can provoke feelings of enjoyment as well as vulnerability and fear at the same time. Similarly, Mackenzie and Kerr (2012) uncovered the paradoxical desires for both adventure and safety for those taking part in an outdoor adventure tour. Risk can be regarded as both the potential to experience a negative outcome that should be avoided and as an accepted and even valued experience when seen as a situation of challenge to overcome (Gstaettner et al., 2018). Espiner (2001) noted that it is the values that are assigned to an expected outcome that determine whether risk is viewed positively or negatively. For some, the encounter of risk and personal challenge forms an essential part of the experiential outdoor environment (Dickson, 2012); an unavoidable aspect when searching for the optimal rush experience (Buckley, 2012).

Complexities also arise through a variety of situational triggers that contribute to a variation in how responsibility is shared between management agencies and the visiting public in parks. Park agencies are typically responsible for managing a range of settings, from remote to highly developed. This has implications when deciding on appropriate risk management measures. Management responses to hazards should consider a variety of aspects such as levels of visitation, associated variability in visitor type, and variance in activity opportunities. Some visitor groups

may be at higher risk than others, and management agencies need to account for these differences when making risk management decisions. Research in Australia identified three contextual dimensions that define responsibility parameters within a standardised risk management process (Gstaettner et al., 2019b). These three dimensions include geographical attributes such as accessibility and remoteness; level of service development at a site, and promotion and marketing (Fig. 3).

The geographical dimension is characterised by the amount of effort required by the visitor (or emergency response) to access a site. Remoteness can impact the spatial and functional accessibility of a park, affecting the number of visitors and therefore the diversity of visitor types. Generally, greater management responsibility is assumed for park areas that are conveniently accessible because this increases the possibility that opportunistic and/or unprepared visitors enter the park environment. Similarly, the site development and promotional efforts affect the magnitude and manner of site usage, therefore impacting whether a site is visited by people who may or may not be experienced with local hazard conditions. Some visitor groups may require additional safety considerations, as different types of hazards present different risks for different visitor groups.

Complexities in terms of risk and responsibility arise when these conditions change. For example, modification to the geographical dimension that reduces the effort required to access a site will affect the number of visitors as well as the types of visitors it attracts, and greater management responsibility arises when accessibility is improved. Likewise, modification to the service dimension through the instalment of additional management measures influences the expectations of visitors, in that the more developed an area appears the higher the expectations of visitors in terms of safety. Visitors use visual cues when interpreting their visitation experience, so the presence of pathways, shelters, signposts, or warning messages can prompt greater expectations towards protected area managers to ensure safety provision (Rickard, 2014a). With an increased level of management control, visitors


**Fig. 3** Site dimensions define the risk management context within which risk management decisions are made. (Source: Gstaettner et al., 2019b)

may develop the impression that a park is not dangerous, introducing a sense of overconfidence related to safety because the park is perceived to be managed well (Gstaettner et al., 2021). Driven by responsibility obligations and associated accountabilities by park management agencies, managing the safety of visitors can trigger a cyclical feedback process in which there is in an ever-increasing requirement for risk management intervention, together with increasing expectations for safety and a high reliance on management advice.

This cyclical feedback process draws attention to the requirement to balance contextual variables when parks are modified in an attempt to accommodate higher visitation numbers (e.g., improved road access, site hardening, additional shelters) or when visitor activities are extended to suit a broader range of visitor clientele. The risk management challenge lies in the need to balance legal and moral obligations with societal expectations, particularly when intervention efforts affect people's appreciation of danger and their perceptions on the requirement to prepare for risk.

## Managing Park Visitor Safety in the New Normal

As the world fitfully rebounds from the impacts of the global pandemic, many national park managers are confronted with what is now widely referred to as the *new normal*. Globally, it is exceedingly difficult to describe or explain what the new normal actually looks like as each country is experiencing COVID-19 in its own way. In WA, at the time of writing (December 2020) there is a somewhat unique situation of no recorded community transmission of the virus since April 2020. To achieve the eradication of COVID-19 in the state, the Government undertook a measured and regulated approach implementing non-porous national, state and regional borders to restrict travel in and around WA (Fig. 4). The closing of Australia's international borders resulted in international scheduled passenger traffic in September 2020 dropping to 62,120 arrivals, compared to 3.5 million in September 2019, with an overall decrease of 98% (Bureau of Infrastructure and Transport Research Economics, 2020). The approach of restricting international visitors into Australia and interstate visitors into WA has likely contributed to a successful limiting of virus spread, resulting in WA residents having the opportunity to be opened up internally with work and intra state travel that resumed in May 2020.

As a result of initial response measures such as travel bans, lock-downs and associated closure of many businesses, there has been a significant negative impact on WA's local economy, particularly on the hospitality and tourism sector. To boost local and regional tourism, a campaign was launched by the WA State Government to encourage residents to travel and work in regional areas, as a way to alleviate decreased tourism and labour shortages due to the coronavirus pandemic (Case Study 1).

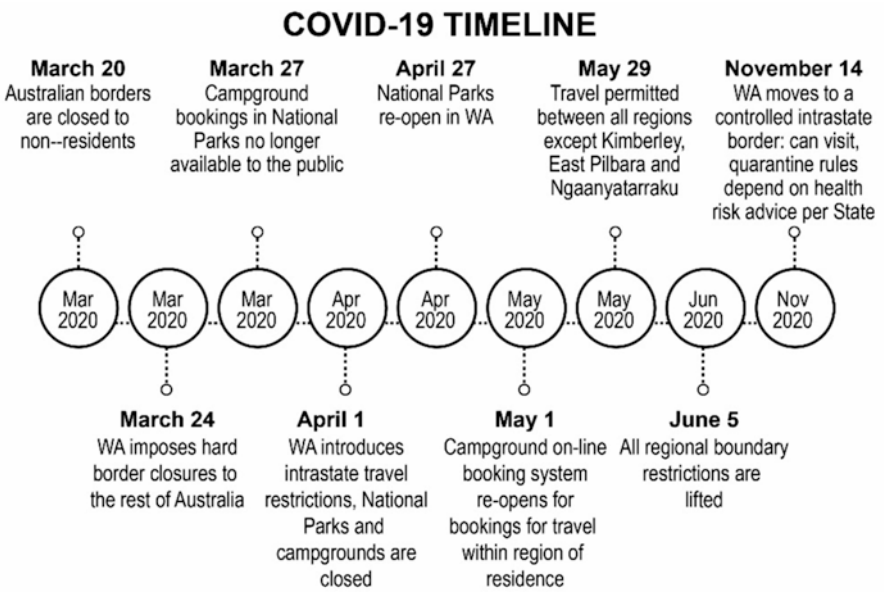


**Fig. 4** WA COVID-19 timeline (*current situation at time of writing)

**Case Study 1: Wander Out Yonder—A WA Government Tourism Policy Initiative**

In March 2020, Australia closed its borders to international visitors. To combat the spread of COVID-19, borders were closed to the other states of Australia and only limited regional travel was allowed within WA. The local tourism industry was decimated.

Regional restrictions were rescinded on June 5th and the *Wander out Yonder* initiative was presented through the media in September 2020. This initiative aimed to encourage Western Australians, within their own state, in "…exploring locations they have never been and embarking on experiences they have never had."

An investment by the WA Government of $1 million for this campaign was to provide a return of $2 million to the WA tourism industry. The WA Government had recognised that while domestic tourism levels were high, there was a missing factor of international and interstate visitors utilising tour business and itineraries. The success of this initiative was recognised when ten thousand $100 vouchers for intrastate tour experiences were sold out within 4 min of opening.

After being forced to remain isolated indoors during the lock-down period, WA residents had the chance to venture outside to visit local, regional and national parks. This became a prime opportunity for a much-needed mental health break in WA

among residents (Cabrera, 2020). Access to nature is inextricably linked to the resilience of urban communities, as public interaction with the natural environment contributes to physical, social and psychological health (Townsend & Weerasuriya, 2010). Particularly in times of crisis, exposure to natural outdoor environments provides an important means to cope with isolation and stress experienced as a result of travel restrictions and social distancing measures (Samuelsson et al., 2020). With the intention to counteract feelings of being "trapped" within restrictions and closed borders, the campaign emphasised that "we're still free to *Wander out Yonder*" (Government of Western Australia, 2020)—and many indeed do.

A significant increase in park visitation was recorded, particularly for parks within a 4-h drive of Perth (Thomas, 2020). Monitored trails located close to major population centres experienced growth in visitation. Where trail monitoring occurs, increases in trail use in 2019–2020, when compared to 2018–2019, were recorded in Swan Region (1 h from Perth; +36%), Wellington Region (2.5 h from Perth; +24%), and the Blackwood Region (2.5 h from Perth; +19%). Campsite bookings post-lockdown increased by almost one-third (31%) between 2019 and 2020, for similar periods.

Government initiatives for a stronger tourism industry, however, can have expected and unexpected outcomes. When additional promotional efforts increase the number of visitors in park areas, many of those will be visiting a park for the first time. Previous research has already shown that first-time visitors and repeat visitors are a different cohort. For example, first-time visitors tend to travel longer distances in order to visit a national park (Kruger et al., 2014), and they have a tendency to visit more places and take part in more activities at a destination (Opperman, 1997). Both of these aspects can be problematic from a risk management perspective, as first-time visitors might not be fully familiar with local hazard conditions and might not take the time to appropriately prepare for an activity, resulting in a heightened risk of injury in WA national parks (Case Study 2).

**Case Study 2: The Inexperienced Visitor**

With the arrival of COVID-19 into Australia came border closures, lockdowns and restrictions on travel. These actions resulted in the eradication of community transmission of the virus in WA and residents were soon able to resume work and travel within the state. Steep increases in park visitation were reported. To gain a park agency perspective on what this might mean for managing visitors in the new normal, interviews were undertaken with WA Parks and Wildlife Services staff.

According to park managers, post-COVID-19 conditions resulted in an increased prevalence of the *Inexperienced Visitor* in national parks. Park agency staff commented that with a general increase in visitation numbers, it appears that this is particularly driven by an increase in the *number of people who have limited experience travelling to remote park areas*. This visitor group is not familiar with and not equipped to handle the extreme conditions of the places they are visiting. They further tend to underestimate the need to actively seek out safety information that allows them to prepare for risk, creating a potentially significant safety management issue.

Industry reports suggest that national parks in the United States are seeing similar issues as a result of increased park visitation. Coinciding with a large increase in outdoor recreation amid COVID-19 restrictions, particularly in hiking, climbing, biking and camping activities (Outdoor Industry Association, 2020), reports from search and rescue teams and park managers indicate an increase in incident occurrence (Howard, 2020; Pilson, 2020). While more research is needed to fully understand the factors at play, observations of US rescue volunteers suggest that an increasing number of incidents include visitors being inexperienced and lack the appropriate gear, skills or fitness to undertake such activities (Brown, 2020). Breathtaking narratives including having to "... rescue hikers who become lost when their phone loses its signal or dies, or who try to summit a mountain they saw on Instagram without researching the terrain or weather" indicate an exacerbation of a pre-existing problem (Brown, 2020). Inexperienced visitors might simply not know what they do not know, and erroneously believe that all is safe and managed well when they venture outdoors (Parkin & Morris, 2005).

For park management agencies, along with the heightened risk of inexperienced visitors venturing through national parks, there is also the issue of managing new risks associated with COVID-19 itself. Freeman and Eykelbosh (2020) suggest that the management of outdoor recreational environments requires careful analysis to reduce the risk of community spread. Aspects to consider include modification of park areas to promote social distancing (e.g., unidirectional traffic on narrow trail loops) and to avoid crowding (e.g., at viewpoints), to provide opportunities for hand hygiene and safe disposal of personal protective equipment, and to actively discourage activities that involve physical contact. Risks to park staff will also need to be controlled, with some on-ground operation routines to be adjusted for social distancing requirements and the provision of additional protective equipment such as masks.

The far-reaching impact of the pandemic opens additional avenues to explore risk and responsibility in nature-based tourism, as a "return to normal" may not be an option. Preliminary research shows that social distancing guidelines and a desire to avoid exposure to people who may be carrying the virus is changing how and where people recreate outdoors (Rice et al., 2020). Preliminary research indicates that visitor groups who value their freedom in park environments tend to support mandatory permit systems and capacity limits in response to the pandemic. This is to ensure visitors can experience the natural and social benefits of visiting national parks without compromising their health due to COVID-19 (Taff, 2020).

## Conclusion

This chapter highlights the many complexities of managing risk and the safety of visitors in national parks, many of which are exacerbated by the global experience of the COVID-19 pandemic and an associated increase in demand for nature-based activities. Policy initiatives introduced to manage the spread of COVID-19 have

potential for both planned and unplanned outcomes. Case Study 1 highlights a policy initiative that aimed to improve the downturn in a state economy arising from border closures, travel restrictions and community lockdown. *Wander out Yonder* has been very successful in terms of increasing visitation to national parks in WA, while Case Study 2 reflects on some of the management issues associated with this visitor increase.

In this time of a global COVID-19 pandemic, uncertainty is the new normal. So, *WHAT'S PAR* for the course? In terms of wellbeing and health, the literature shows that visiting natural areas is conducive to both, and our chapter shows that more people are and will be visiting national parks, both in WA and across the globe. When addressing visitor safety, management agencies will need to work on measures that support those visitors who are less experienced. The literature of managing risk focuses on the context of the setting and the relationships of stakeholders with responsibility for managing that risk, with one of the greatest contributors to the occurrence of incidents being the level of experience. Those with less experience are more likely to be involved in risk-related incidents and injuries.

The act of inviting visitors to a natural area effectively turns protected areas into a tourism product, creating moral and legal obligations to keep visitors safe. While managers of recreational protected areas have a duty of care to reduce the risk of injury for visitors, uncertainty remains where responsibility for safety begins and where it ends. Promotional efforts such as *Wander out Yonder* campaigns form part of the responsibility construct. By encouraging potentially inexperienced visitors to national parks, the challenge for risk management lies in achieving a balance between maximising the benefits of outdoor recreational activities while also minimising the social costs associated with incident occurrences.

As communities across the globe adapt to the new normal, we need to consider not only past issues and approaches to managing risk for visitors in national parks, but also innovative management of COVID-19 issues, at least until an effective vaccine is available and widely disseminated. As Fredman and Margaryn (2020) argue, nature-based destinations have an opportunity to position themselves well for post-pandemic travel and even grow market share. Although managing visitor risk in national parks has always been complex, under the uncertainty of the new normal, further complexity abounds.

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# Safety in Coastal and Marine Tourism

**Jeff Wilks**

**Abstract** Coastal and marine tourism is the largest segment of the travel industry, historically associated with the Sun, Sand and Sea imagery of beach holidays, and more recently inclusive of a broad range of boating and watercraft activities within what has been termed Blue Tourism. The health and safety of visitors in water-based environments is particularly important as the consequences of an incident can result in drowning or more serious injuries than on land. This chapter describes the activities of tourists in coastal and marine environments, where they are likely to experience difficulties and the services available through various government agencies and organisations to assist them. A particular focus is on the legal responsibilities and duties of care owed to tourists, recognising that for many visitors water-based environments are very unfamiliar settings. The chapter concludes by looking at innovations and initiatives in coastal and marine tourism in response to COVID-19 and how safety contributes to greater enjoyment of the marine environment.

**Keywords** Coastal tourism · Marine tourism · Safety · Drowning · Risk management · COVID-19

## Introduction

Coastal and marine tourism is the largest segment of the travel industry (Honey & Krantz, 2007) and forms part of what has become known as *Blue Tourism* (Tonazzini et al., 2019). According to Ecorys (2013) coastal tourism refers to beach-based tourism and recreation activities, including swimming, sunbathing and surfing, alongside other activities taking place on the coast and for which the proximity of the sea is advantageous, such as coastal walks or wildlife watching. Coastal tourism also

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_17

includes hotels and resorts situated in proximity to the coastline and on adjacent islands.

Marine or maritime tourism, on the other hand, covers tourism that is primarily water-based rather than land-based (e.g., boating, yachting, cruising, nautical sports), but includes the operation of landside facilities and services necessary for this segment of tourism.

In an insightful analysis, the Centre for the Promotion of Imports from Developing Countries (CBI, 2020) provides a summary of common coastal tourism activities, main features for each location and associated tangible requirements that support these activities. Table 1 presents a snapshot of their work, where we can see a clear overlap in tourist leisure and recreation activities that are traditionally viewed as either coastal or marine.

While the Centre for the Promotion of Imports from Developing Countries (CBI, 2020) report has a clear focus on destination marketing, an interesting aspect is that health, safety and wellbeing feature prominently in the table; in regard specifically to the importance of requirements for trained and qualified guides and instructors for the various activities, favourable environmental conditions, regularly maintained equipment and appropriate infrastructure. As pointed out in *Introduction: Issues in Tourist Health, Safety and Wellbeing*, these are key considerations in keeping tourists safe in general. Moreover, researchers have now well-established in tourism that visitors are most likely to experience difficulties when they participate in unfamiliar activities in unfamiliar settings (Wilks et al., 2006). The ocean is one setting that can be very unforgiving when things go wrong, so it is essential that a safety net of supervision and surveillance is in place to assist visitors.

A recent report by the UK's Maritime and Coastguard Agency (2019, p. 1) makes this point very clearly:

> The UK's beaches are special places, known around the world for their beauty and attracting millions of people every year. They create lifelong cherished memories for those who visit, and are vital to the economies of both local communities and the country as a whole; they generate millions through tourism, and attract new residents who are seeking a better work-life balance, contributing directly to the survival of our seaside towns and resorts. Underpinning all of this is beach safety.

The report goes on to note that:

> a huge amount of work goes on behind the scenes, involving local partnerships including landowners, local authorities, third sector bodies and local lifesaving and rescue organisations. This work is fundamental to the wellbeing of millions of people, and often is only highlighted following a serious accident or incident (Maritime and Coastguard Agency, 2019, p. 1).

A good example of this work undertaken behind the scenes was recently reported for Surf Life Saving Australia (SLSA). In 2019 SLSA members performed 10,176 rescues during beach patrols, provided 89,695 first aid treatments and 1.5 million preventive actions (SLSA, 2019). Using these figures Deloitte Access Economics (2020) calculated the value of lives saved by Australian surf lifesaving patrols to be

**Table 1** Common coastal tourism activities

| Activities | Main features of location | Tangible requirements |
|---|---|---|
| Swimming, snorkelling | Clean beaches, clear seas | Lifeguards, sunbeds/umbrellas, beach sports (volleyball, beach tennis, yoga/tai chi), beach bar/restaurant, shop, rental of snorkels and fins |
| Stand up paddle boarding, canoeing, kayaking, surfing | Suitable sea conditions | Lifeguards, adequate rental equipment, guides as required |
| Jet ski, banana/donut boats, water skiing, parasailing, other motorised water activities | Suitable sea conditions | Rental equipment that is regularly maintained, trained staff, appropriate liability insurance, marking out safe areas in sea/lake |
| Diving | Suitable dive sites/wrecks, availability of marine life, coral reefs | Qualified diving instructors and guides, PADI and other certification agencies affiliation, equipment that is regularly maintained (air cylinders, SCUBA jackets, weight belts, masks etc), boats, appropriate liability insurance |
| Windsurfing, Kitesurfing | Suitable wind conditions and suitable beaches for learning to kitesurf | Qualified instructors, suitable equipment, liability insurance |
| Boat trips | Places to sail, such as outer islands, less-visited beaches, cultural destinations | Qualified skippers, boats that are regularly maintained, robust safety regulations, glass-bottomed boats, appropriate liability insurance, guides as necessary |
| Hiking/trekking | Local marked trails in beautiful and culturally interesting locations | Trail maps |
| Cycle tours | Local marked trails in beautiful and interesting locations | Bicycles for hire (regularly maintained), trail maps |
| Community-based tourism | Daily life in local villages, markets, festivals, cooking classes, vineyards/ distilleries | Suitable guides, vehicles |
| Wildlife/marine life watching | Resident wildlife/marine life of interest to target market | Trained guides, vehicles/boats |
| Conservation activities | Availability of suitable species, e.g., turtles or other, habitat protection activities, rubbish/plastic/ beach clearing activities | Trained conservationists and staff |
| Wellness activities | Allocated area/building for wellness | Trained wellness practitioners, spas, range of wellness activities |

(continued)

**Table 1** (continued)

| Activities | Main features of location | Tangible requirements |
|---|---|---|
| Fishing | Suitable saltwater/ freshwater species | Experienced fishing guides, suitable boats that are regularly maintained, robust safety regulations, fishing equipment |
| Horse riding | Local stables, suitable beach (sandy) | Experienced riders, liability insurance |

Source: Centre for the Promotion of Imports from Developing Countries (CBI, 2020), used with permission

$6.1 billion. In addition, the actions performed by SLSA members are expected to prevent 1363 coastal deaths and 818 critical injuries each year.

While drowning continues to be the main safety concern in coastal and marine environments (Royal Life Saving Australia, 2020; Rubbo, 2019; World Health Organization [WHO], 2014), and tourists who are unfamiliar with local water risks and features are identified as a key target group for drowning prevention (WHO, 2020), there is also a growing appreciation that all hazards in the coastal environment must be considered in visitor safety (Australian Water Safety Council, 2020). This approach has been adopted in this chapter.

It is expected that coastal areas will continue to attract large visitor numbers with the easing of COVID-19 restrictions worldwide (Hines, 2020; UK Maritime and Coastguard Agency, 2020; Zielinski & Botero, 2020) and the surging interest for spending time outdoors (Cairn Consulting Group, 2020). Indeed, leading up to summer 2020 SLSA state centres had anticipated record crowds at the beaches, and based on this prediction, expanded their drone technology services to monitor and where required assist beachgoers (Surf Life Saving New South Wales, 2021). Interestingly, the *10 National Safety Agenda Issues* identified by SLSA (2019) before COVID-19 included a mixture of activities across coastal and marine tourism (Fig. 1), as well as specifying a need to concentrate on those groups unfamiliar with the coastal environment, particularly international tourists.

Many of these health and safety issues will continue to be high priorities in the *new normal*, especially in countries where coastal and marine tourism is a principal attraction for visitors. At-risk groups will include regional and domestic tourists as well, with inexperience, poor swimming ability, alcohol use, risk-taking behaviour and failure to follow rules or instructions contributing to potential incidents in and around water (Wilks et al., 2005).

The following sections discuss the activities of tourists in coastal and marine environments, where they are likely to experience difficulties, as well as the services available through various government agencies and organisations available to assist them. A consistent observation here is that there is already a wealth of existing information and resources for the health, safety and wellbeing of visitors in coastal and marine settings—the challenge is to apply this knowledge in the new normal (Wilks, 2021).


**Fig. 1** National safety agenda issues. (Source: Surf Life Saving Australia (2019), used with permission)

## Responsibility for Safety

Before turning to coastal activities and settings it is important to note that prominent reports and plans surrounding blue tourism largely focus on economics and sustainability (Elcorys, 2012, 2013; National Coastal Tourism Academy, 2016; National Oceanic and Atmospheric Administration [NOAA], 2018; Tonazzini et al., 2019), with very little or no mention of the health and safety of tourists in the marine environment. There are several possible reasons for this. First, many coastal activities around the world take place on public beaches and there is a general expectation from visitors, and to a large extent tourism operators also, that local councils or public authorities will automatically provide services to keep tourists safe. In most cases councils do provide services and facilities under their duties of care to the public, but it is also important that visitors recognise that they have a personal responsibility to keep themselves safe and to follow instructions from local authorities. As noted in the following sections, the role of lifesavers and lifeguards is of central importance in coastal tourism safety.

Lifesavers often remind the public that "If we can't see you, we can't save you" to encourage people to swim between the designated patrol flags at the beach; these being identified areas where the most effective supervision and surveillance is available (International Life Saving Federation [ILS], 2015; Wilks, 2017). Indeed, studies show that many drowning and rescue events occur outside but in relatively close proximity to flagged areas (Wilks et al., 2007) with many visitors assuming that "near enough is close enough". There are particular challenges for beach safety managers


**Fig. 2** If we can't see you, we can't save you. (Source: Surf Life Saving Australia, used with permission)

during COVID-19 where social distancing is somewhat at odds with keeping people within the flagged patrol area where they can be supervised and assisted (Fig. 2).

A related reason for non-compliance seems to be that safety is often forgotten in the general euphoria of being on holidays and the activities at the time (Tarlow, 2006). This is supported by research showing that visitors to beaches often pass by prominent safety signs without seeing them (Brannstrom et al., 2015; Matthews et al., 2014). For this reason lifesaving organisations note that public signage is only one element in the safety net for visitors (SLSA, 2007) and signage by itself should not be exclusively relied upon (Cantrill, 2008; Taylor, 2004). The other elements in the safety net are education and information, denial of access (to go with warnings), acquisition of survival skills and provision of supervision (ILS, 2015).

Finally, while legislation in some jurisdictions directly considers the safety and wellbeing of visitors (e.g., the Tourism Services Act, 2003 [Qld].) a recent review of passenger safety on whale-watching vessels in Australia noted that most attention in related government regulations and industry codes of practice was directed to the safety of the whales rather than the safety at sea of the tourists (Wilks et al., 2020). The review concluded that this may be due to safety at sea being the responsibility of maritime transport authorities rather than being engendered through dedicated tourism services.

So, an important distinction in this chapter is between coastal and marine tourism activities that have a commercial component (e.g., the hire of a boat; guided scuba diving excursions) and those undertaken as private recreation (owning your own kayak and taking responsibility for your own safety while out paddling). The

chapter looks closely at commercial situations where there are statutory and/or common law duties of care to protect the health, safety and wellbeing of domestic or international tourists. In Queensland, for example, some of these responsibilities are covered by legislation, such as the *Safety in Recreational Water Activities Act 2011 (Qld)* (State of Queensland, 2019, p. 5) which states (inter alia):

> The main object of this Act is to ensure the health and safety of persons to whom recreational water activities are provided by a person conducting a business or undertaking by—
>
> (a) Protecting the persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from the provision to them of recreational water activities; and
> (b) Promoting the provision of advice, information, education and training for health and safety in relation to the provision of the recreational water activities.

What this means is that a person carrying on a business within coastal and marine tourism has legal responsibilities to look after their customers, with clear guidelines for how this outcome can be achieved. Reckless conduct by those with responsibilities under the Act has very serious consequences. *Part V Government and Industry Activity: Safe Travel–The Legal Duty of Care to Keep Tourists Safe* outlines further the legal responsibilities for businesses in regard to taking care of tourists. The following coastal activities and settings have been selected based on popularity and research identifying where tourists are most likely to experience difficulties and consequently where they are most likely to need assistance.

## Beach Tourism and Safety

Prior to COVID-19 beach tourism was booming. The 2019 Holiday Barometer found that the seaside dominated summer holiday destinations for Europeans, while Americans and Brazilians were almost equally interested in the seaside and city trips (IPSOS, 2019). This popularity continues a trend for Europeans spending time in the sun or at the beach as their main reason for going on holidays (European Commission, 2015, 2016). And such outcomes relate not only to international visitors, but also domestic tourism. Visit England (2015), for example, reported 11.22 million domestic overnight trips in England that involved visiting a beach, and an additional 37 million day visits to a beach comprising 3% of all tourism day visits in England.

Many of these beach visits involve families with children so it's not surprising that researchers and local government authorities have long been interested to identify hazards at beaches and how they can be managed. Beach safety requires a combination of common sense, swimming ability and beach/surf knowledge that will vary according to location and personal experience. The main examples of hazards and potential injury in a beach environment can be summarised as:

- Water (immersion, drowning)
- Marine animal (bites and stings, jellyfish)
- Litter (cuts, broken glass)
- Wave action (broken bones, collarbone from dumping)

- Equipment (head injury, hit by surfboard)
- Cliffs (fall, trip on cliff edge)
- Water pollution (infection, gastroenteritis from faecal contamination)
- Underwater object (spinal cord injury, diving into sandbar)
- Criminal activity (assault, robbery)
- Sun (sunstroke, sun exposure) (De Nardi & Wilks, 2008a).

Interestingly, when Surf Life Saving Australia (2019, p. 15) surveyed community members about "things that come to mind when thinking of the coast" hazards including those listed above were largely ignored, suggesting that visitors would be unprepared when confronted with these hazards. When visitors think about the coast, neither life saving services nor patrol flags immediately came to mind, though when prompted 80% of adults recognised rip currents to be very hazardous.

In an insightful study Abraldes and Pérez-Gómez (2009) investigated the risk factors for injuries on a beach. Risk factors were grouped in four main categories: beach morphology, beach equipment, lifeguard service and miscellaneous aspects. The risks were evaluated by a panel of experts who concluded that the lifeguard service was the single most important component on a beach that could prevent injuries and accidents. An extensive travel medicine review by Cortés et al. (2006) supports this finding, recommending that tourists should choose to stay in lodging that provides lifeguard supervision for designated swimming areas, since the presence of lifeguards increases favourable outcomes should a submersion occur.

Moran and Webber (2014) looked at leisure-related injuries at the beach by analysing lifeguard incident report forms in New Zealand. Apart from actual rescues, they found that lifeguards provided first aid to almost 9000 beachgoers over five summer seasons, with an average of 1772 cases per annum. The main first aid incidents were related to (in order of frequency): lacerations/abrasions (47%), marine sting/envenomation (16%), bruising (11.9%), feeling unwell (5%), insect stings (4%), breathing difficulties (3%) and cramp, burns and sunburn (all less than 1%).

Studies of tourist hospital admissions (Nicol et al., 1996) and clinic presentations in coastal settings (Schmierer & Jackson, 2006) confirm this predominant pattern of lacerations, soft tissue injuries, marine stings and sunburn stemming from the hazards listed above. More recently, the Australian Water Safety Council (2020) notes the increasing need to also respond to cardiac and other emergency events in coastal settings, finding a pre-existing medical condition was present in 36% of drowning deaths. Overall, beaches accounted for 19% of drowning deaths and for every fatal drowning there are three non-fatal drowning incidents (Australian Water Safety Council, 2020).

When we look at health and safety in coastal and marine settings there is a long history of visitor care on beaches, mainly through local councils or voluntary lifesaving associations. There are also some exemplary practices developed by industry associations. A good example is the *Water Safety Handbook* developed by the Queensland Tourism Industry Council (QTIC) in partnership with Surf Life Saving Queensland (SLSQ) (QTIC, 2018).

This handbook provides best practice guidelines for tourism operators to assist in keeping visitors safe in aquatic environments, with checklists to conduct regular safety audits and a companion Beach Safe App available in 72 languages (Surf Life

Saving Australia, 2020). With permission from QTIC the best practice guidelines relevant to all aquatic environments are presented in the Appendix at the end of the chapter. Interestingly, the first guideline is:

1. *Conduct a safety brief with all participants before engaging visitors in aquatic activities.*

This advice is emphasised across all coastal and marine activities, with specific examples provided in the following sections of this chapter. Failure to provide a comprehensive safety brief is one area where operators are especially vulnerable to lawsuits.

The second QTIC water safety guideline is to advise visitors to remember the FLAGS message—using the acronym FLAGS as a memory aid (Fig. 3):

**F**—Find the flags and swim between them
**L**—Look at and read all safety signage
**A**—Ask a lifesaver or lifeguard for some good advice
**G**—Get a friend or travel companion to swim with you
**S**—Stick your hand up if you need help

Finally, to emphasise the value of lifeguards and lifesavers in beach safety Table 2 presents a summary of 2019 statistics from the United States Lifesaving Association (USLA, 2020a, para. 2), which includes the well-established statement


**Fig. 3** The Flags Message. (Source: Surf Life Saving Australia, used with permission)

**Table 2** Summary of 2019 National Lifesaving Statistics

| Events | Number of people |
|---|---|
| Beach attendance | 408,965,638 |
| Rescues | 71,034 |
| Preventive actions | 8,838,094 |
| Medical aids | |
| Major | 16,119 |
| Minor | 287,335 |
| Lost and found persons | 11,261 |

Source: Adapted from United States Lifesaving Association (2020b)

that "USLA has calculated the chance that a person will fatally drown while attending a beach protected by USLA affiliated lifeguards at 1 in 18 million (.0000055%)". This is based on the last 10 years of reports from USLA affiliated lifeguard agencies, comparing estimated beach attendance to the number of drowning deaths in areas under lifeguard protection.

By way of explanation, major medical aids mentioned in the table are first aid instances which require further attention from higher levels of medical care such as paramedics, emergency transport or specialised medical response. Minor events are where first aid provided by the lifeguard was sufficient, remembering that all lifeguards are trained and accredited in first aid.

## Drowning

Drowning is the second most frequent cause of injury death among international tourists, following motor vehicle crashes (Leggat & Wilks, 2013). Drowning is also largely preventable (Cortés et al., 2006). In Australia, males drown at a rate of four times that of females and 23% of drowning deaths occur while swimming and recreating (Australian Water Safety Council, 2020). Of particular concern are rip currents ("rips") which are narrow and concentrated seaward-directed flows that extend from close to the shoreline, through the surf zone, and varying distances beyond. Each year they cause hundreds of drowning deaths and tens of thousands of rescues on beaches worldwide and are therefore the leading deadly hazard to recreational beach users (Castelle et al., 2016).

A comprehensive review of data records by Brander et al. (2013) revealed that rip currents account for more human fatalities in Australia on average each year than bushfires, floods and cyclones combined. Yet, studies consistently show that a majority of beach visitors are not able to spot a rip in a photograph (Ballantyne et al., 2005; Wilks et al., 2017; Williamson et al., 2012). Research by Surf Life Saving Australia (2019) found that the general public recognise rips as extremely or very hazardous but even experienced ocean swimmers may struggle to identify a rip (see Fig. 4).

At the same time, research by Sherker et al. (2010) found that beachgoers with basic knowledge about rip currents are significantly more likely to avoid swimming


**Fig. 4** Ability to recognise a rip. (Source: Surf Life Saving Australia 2019)

in the rip. This is an important finding that supports continuing education on rip safety, but perhaps using more immersive and realistic education strategies, such as the use of virtual reality headsets showing moving imagery (videos) of rip currents rather than static photographs in order to improve rip spotting ability (Pitman et al., 2021).

Sometimes it takes a tragic incident for tourist safety to improve, especially in relation to rips. In the case of Bavo Verheyden (see Case Study 1) a Flemish tourist who drowned at Ntafufu Beach, Eastern Cape, the High Court of South Africa found the resort at which Bavo and his brother stayed a short distance away from Ntafufu Beach, failed in its legal duty to take all of the reasonable precautions to warn the brothers of potential dangers of the sea. As part of a court-sanctioned settlement with the family, the resort agreed to erect signs both at the resort and on the beach warning of the possible presence of rips and the danger of swimming in the ocean in the absence of a lifeguard. The family's charity Safe Coastal Tourism (Danneels, 2011) continues to promote beach safety for tourists, with the work formally endorsed by the UNWTO (2012).

**Case Study 1: Bavo Verheyden**

Bavo was a fourth year Bioscience Engineering student when he visited his older brother Bart, a medical doctor working in South Africa. The two arrived at Khiluleka Retreat (now Ntafufu Eco Lodge) on the evening of 17 April 2011. The following day the brothers rented two canoes at the resort then took them over the river to the sea, where they were caught in a rip. Bavo drowned and Bart survived. The family filed a law suit against the resort owners claiming that they had neglected to warn the brothers of the dangers of the sea at the nearby beach. After a lengthy process a court-sanctioned settlement was concluded on 2 September 2019. The legal duty to take all reasonable measures in warning bathers of the dangers of the sea was recognised in the settlement.

*Danneels & Ors v Khululeka Retreat CC* (2019)

Coastal and island resorts have very clear duties of care to their commercial customers in relation to water safety, as also demonstrated in other legal cases (Wilks & Davis, 2003). As previously noted, well before COVID-19 best practice guidelines for protecting visitors were readily available (QTIC, 2018). The challenge is to use them.

## Coastal and Island Resorts

Quite often coastal and island resorts are situated in close proximity to dangerous surf areas. McKay et al. (2014) investigated relationships between coastal tourist parks in New South Wales (NSW), Australia and the hazard rating and extent of lifeguard patrols of their nearest surf beach. They found that the vast majority (91%) of NSW coastal tourist parks are closest to surf beaches rated as hazardous to swimmers. Of these beaches, 35% are completely unpatrolled by lifeguards while another 61% are only partially patrolled. This places an additional responsibility on the resorts to provide a safety net for their guests by way of education and signage, or ideally through the employment of lifeguards.

In a slightly different context Van den Enden (2009) reports that following a major incident in 2003 where two guests from a neighbouring resort drowned in a lagoon, and two staff members were hospitalised as a result of their rescue attempt, the Outrigger on the Lagoon Fiji Resort requested assistance from Surf Life Saving Australia. A lifeguard training program was provided. The program involved an aquatic safety and risk management assessment (including signage), staff training and advice on lifesaving and rescue equipment. In the months following the training program 20 guests were rescued, of which 18 belonged to nearby resorts.

In the earlier landmark case of *Enright v Hyatt Coolum Resort* an American businessman drowned at an unpatrolled Australian beach while he was a guest of the resort. His widow sued the resort and the local government council which had control of the beach. The court systematically reviewed the risk management mechanisms the resort had in place to prevent a drowning incident. Justice Moynihan found that it was reasonably foreseeable that someone might swim in the surf and drown on an unpatrolled beach, but that the facts in this case did not support a breach of the defendants' duty of care as the resort had gone to considerable lengths to provide a safe swimming environment for its guests. Again, and relevant to this case, detailed industry standards have been available to assist tourism operators for many years (Federation of Tour Operators, 1999, 2003).

One area highlighted in the case of *Roberts v Iberotravel Limited* was the provision of first aid for guests at a resort. The plaintiff Kevin Roberts, aged six at the time of the incident, suffered a near drowning event while on holidays with his family in Majorca. Kevin was found floating unconscious in the swimming pool and was carried by another guest to the hotel reception. He sustained catastrophic brain damage. Under Spanish law the hotel had a responsibility to provide pool attendants who could swim and were trained in life saving and the practice of artificial

respiration in cases of asphyxia from immersion in water. His Honour Justice Gibbs found "There is no evidence that any staff or other person connected with the hotel and who was in any way trained in lifesaving or resuscitation responded to the emergency … In short there was, as I find, a complete absence of any significant staff, equipment or procedure to deal with any drowning emergency". His Honour found the hotel negligent both in relation to Kevin's immersion and their failure to resuscitate.

While lifesavers and lifeguards can deliver first aid in response to a range of beach hazards (Moran & Webber, 2014) and are clearly an effective way to provide supervision and assistance to visitors (Cortés et al., 2006) coastal and island resorts also have legal responsibilities to provide timely first aid for their guests (Wilks, 2013). The discharge of these responsibilities involves staff training and accreditation, resources (first aid kits, signage) and regular training drills (St John Ambulance Australia, 2013). In addition to drowning incidents, the ability to provide immediate first aid for identified hazards such as marine stings, sun safety, adverse effects of drug and alcohol use, slips and falls, and a range of medical emergencies is all part of customer care in coastal and marine settings (QTIC, 2018).

## Boating

Boating and watercraft use are very popular activities undertaken by tourists, both international and domestic. In Australia, an estimated 20% of the population participate in boating and watercraft activities annually. Unfortunately, drowning is the leading cause of boating-related fatalities and boating safety is a national priority (Australian Water Safety Council, 2020).

In 2019, the United States Coast Guard counted 4168 accidents that involved 613 deaths, 2559 injuries and approximately 55 million dollars of damage to property resulting from recreational boating accidents (U.S. Coast Guard, 2019). Where cause of death was known, 79% of fatal boating accident victims drowned. Of those drowning victims with reported life jacket usage, 86% were not wearing a life jacket. Alcohol use is the leading known contributing factor in fatal boating accidents; where the primary cause was known, it was listed as the leading factor in 23% of deaths.

As previously noted, there is an important distinction between private recreational boating and commercial boating where, for the latter operators have specific legal duties for the safety of their customers/passengers. With private recreational boating individuals have responsibilities for their own safety, and there are clear standards and guidelines available to assist them (e.g., Transport Canada, 2019a). The Canadians have a very good system, where everyone who operates a power-driven boat needs proof of competency—something that shows they understand the rules and how to safely operate a boat. The Pleasure Craft Operator Card is the most common means and this can be obtained by passing an accredited boating safety course (Transport Canada, 2019b). A boating safety app (Boating Safety App, 2021)

is also available to download to mobile devices, covering basic safety areas. Other jurisdictions have similar personal licencing systems.

Staying with Canada, the *Small Commercial Vessel Safety Guide* (Transport Canada, 2017) illustrates the difference between private and commercial vessel safety, the latter for owners and operators of small commercial vessels because they are responsible, by law, for knowing, controlling and defending against the risks related to their vessel and its use. One of the most important responsibilities in tourism is the pre-departure passenger briefings. *The Guide* (para. 1–9) notes:

> Holding safety briefings before the voyage begins—similar to those given on an aircraft—is a legal requirement. Show and tell your passengers how to react in an emergency. Give the briefing in English, French or both, as needed.
>
> You must tell passengers:
>
> - where to find lifejackets closest to their position on the boat, including children's lifejackets
> - how to properly put on, secure, and, if you have inflatable and hybrid lifejackets, how to operate, each type of lifejacket onboard
> - not to put lifejackets on until they are outside the cabins and out from under canopies
> - where the liferafts are, if you have any, and where they are to gather to get onboard the liferaft (muster stations); and
> - how to reduce the effect of their movement on vessel stability and how to avoid potential hazards, such as ropes and docking lines.
>
> Whether you talk, distribute handouts with pictograms, use a recording or show a video to give the briefing, you must show your passengers how to put on each type of lifejacket onboard.
>
> Keep your passengers safe by keeping them informed.

The critical role of passenger briefings in tourism, especially for international tourists who may not speak or understand the local language, has been highlighted often in recent years (Maritime New Zealand, 2008; Wilks, 2008; Wilks et al., 2020; Workplace Health and Safety Queensland, 2017). There are now some excellent resources available to assist tourism operators. For example, the Australian Maritime Safety Authority (2020) has recently published an updated *Guidelines for a Safety Management System* which includes a very detailed passenger safety briefing form using a whale-watching eco-tourism vessel as the example template. The safety briefing emphasises the critical importance of crew training, practice drills and practical demonstrations for passengers.

Reviews of recreational boating accidents show a consistent pattern of contributing factors, including:

> Failure to wear […] a lifejacket
> Failure to take adequate safety precautions, such as proper lookouts and excessive speed
> Poor or unexpected weather conditions
> Inadequate maintenance of equipment
> Inexperience with equipment, waterways and weather conditions
> Risk-taking behaviour
> Alcohol and drug consumption (Australian Water Safety Council, 2020, p. 32)

Tourist briefings that address these issues are essential for all types of boats; from the hire of sailing vessels (see Case Study 2) through to passengers on adventure jet boats (see Case Study 3).

**Case Study 2: McElwee and Anor v Ansett Transport Industries**
In the case of *McElwee and Anor v Ansett Transport Industries* a paying guest at an island resort was injured by a boom on a catamaran supplied by the resort for guests. The court held that the defendant had breached their duty of care owed to the plaintiffs as there had been insufficient instruction regarding use of the vessel, insufficient advice regarding dangers involved generally, and specifically to the conditions on the day, and that there was lack of signage as to the topography of the bay. The plaintiff was awarded damages.

Source: *McElwee and Anor v Ansett Transport Industries (Operations) Pty Ltd* (1997)

Failure to take adequate safety precautions was tragically highlighted in September 2019 when a scuba diving boat caught fire off the coast of Santa Barbara, California. A crew member and all 33 passengers sleeping below deck died. The captain was charged with 34 counts of seaman's manslaughter. A grand jury cited three federal safety violations: failure to, assign a night watch or roving patrol, to conduct sufficient crew training or to conduct adequate fire drills (BBC News, 2020).

**Case Study 3: Talwar v Ox Two Pty Ltd**
In the case of *Talwar v Ox Two Pty Ltd* (t/as Ocean Extreme) there was a successful claim for damages arising from a boating misadventure on Sydney Harbour. The plaintiff was a passenger on an adventure tour. As the vessel travelled northbound in the western channel of Sydney Harbour the person in control carried out a jump manoeuvre over a large swell of water, at speed, which resulted in the vessel landing heavily flat on the water surface. This caused the plaintiff to be thrown from her seat, in the course of which her face and head struck a metal handhold bar structure on the vessel. As a consequence, she suffered physical and psychological injuries. The plaintiff secured a finding that the defendants were negligent and received a verdict and judgment in the sum of $435,630 plus costs. An interesting aside was the evidence presented by the plaintiff's General Practitioner, who in his notes commented about the accident—"no seat belts, no life jackets, no instructions as to what to do in an accident".

Source: *Talwar v Ox Two Pty Ltd (t/as Ocean Extreme)* (2017)

Recalling the earlier observation that safety at sea is the direct responsibility of maritime safety authorities rather than tourism bodies or promoters per se (Wilks

et al., 2020) the Australian Water Safety Council (2020) recommendations around legislation and enforcement of lifejacket use, drink and drug driving of vessels and comprehensive safety campaigns to promote safe behaviours are pertinent to all coastal and marine tourism activities.

## Scuba Diving and Snorkelling

Scuba diving is one of the world's most popular adventure tourism activities, involving the voluntary immersion of a person in salt or fresh water. The acronym SCUBA stands for Self Contained Underwater Breathing Apparatus and refers to the fact that a diver has an independent source of air while underwater (De Nardi & Wilks, 2008b). Many people only dive on their vacations (Coghlan & Prideaux, 2008; Wilks & Atherton, 1994), with large numbers taking an "introductory" or resort scuba dive that does not require certification but provides a closely supervised "one-off" experience (Fig. 5).

Asked what they most enjoyed about their introductory dive on the Great Barrier Reef, first time divers in one study mentioned enjoying seeing fish and coral close up, and were pleased with the colour and beauty underwater (Wilks & Beecham, 1992). Many divers replied that they also enjoyed the excitement and adventure of their first scuba experience. For some, especially males, there was a sense of achievement in taking the plunge. For others the dive was enjoyed because it was relaxing and peaceful. Feeling weightless and free was considered a unique experience. These benefits align very positively with new research interest in the promotion of health and wellbeing through exposure to blue spaces (Grellier et al., 2017).

Client safety has always been a key concern for the dive industry, recognising that this is an equipment intensive leisure activity that requires a basic level of fitness to enjoy the underwater experience. There is also a growing appreciation that many dive customers may have pre-existing health conditions that need to be assessed before they go underwater. The Australian Water Safety Council (2020) has recently stressed this point, including diving and snorkelling as a national focus for water safety and identifying the following risk factors:

- Poor medical fitness, especially age-related cardiac issues (often undiagnosed)
- Poor planning and failure to take adequate safety precautions
- Inexperience and inadequate skills
- Equipment inadequacies
- Hypoxic blackout from extended breath-holding
- Anxiety

Medical fitness for diving has been addressed in recent times through standard requirements to complete a medical screening questionnaire that asks candidates "Have you suffered from, or do you now suffer from, any of the following" and a list that includes: asthma or wheezing; fainting, seizures or blackouts; chronic sinus conditions; chest surgery; epilepsy; diabetes mellitus (sugar diabetes); heart disease

**Fig. 5** Introductory diving provides a closely supervised underwater experience. (Image courtesy of Kyrra Wilks)

of any kind; collapsed lung (pneumothorax) and ear surgery (PADI, 2013). High blood pressure, alcohol use in the previous 8 h and pregnancy are also on the list. If the answer is *yes* to any of the conditions then the diving instructor seeks medical advice and the candidate is usually referred to a doctor for a dive medical examination to assess their fitness or suitability for diving (Wilks, 2018). There are also medical declarations that operators can use for snorkelling (Workplace Health and Safety Queensland, 2016) with additional safety information in 15 languages.

Looking at the other risk factors mentioned above, especially poor planning and inexperience, an early observational study of 192 certified tourist divers by Wilks and Christie (1992) found the most common problems in the pre-dive preparation were failure to complete a "buddy" or pre-dive safety check (BCD/**B**uoyancy; **W**eight; **R**eleases; **A**ir; **F**inal Check), lack of buddy assistance and faulty equipment assembly. Traditionally, new divers learn a mnemonic device such as "**B**egin **w**ith **R**eview **a**nd **F**riend" to easily remember the steps in a buddy check (PADI, 2021). Unfortunately, safety checks are often forgotten in the excitement of getting ready to enter the water.

This fact was evidenced in a recent study by Ranapurwala et al. (2017) that found an overall incidence of major and minor mishaps was 11.2 and 18.2 per 100 dives, respectively in a sample of 426 divers. Major mishaps included rapid ascents and lost buddy contact, while minor mishaps included changed buoyancy due to dive suit, equalisation problems and mask flooding/dislodgment/panic. The study also compared mishaps according to whether divers used written pre-dive checklists,

memorised checklists or used nothing. The conclusion was that written checklists appear to be more effective in preventing mishaps.

As with lifesavers and lifeguards on the beach, the importance of direct supervision and support for tourist divers has been highlighted in the last 20 years (Lucrezi et al., 2018), with many jurisdictions now having codes of practice and regulations in place to guide operators in their duty of care responsibilities (Workplace Health and Safety Queensland, 2018).

## Jet Skis

Motorised personal watercraft (PWC) or jet skis are very popular in outdoor recreation and as an adventurous activity in many coastal tourism destinations. They provide thrills riding the waves and an exciting adrenaline rush moving at high speeds across the water. Unfortunately, the number of accidents related to jet skis continues to rise and the Australian Water Safety Council (2020) has included them as a national focus for water safety in the boating and watercraft area. In 2019, the United States Coast Guard counted 660 personal watercraft accidents, involving 46 deaths (24 drowning, 22 other deaths) and a further 614 injuries. According to the Coast Guard, the primary contributing factors in personal watercraft accidents, in order, were: operator inexperience, excessive speed, improper lookout, operator inattention, and navigation rules violation (see Fig. 6). Interestingly, alcohol ranked a much lower (sixth place) in total US personal watercraft accidents, though it was the main contributing factor to fatal boating accidents across all vessel types.

This pattern of operator inexperience, inattention and improper lookout has previously been noted for tourists hiring jet skis (Wilks, 2010, 2012) and is reflected in Table 3 which summarises recent media reports of tourist jet ski accidents where loss of control and collisions between jet skis are highlighted.

In a review of 127 inpatients with orthopaedic injuries associated with jet skis Donnally et al. (2018) noted that PWC account for a disproportionate amount of water-based injuries and that current literature suggests those with less PWC experience are more at risk for injury. They observed that riding PWC is especially popular among tourists and as a result numerous inexperienced drivers will take to the crowded waters in these high powered aquatic vehicles. Industry comments suggest that the relaxation of COVID-19 restrictions is already resulting in crowding and jet ski safety issues (Gold & Norman, 2020).

In the Donnally et al. (2018) study the majority of PWC injuries resulted in extremity fractures, with the most common cause being direct collision. In another review Branche et al. (1997) found that in PWC injuries severe enough to require hospitalisation, 33% were due to direct collisions. Of the collision cases 75% were reported to have occurred between PWC.

At many tourism destinations there is no requirement for a tourist to have a licence or any prior experience before renting a jet ski for the first time. From a regulatory standpoint, Whitfield and Roche (2007) point out that overall

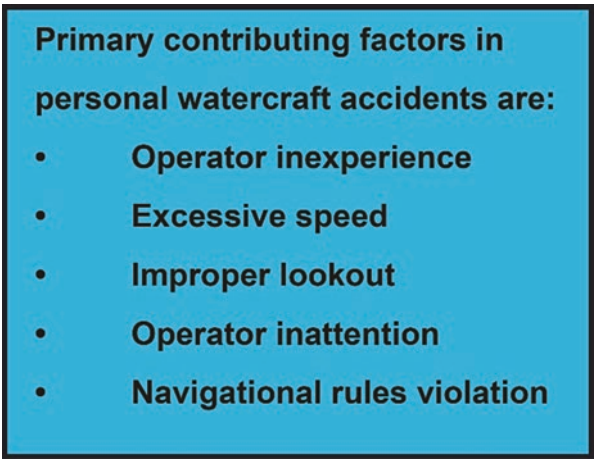


**Fig. 6** Primary contributing factors in PWC accidents. (Source: U.S. Coast Guard, 2019)

responsibility for managing coastal areas often lies with the Local or Harbour Authority, which means there are variations in approach, resource availability and success in relation to PWC management.

There seems to be an increasing willingness for tourists injured in jet ski accidents to take legal action against hire operators (Kelleher, 2012; Lean, 2019; Maldives Independent, 2018) and for local law enforcement to hold tourists responsible for reckless driving (The Nation Thailand, 2019; Sakoot, 2017). As a popular tourist activity in coastal and marine settings, jet ski safety must be assigned a high priority, while giving attention to detailed briefings and the opportunity for customers to practice under supervision, and then demonstrate their competency, before heading out independently (Wilks, 2010, 2012).

## Fishing

The Australian Water Safety Council (2020, p. 44) has identified fishing and rock fishing as a national water safety priority area, noting that:

> Despite the benefits, fishing can also be very dangerous. In fact, rock fishing alone has been dubbed Australia's most dangerous sport and is responsible for drowning deaths every year. Many boating- or watercraft-related drowning deaths occur during fishing trips. The range of recreational fishing activities highlights a number of water safety challenges and the need for diverse, multi-faceted and targeted approaches to ensure safe fishing practice.

Among the risk factors for fishing are:

- Failure to wear a lifejacket
- Fishing alone
- Failure to take adequate safety precautions and equipment

**Table 3** Recent media reports of tourist jet ski accidents

| Date | Location | News heading | Incident details reported |
|---|---|---|---|
| 5 October 2020 | Sand Hollow State Park, Utah, USA | UPDATED: 11-year-old dies from injuries following watercraft collision at Sand Hollow. | Officials said three people, a man and two boys, were injured when two personal watercraft collided. An 11-year old boy later died of his injuries. The trio was part of a large family group that had travelled up from Arizona on vacation. The watercraft were rented. Source: Richards (2020). |
| 14 August 2020 | off La Carihuela Beach, Torremolinos, Spain | Dutch tourist, 32, dies in jet ski accident in Torremolinos | Apparently the young man lost control of the jet ski and was thrown for several metres, hitting the back of the jet ski as he fell. The Yamaha vehicle had been rented from a firm that also offered nautical training. Source: Torres and Cano (2020). |
| 18 August 2019 | Super Paradise Beach on Mykonos Island, Greece | Young Italian man tragically dies after jet ski overturns in Mykonos | A 21-year-old Italian man has tragically died after the jet ski he was riding overturned at Super Paradise Beach on Mykonos Island. The tourist was on holidays with his girlfriend when the couple decided to hire a jet ski for the day to ride around the Cycladic island. According to reports, the young man was riding the watercraft with his partner holding on behind him when the jet ski overturned. The pair both fell off and attempted to swim to safety but unfortunately the 21-year-old drowned as he tried to make it back to shore. Source: Greek City Times (2019) |
| 28 January 2019 | Off Kata Noi Beach, Phuket, Thailand | Russian tourist injured in Kata jet ski crash | A Russian woman was injured and taken to Chalong Hospital this afternoon after she and her friend crashed their rented jet skis into each other at Kata Noi Beach. Source: Thongtub (2019). |
| 11 March 2018 | Mission Bay, San Diego | Tourists hospitalised after jet ski crash | Two tourists were hospitalised after crashing their rented jet skis in Mission Bay on Sunday. Four people had been riding two jet skis when they collided at a high rate of speed. Two of the riders, who were visiting from Japan, suffered leg injuries. Source: Fox 5 Digital Team (2018) |

(continued)

**Table 3** (continued)

| Date | Location | News heading | Incident details reported |
|---|---|---|---|
| 11 January 2018 | Off Tritrang Beach, Patong, Thailand | Australian tourist suffers broken leg in Patong jet-ski collision | An Australian woman on holiday with her family in Phuket suffered a broken leg in a jet-ski collision off Tritrang Beach, south of Patong. The accident involved two jet-skis colliding into each other, mid-afternoon. The other two people injured were both men. One had a sore neck, the other suffered chest pains. Source: Thongtub (2018). |
| 27 June 2017 | Ibiza, Spain | Stranded Brit tourist with broken leg winched to safety after horror jet ski accident in Ibiza | A British jet skier who broke his leg was winched to safety by helicopter in a dramatic rescue after he became trapped in a small cove in Ibiza. The Spanish Coastguard helicopter was called out to rescue the 50-year-old after receiving reports a man had lost control of his jet ski near S'Estanyol close to the village of Jesus. Source: Couzens (2017) |
| 5 February 2017 | Off Kata Beach, Phuket, Thailand | Australian tourist dies in jet ski crash with husband | An Australian jet skier died after a high-speed collision with another jet ski driven by her husband off Kata beach on this resort island. Source: Chuenniran (2017). |
| 31 December 2016 | Rainbow Beach, Queensland, Australia | German tourist injured in jet ski accident | The 47 year old male sustained a suspected broken leg after he was knocked off his jet ski by a wave in the surf off Rainbow Beach. Source: RACQ Life Flight Rescue (2016). |
| 23 September 2016 | Cairns, Australia | Japanese woman dies in Cairns jet ski crash | A dream Cairns holiday turned to tragedy when a Japanese tourist was killed after crashing a jet-ski into a packed tourist boat. The 27-year-old woman and her husband were taking part in a popular jet-ski tour yesterday morning when she is believed to have lost control and hit the side of the Sunlover Reef Cruises vessel just after 9 am. Source: Mason (2016). |

- Poor or unexpected weather conditions, including poor visibility
- Inexperience and poor understanding of hazards
- Unfamiliar environments
- Risk-taking behaviour
- Alcohol and drug consumption

In 28% of the drowning deaths with fishing there was a pre-existing medical condition (Australian Water Safety Council, 2020). Borch et al. (2008) observe that

tourism fishing is largely unstudied both from a recreational fishing research perspective and from a tourism research perspective. Where tourism fishing is discussed, narratives tend to focus on the potential economic benefits to a destination (e.g., Gomei & Bellia, 2019; González & Antelo, 2020), while fishing injuries in the literature are mostly concerned with commercial fisheries in the context of workplace or occupational hazards (e.g., *Maritime Injury Guide*, 2019). This is an area of tourism safety that requires further research, educational partnerships with maritime authorities and legislative enforcement of safety standards.

## Evolution of Coastal and Marine Tourism

In 2014 the European Commission outlined a strategy for coastal and marine tourism recognising that changing demand requires attractive and sustainable products that provide unique and customised experiences. They noted the growing public interest in water-based sports, such as recreational fishing, boating and diving, highlighting the importance of quality service, and the promotion of skills and innovation (European Commission, 2014). The Centre for the Promotion of Imports from Developing Countries (CBI, 2020) has more recently expressed a similar view. Post-COVID-19 these factors are especially relevant as the tourism industry works to regain the trust of customers through safety as a core value (WTTC, 2020).

Key to regaining customer trust is the guarantee of safety in marine environments (Wilks, 2021) and as pointed out in this chapter best practice guidelines and checklists are already available (QTIC, 2018). In particular, providing visitor briefings, having qualified instructors and guides, communicating about hazards, running regular practice drills, providing supervision and surveillance, and ensuring in advance the capacity for emergency response are critically important. These actions are not just required for lifeguards or lifesavers but also for staff where there are commercial duties of care such as in hotels and resorts (Wilks, 2018). Again, these responsibilities for operators are well-documented and often enshrined in workplace health and safety legislation (State of Queensland, 2019).

The impact of COVID-19 on surf-related drowning in the Great Lakes region of North America was recently examined by Houser and Vlodarchyk (2021). They found that the pandemic changed the number and behaviour of beach users, with an increase in drowning associated with the reopening phases. Specifically, they argue that the increase in drowning is due to a combination of reduced local lifeguard resources, cancelled swimming lessons, large beach crowds, warm weather, high-water levels and self-isolation fatigue. With social distancing requirements and fewer lifesavers available on beaches (Kilgannon, 2020), safety managers have had to rely more on technology to assist with water safety.

The use of drones is becoming more common in beach management, especially through their use of mobile cameras to monitor social distancing and carrying

capacity on beaches during COVID-19 (Kane et al., 2021; Szuster et al., 2021). Drones are also being used in beach rescues. For example, the Little Ripper Lifesaver (Ripper Corporation, 2021) provides broad coastal surveillance, spotting sharks in real-time through AI systems, and dropping rescue pods down to swimmers struggling in the water. The pods include a flotation device that can support up to four people, an automatic light, high-visibility retro-reflective tape, a sea anchor, and a shark shield. Of course, technology does not replace lifeguards, who in their traditional roles remain the most effective means to reduce injuries on a beach (Abraldes & Pérez-Gómez, 2009) and are currently being trained to operate the drones (Fig. 7).

Del-Real and Díaz-Fernández (2021) surveyed beach users to measure public acceptance of rescue drones and found that there was moderate acceptance of their use. Participants from beaches without lifeguard services were more likely to accept the use of rescue drones. The drones appear to be particularly effective as a platform for spotting sharks (Butcher et al., 2019). In Israel, AI and image recognition technology are being piloted to provide lifeguards with a current picture of swimmer whereabouts and real-time data on changing winds, waves and hazards (Leichman, 2020). The technology identifies real-time hazards for beach users, crowd management solutions, updates on weather conditions and estimates how many lifeguards are needed on a given day.


**Fig. 7** Drone surveillance at the beach. (Image courtesy of Paul Hardy, Australian UAV Service (Surf Life Saving New South Wales), used with permission)

## WHAT'S PAR for the Course?

Coastal and marine tourism is expected to further increase in popularity following COVID-19 as a response to a greater appreciation of nature and with travellers increasingly looking for unique experiences which they can enjoy in a sustainable manner. In addition to COVID-safe measures to protect health there will be an increased reliance on public services such as lifeguards to keep visitors safe. For commercial operators it is important to remember their legal duties of care to customers, many of whom will be inexperienced and need assistance in and around water. Operators and destination managers will need to *Pivot, Adapt* and *Recalibrate* in the delivery of their services for the new normal, but at the same time draw on the considerable resources already available to them through codes of practice and industry standards. The use of technology such as drones in beach safety, for both surveillance and rescue, is an example of innovation increasingly used in the new normal.

## Appendix: Best Practice Guidelines

### *Guidelines Relevant to All Aquatic Environments*

| WATER SAFETY | |
|---|---|
| **1.** | Conduct a safety brief with all participants before engaging visitors in aquatic activities. |
| **2.** | Advise visitors that a great way to keep safe at Queensland beaches is to remember the F.L.A.G.S. message<br>**F**—Find the flags and swim between them<br>**L**—Look at and read all safety signage<br>**A**—Ask a lifesaver or lifeguard for some good advice<br>**G**—Get a friend or travel companion to swim with you<br>**S**—Stick your hand up if you need help |
| **3.** | Advise visitors to swim between the red and yellow flags at patrolled beaches and waterways. |
| **4.** | When swimming, snorkelling or diving, teach the guests to make a reference point on shore to avoid drifting outside of supervised areas. |
| **5.** | Make visitors aware of rips and currents. Reinforce that swimming between the flags is the best way to avoid getting into trouble. |
| **6.** | IF IN DOUBT, DON'T GO OUT!<br>Advise guests if you think conditions are too rough for them to enter the water. The same rule applies if you are taking guests on an activity and you think it's too rough for them. It's not worth the risk. If possible, let them know what other great things they can do in Queensland!<br>A good rule of thumb for visitors is, if their feet can't touch the bottom—they are out too far and should make their way back to shore immediately. |
| **7.** | Never enter the ocean at night and only swim in well-lit pools, lagoons, and the like. |
| **8.** | When visiting beaches, lakes, rivers, estuaries and canals, advise guests not to swim at dusk or dawn as this is when dangerous marine creatures are most active. |

(continued)

| | |
|---|---|
| **9.** | Advise visitors that it is best to swim with light clothing on as baggy clothing makes them heavier in the water and it's more difficult for them to swim.<br>Operators need to be aware that this is only a recommendation. Some cultures do not allow members of their community to wear clothing that is considered revealing.<br>Please advise visitors wearing baggy and light clothing to bathe in knee deep water only. |
| **10.** | Advise guests that they should not swim if they have any medical condition that could affect or impede their abilities. |
| **11.** | Ensure guests are aware that when swimming in rivers and lakes they may experience dangerous cool water temperatures and should always be alert to the dangers of flash flooding. |
| **12.** | Regularly monitor weather and tide conditions (twice daily—morning and afternoon) so you can advise guests on where the most enjoyable and safe conditions are.<br>Guests need to be made aware that conditions can change quickly. What might be safe swimming at one time could change to unsafe in a short period of time. |
| **13.** | Advise guests on how to avoid marine creatures such as stingers, sharks, crocodiles, sea snakes, and stingrays as outlined in the SLSQ Dangerous Marine Creatures (pages 13–22) and Marine Stinger (pages 23–31) fact sheets |
| **14.** | Advise all guests to take notice of and understand safety warning signs and explain the meaning of the signs to visitors.<br>Remember! Safety signs are great but they do not replace the need for verbal instruction. Be sure to offer written and verbal communication about local dangers wherever possible. |
| **15.** | Visitors should always enter the water slowly, feet first and never dive in when the depth is not known |
| **16.** | Reduce the risk of spinal injury. Prior to allowing guests to enter an aquatic environment ensure staff check the area for dangerous objects. Advise visitors of the risk of spinal injury by erecting notices or signs. Notices and signs should be explanatory—for example, do not just say DANGER, say SUBMERGED ROCKS, LOGS, or SHALLOW WATER |
| **17.** | Ensure all equipment used is checked and maintained regularly. |
| **18.** | Minimise the risk of infection from animal faeces. Make guests aware that the water may not be drinkable because of animal faeces and promote the drinking of bottled water. |
| **19.** | Ensure multilingual water safety information is available for your guests. Details on Surf Life Saving Queensland's range of multilingual Fact Sheets and Beachsafe smartphone app can be found in this resource. |
| **20.** | Develop a risk management plan whereby risks are identified and assessed; and control measures are developed, implemented and monitored for effectiveness.<br>Ensure you regularly assess all possible risks in an area so guests receive the most up-to-date information. |
| **21.** | If you have activities that operate in or near rivers, construct a Safety Line downstream consisting of heavy duty rope and a floatation device. |
| SUPERVISION | |
| **22.** | Where possible, provide trained lifeguards or appropriately qualified personnel around water areas as required and encourage visitors not to swim alone |
| **23.** | Ensure you are aware of the lifeguard/lifesaver beach patrolling hours and advise guests not to swim outside these hours |
| **24.** | Advise guests to follow all instructions given by lifesavers, lifeguards, and trained personnel. |
| **25.** | When visiting the beach, encourage your guests to obtain additional information about the local swimming conditions from the qualified personnel on duty. |
| **26.** | Children should be supervised at all times. |

Source: QTIC (2018). *Water safety handbook: Best practice guidelines for tourism operators* (8th ed., pp. 4–5). Reproduced with permission

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# Part V
# Government and Industry Activity

# Government Travel Advisories


**David Beirman**

**Abstract** Government travel advisories are important guides for citizens on risks for travellers when visiting international destinations. In essence, they are an expression of a country's duty of care to its citizens when travelling internationally. The foreign ministries of most tourism generating countries issue travel advisories applicable to all countries travellers intend to visit. Until 2020, with a small number of exceptions, their wording was in the form of an advisory. This enabled travellers to exercise their discretion to choose whether they would act on the advice. The outbreak of the COVID-19 pandemic during 2020 heralded a major change in the approach of many governments to travel advisories.

**Keywords** Government travel advisories · Travel bans · Travel industry-government collaboration · COVID-19

## Introduction

Traditionally, the primary role and function of government travel advisories has been the provision of guidance to citizens of a tourism generating country on the risks, safety, health and security threats which apply to an international destination. In most cases, travel advisories are issued by the foreign ministry of a tourism generating country and the security assessments apply to their citizens. Travel advisories to a specific destination may be very different when issued by the governments of Japan, Canada, the USA, Australia, Israel or South Africa. At times, the state of bilateral diplomatic relations between tourism generating

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_18

countries and destination countries may influence the level of threat which applies. To use a simple example, political tensions, which existed between the USA and Mexico during the Trump administration (2017–2020) led the U.S. State Department to issue a far more cautionary travel advisory about Mexico for US citizens than its northern neighbour Canada which had no significant dispute with Mexico.

In comparison with other sources of travel safety and security advice on specific destinations, such as guide books, online destination briefings and destination information provided by a destination marketing organisation, government travel advisories are perceived as highly credible. This is largely due to the absence of a commercial motive and the fulfilment of a government's primary duty of care to its citizens. Generally, (but not always) travel advice issued by governments is free of political or ideological partisanship which may exist in other areas of government activity, reflecting the role of travel advisories as a core duty of care issue for all governments. In developing content, the general understanding is that a government travel advisory acts in the interest of citizens' safety. Many citizens, who may treat government pronouncements on a range of topics with a degree of scepticism, tend to give a high degree of credence to travel advisories. In democratic countries, irrespective of the political party or coalition in power, government travel advisories tend to be administered in a consistent fashion (Beirman, 2006).

Until the COVID-19 pandemic spread globally during 2020, government travel advisories were exactly that, *advisories*. There was no compulsion for the traveller to observe the advisory, although countries with a *do not travel* advisory came with limited travel options and insurance cover would be a challenge. As an example, *Travel Advisory Alert Levels* presents the four levels of advice provided by the U.S. Department of State (U.S. Department of State—Bureau of Consular Affairs, 2020). The 2020 Coronavirus outbreak represents one of the few times in recent history in which a significant number of governments have banned outbound international travel on medical grounds.

**U.S. Department of State 2020's Travel Advisory Alert Levels Levels 1–4**

The Travel Advisory appears at the top of each country page, with a color corresponding to each level:


**Level 1—Exercise Normal Precautions:**

This is the lowest advisory level for safety and security risk. There is some risk in any international travel. Conditions in other countries may differ from those in the United States and may change at any time.

**Level 2—Exercise Increased Caution:**

Be aware of heightened risks to safety and security. The Department of State provides additional advice for travelers in these areas in the Travel Advisory. Conditions in any country may change at any time.

**Level 3—Reconsider Travel:**

Avoid travel due to serious risks to safety and security. The Department of State provides additional advice for travelers in these areas in the Travel Advisory. Conditions in any country may change at any time.

**Level 4—Do Not Travel:**

This is the highest advisory level due to greater likelihood of life-threatening risks. During an emergency, the U.S. government may have very limited ability to provide assistance. The Department of State advises that U.S. citizens not travel to the country or to leave as soon as it is safe to do so.

The Department of State provides additional advice for travelers in these areas in the Travel Advisory. Conditions in any country may change at any time.

**Varying Levels**

We issue an overall Travel Advisory level for a country but levels of advice may vary for specific locations or areas within a country.

Source: Graphic and text: U.S. Department of State—Bureau of Consular Affairs (2020, paras. 3–8)

This traditional approach changed during 2020 as foreign ministries of a number of countries imposed *travel bans* either on selected countries, as occurred in the United States, or more broadly on all international travel, which applied to China and Australia (amongst others) (Fig. 1). These bans, based on national health assessments, had never previously applied to international outbound travel. It is notable that there have been many pandemics since 2000. Prior to 2020, with the exception of a ban imposed by several governments between 2014 and 2016 applying to four West African countries with high levels of Ebola (Centers for Disease Control and Prevention [CDC], 2019) travel bans only applied to travel to countries with which the tourism generating country was in a state of war, non-recognition or had severed diplomatic relations with another country (Avraham & Ketter, 2016).

Unlike Ebola, COVID-19 was a global pandemic with a presence in over 200 countries. On 11 March 2020, the World Health Organization (WHO) officially designated COVID-19 as a pandemic (WHO, 2020a) even though it was present in many countries well before that date.


**Fig. 1** Australian Government's COVID-19 international travel bans during 2020. (Source: Department of Foreign Affairs and Trade (DFAT) (2020a), used with permission)

By 27 February 2021 just over 114 million cases of COVID-19 had been recorded globally, causing 2,437,000 deaths. The USA with 29 million cases and 525,000 deaths leads the tally of more than 20 countries with over 1 million cases (Worldometer, 2021). Many of the countries with the highest rates of COVID-19, including the USA, UK, France, Spain, Italy and Germany are both major tourism generating countries and among the world's most popular tourism destinations.

The Australian Government's COVID-19 international travel bans during 2020 applied globally from 25 March 2020, apart from individuals with government approved exemptions.

In essence, each country's primary duty of care to its citizens is to ensure their safety and security. As countries cannot accompany their citizens travelling internationally with military or police protection the travel advisory effectively becomes a form of extra-territorial security advice which fulfils that duty of care. The contents of travel advisories vary considerably from country to country. The common elements are (Beirman, 2019):

1. Security assessment which is either described by words, a numerical ranking or both. A ranking of 1. *Maintain security awareness* is a low rank suggesting that the country is safe to visit but visitors are advised to be alert to the sort of hazards they may encounter in their home country, including opportunistic criminals and scams. A high-level advisory (ranking 4), which may use the words *do not travel*, indicates that this destination is regarded as highly dangerous. Frequently, insurance providers will take their cue from a *do not travel* advisory to refuse coverage to travellers visiting this destination. This section will usually include a range of security threats of which visitors need to be aware and when possible avoid a range of dangerous situations such as participating or walking in the midst of a political demonstration.
2. Respect for and observance of the laws and the legal jurisdiction of the country visited. Many travel advisories include key laws that may be different and more stringent than those of the tourism generating country. This will frequently apply to the consumption, carrying or trafficking of alcohol and illegal drugs and in some Muslim countries the wearing of appropriately modest dress. Many advisories will include information on driving license laws and conditions.
3. Health threats and vaccination requirements to visit the country and returning home.
4. Some countries require a vaccination certificate for endemic diseases such as yellow fever, cholera and typhoid. The advisory may also recommend other non-compulsory preventative health measures.
5. Cultural, dress and behavioural mores which apply to the destination.
6. Contact points for the diplomatic representatives of the tourism generating country.
7. General advice for travellers visiting the country.
8. Advice on the consular services provided to citizens in a given country and some services not provided.

Prior to 2003 most foreign ministries, when determining the content of travel advisories applying to a given destination country employed the following primary sources:

1. The in-country diplomatic legation
2. Expatriate business people conducting business and trade in the target country
3. National military intelligence and the intelligence services of trusted allied countries
4. Selected media correspondents and editors
5. Academics deemed as experts on the country (Beirman, 2019).

There were variations on the above but until 2003 the tourism industry was largely excluded from the consultation process based on a false but pervasive perception among foreign ministry staff that tourism industry professionals lacked objectivity about countries they sold, flew or cruised to, operated tour programs within and marketed to citizens of tourism generating countries.

Prior to the widespread use of the internet and online communications in the early years of the twenty-first century, travel advisories tended to appear in bulletins prepared by the foreign ministry. Most citizens were unaware of them although travel professionals usually had access to them and communicated the relevant contents to travellers as part of the booking process. Indeed, travel agents were reliant on this information source to advise their customers and discharge their legal duty of care (Wilks et al., 2003).

The widespread employment of the internet and online communications from 2000 enabled governments to widely disseminate travel advisories to the public and all relevant stakeholders at minimal cost. Foreign ministries in many countries established websites devoted specifically to travel advisories which could be updated whenever necessary. Online travel advisories, increasingly evident from 2001, had the advantages of being less expensive to produce, easier to update and far more widely disseminated, than print versions.

## Development of a Collaborative Approach to Government Travel Advisories Between Foreign Ministries and Stakeholder Groups

### *Emphasis on the Travel Industry*

The increased dissemination and visibility of government travel advisories since 2000 has also increased critical scrutiny of their contents by various stakeholders. These critical stakeholders included tour operators, travel agents, cruise operators, destination marketing organisations and airlines which specialised in certain countries. The media, and especially travel journalists from a variety of media platforms, closely monitored government travel advisories. Insurance companies have always

monitored travel advisories because travel insurance coverage is frequently linked to travel advisories (Gurtner, 2007).

The Council of Australian Tour Operators (CATO), which is a national association of outbound wholesale tour operators, was a frequent critic of travel advisories issued by the Australian government as being unrealistically negative about certain countries and the fact that some were issued as blanket advisories on countries in which security problems were confined to a small area. Many CATO member companies were well-credentialed experts in the destinations in which they operated and believed their destination knowledge was superior to that of Australian diplomats.

Until 2003 foreign ministry officials tended to treat the opinions of the travel industry about travel advisories with polite disinterest at best and contempt at worst. The general sentiment, which the author bases on extensive discussions with Australian Department of Foreign Affairs officials and diplomats from many countries between 1994 and 2007 was that, "the travel industry doesn't care about tourists' safety and was only interested in making money from people travelling to destinations, so they just want nice things written about them in travel advisories". The standard retort to this illogical but frequently expressed opinion was "dead and injured tourists are very bad for business and worse still they don't re-book".

The 12 October 2002 terrorist bombings of the Sari Club and Paddy's Bar in Denpasar, Bali led to a significant change of attitude on the part of DFAT toward engagement with the travel industry in Australia (Kemish & Roach, 2006). The terrorist attack, known as the Bali Bombing, was one of the deadliest terrorist attacks targeting tourists in recent history. The coordinated bombing of the two Bali nightclubs by Islamist extremists killed 202 people and wounded over 400 people (mainly tourists) from 27 countries. The attack killed 88 Australians and wounded over 200, making it the most severe mass-casualty terrorist attack against Australians ever. For Australians, the Bali bombing essentially became Australia's 9/11 (Gurtner, 2007).

As Kemish and Roach (2006), two senior DFAT officials wrote, the Bali bombing triggered a massive review of a whole-of-government response to terrorist threats against Australians abroad. Traditionally, in the event of a crisis situation involving Australians in a foreign country, DFAT, through its diplomatic legation in the country concerned, would lead the response. The review changed the focus to an emergency collaboration involving a number of key government ministries (the military, police, social services, intelligence and Emergency Management Australia) ready to respond to a range of crisis situations (natural disaster, pandemic, terrorist attack, political unrest) and able to coordinate the evacuation, medical treatment or securing of Australians who may have been victims of the particular crisis. DFAT's crisis unit, which was established after the Bali bombing, has since been involved in assisting Australians affected by a variety of crisis situations, including: the Indian Ocean tsunami (2004), the Egyptian uprising (2011), the Christchurch earthquake (2011), the Japan earthquake tsunami (2011) and COVID-19 (2020).

Following the Bali bombing DFAT reached out to the leaders of major associations involved in outbound travel from Australia, establishing the Consular Consulting Group, a stakeholder group which has advised DFAT on travel

advisories and tourism safety security issues since 2003 and was the first such advisory body in the world. There were representatives from Qantas, ANTOR (Association of National Tourist Office Representatives), EMTA (Eastern Mediterranean Tourism Association), CATO (Council of Australian Tour Operators), ABTA (Australian Business Travel Association) and QBE Insurance (at the time the dominant underwriter of travel insurance policies in Australia). These associations would form the nucleus of what later became the Smartraveller Advisory Group and develop the *Charter for Safe Travel* (Fig. 2) which involved commitments from the travel industry to educate themselves about government travel advisories and disseminate them to their clients. It also advocated for the purchase of travel insurance. The Charter obligated DFAT to confer and consult with the travel industry on an ongoing basis and to establish a relationship based on cooperation and mutual support. The agreement between government and industry coincided with the official release of DFAT's *Smartraveller* website (www.smartraveller.gov.au).

The collaboration between the travel industry and DFAT has, over time, led to many significant changes in Australian government travel advisories, including: simplification and clarification of the security threat levels in travel advisories, to four clear categories of risk, and enhanced geographical specificity of danger or threat levels in destination countries.

DFAT's relationship with the outbound Australian travel industry leadership represents a synthesis of stakeholder theory and collaborative theory in dealing with tourism-related crises. That is, the inclusion of multiple stakeholders and collaborative communication at all stages (Pennington-Gray et al. 2015). As Drucker (2007) correctly points out, the travel industry is highly fragmented into industry sectors. Travel advisories, tourism safety and collaborative coordination by a non-travel industry neutral body (DFAT) have fostered extensive inter-sectoral collaboration (Dwyer et al., 2009; Jamal & Getz, 1995; Selin, 1994). As Jensen (2002) observes, advisories and tourism safety represent a single value objective function as a basis for collaboration.

DFAT has come to rely on the support of advisory group associations when Australians have been at the epicentre of crisis events. In 2011, a year in which there was a political uprising in Egypt, an earthquake in Christchurch and an earthquake/tsunami in Japan, DFAT was able to seek and gain support from airlines, tour operators, cruise companies, insurance companies and travel agents to assist with emergency evacuations of Australian citizens, identifying victims, alter and ease cancellations, and change policies and insurance conditions.

The Australian travel industry has fulfilled its commitment to disseminate information on government travel advisories across all its sectors. DFAT's own research has demonstrated that the majority of Australian international travellers consult DFAT's Smartraveller website before and during their travel (Quantum Market Research, 2019). Technological enhancements in recent years, including social media sites and apps, have been employed by DFAT to further communicate their travel safety and travel advisory messages (DFAT, 2020b). DFAT has actively engaged with travellers and travel industry professionals at consumer holiday and travel expos, major travel industry seminars and events and conferences related to

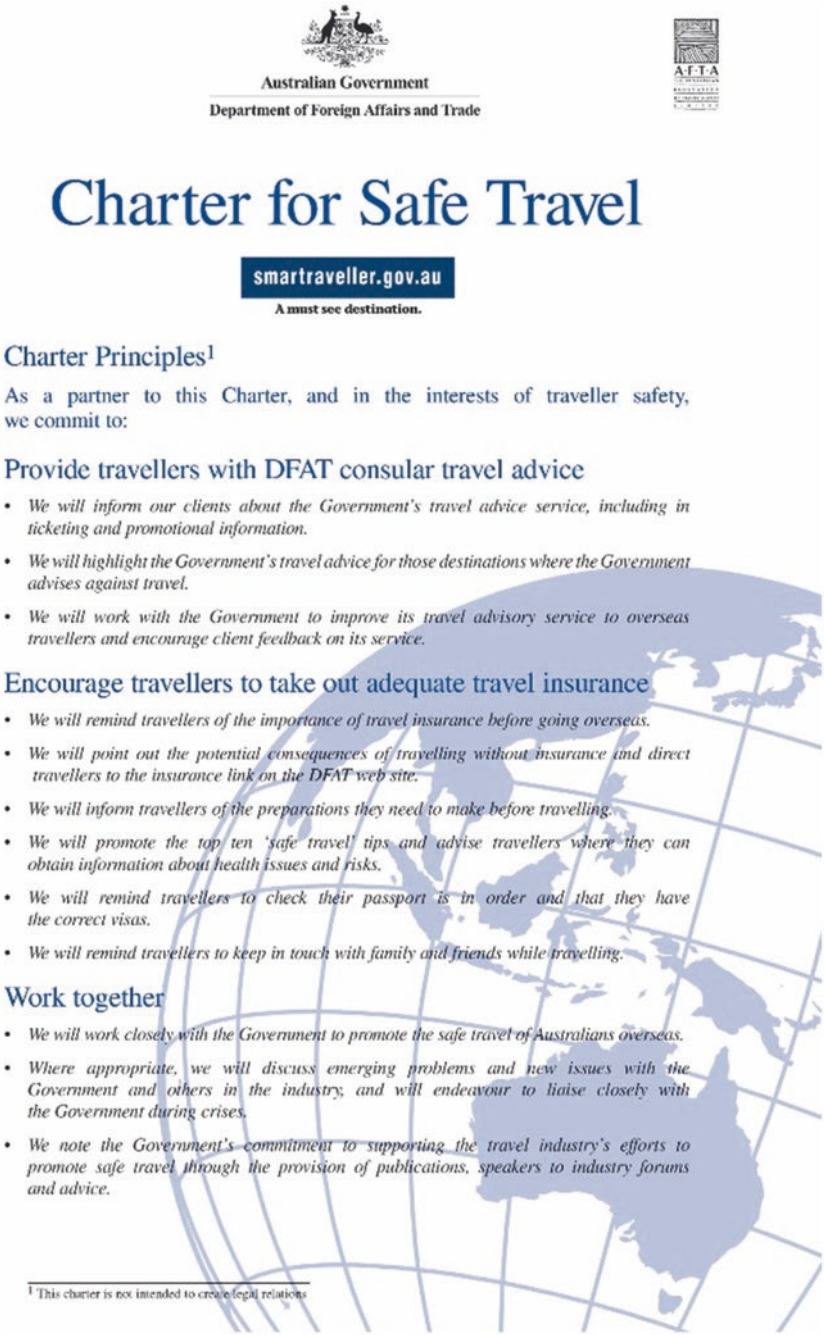


**Fig. 2** *The Charter for Safe Travel 2003.* The world's first agreement between a foreign ministry and travel industry leaders. (Source: DFAT (2003, cited in Beirman 2019))

tourism safety and security (DFAT, 2020b). These have included industry training events run by major travel agency groups, including Flight Centre and Hello World and the Australian capital city consumer travel expos run by Expertise Events. However, the one area in which DFAT consistently rejected active travel industry involvement was in the determination of security advice. As most security assessments are derived from military and civil intelligence sources, DFAT considered the travel industry lacked the specialist expertise to be a major source. Informally, by 2019 the Consular Consulting Group was regarded by DFAT as a legitimate source of information largely due to the fact that its stakeholder members included a number of government departments including Austrade, the Australian Passport Office and Customs.

Between 2003 and 2019, DFAT was granted a significant annual budget to promote travel advisories and its call for insurance on all traditional and social media platforms. DFAT regularly previewed its media campaigns to the consultative group prior to release. Irrespective of which political party or coalition was in power in Australia the relationship was maintained and solidified. The DFAT promotional campaigns over this period focussed on communicating three major messages, which were: purchase travel insurance when travelling, check the Smartraveller website when choosing a destination, and register your trip with DFAT. DFAT publishes an annual report, *The Consular State of Play*, which details the promotional activities undertaken in any given year (e.g., DFAT, 2020b). The initial two messages were well-received and very successful but many travellers, especially backpackers and independent travellers, rejected DFAT's original registration system which required travellers to provide a detailed itinerary. This was considered too intrusive for most Australians, and for independent travellers who don't plan their day to day travel the registration system was simply impractical. In the age of GPS information on smartphones, a mobile phone contact would have achieved the same result and by 2017 DFAT finally altered its registration to reflect that. Between 2013 and 2018, in response to a growing number of traveller requests for Australian legations to assist travellers with money, medical assistance and services beyond their brief, DFAT sought to make it clear to Australian travellers what services and support could be obtained from diplomatic legations and what was not. The tourism industry was asked and agreed to help disseminate this information. Very detailed information is now available online as the *Consular Services Charter* (DFAT, 2021).

There has been extensive research collaboration between DFAT and members of the advisory group. The Insurance Council of Australia (ICA) has partnered with DFAT to examine insurance behaviour of Australian travellers (Quantum Market Research, 2016, 2017, 2018) and Choice, the consumer advocate, has undertaken research with DFAT to ascertain the inclusions and exclusions of travel insurance policies (Choice, 2019). ICA research released in 2019 revealed that 90% of Australian international travellers had travel insurance (Quantum Market Research, 2019) and a more recent survey found that a vast majority of travellers (91%) agree they will look for insurance which covers against the disruptions of a possible pandemic in future, with the majority (77%) willing to pay a higher premium for such coverage (Quantum Market Research, 2020). From DFAT's perspective this

indicated a positive outcome of its messaging to urge Australian travellers to cover themselves with an appropriate travel insurance policy. This is a level well above the global average.

Between 2003 and 2020 there was a significant growth in the number of stakeholder associations involved in consulting DFAT on travel safety and travel advisories (Beirman, 2019). As Table 1 attests DFAT has encouraged a widened and more inclusive consultative network and while most of the member associations emphasise a connection with travel and tourism this is no longer universal. The inclusion of government departments is part of an all of government approach to tourism safety and security as outlined by Kemish and Roach (2006).

**Table 1** Changes in the stakeholder members of the original Smartraveller Advisory Group 2003 and its successor, the Consular Consulting Group as of 2020

| SCG Smartraveller Advisory Group 2003 Government and Industry members | Consular Consulting Group Government and Stakeholder members 2020 |
|---|---|
| AFTA (Australian Federation of Travel Agents) | AFTA |
| CATO (Council of Australian Tour Operators) | CATO now incorporates ANTOR |
| ANTOR (Association of National Tourist Office Representatives) | Virgin Australia |
| QANTAS Airways | QANTAS Airways |
| QBE Insurance | Insurance Council of Australia |
| ABTA (Australian Business Travel Association) | Global Business Travel Association |
| PATA (Pacific Asia Travel Association) | IATA (International Air Transport Association) |
| DFAT (Department of Foreign Affairs & Trade) | DFAT |
| EMTA (Eastern Mediterranean Tourism Association (dissolved 2012) | Private Healthcare Australia |
| | Google |
| | Lonely Planet |
| | Australian Society of Travel Writers |
| | CAUTHE (Council for Australasian Tourism and Hospitality Education) |
| | Lowy Institute for International Policy |
| | National SeniorS Travel |
| | CLIA (Cruise Lines International Association) |
| | CHOICE (consumer advocacy) |
| | Travel Doctors |
| | Australian Passport Office |
| | Austrade |
| | Australian Customs Office |
| | AQIS (Australian Quarantine and Inspection Service) |

Source: Beirman (2019) and the author as a 2020 member representing CAUTHE (Council for Australasian Tourism and Hospitality Education)

As the consultative approach between the travel industry and DFAT between 2003 and 2019 was regarded by all parties as successful, the concept spread beyond Australia. The first country outside Australia to establish a travel industry advisory body was the United Kingdom, which set up an advisory body to the Foreign and Commonwealth Office in 2004, involving the Association of British Travel Agents (ABTA) and a range of other sectoral organisations. Today this body is known as Travel Aware (UK Government, 2021).

Canada set up a similar association in 2005 but it wasn't until 2017 that the USA and New Zealand established advisory boards to the Ministry of Foreign Affairs and Trade (New Zealand) and the Department of State and Department of Commerce. In the United States the Department of Commerce established the U.S. Travel and Tourism Advisory Board in 2003 but until 2017 its role was confined to discussing either inbound tourism to the USA or domestic tourism. In 2017 its revised charter (U.S. Department of Commerce International Trade Administration, 2017) included engagement with the State Department on travel advisories and safety issues involving outbound international travel for Americans. However the advisory board remains under the jurisdiction of the Department of Commerce.

The model on which all of these advisory boards is based is the Australian model. The only five countries in the world (to date) that have established travel industry or stakeholder groups to advise foreign ministries are the members of the Five Eyes countries. The Five Eyes countries, USA, Canada, UK, Australia and New Zealand, also known as the Anglosphere countries, share English as a common dominant language. The respective foreign ministries also share ideas and DFAT has been an enthusiastic advocate of travel industry government collaboration to its Five Eyes colleagues since 2010 (P. Ganly, Head of DFAT Consular Branch, personal communication, September 12, 2011). The Five Eyes countries have tended, in recent years, to issue travel advisories on their websites which are more similar than different (Table 2).

**Table 2** Summary of travel advisories of the Five Eyes countries

| Country | No of advisory levels | Regional advice for destination countries | Call for travel insurance | COVID-19 special conditions | Interactive maps |
|---|---|---|---|---|---|
| USA | 4 | Highlighted | Yes | Country selective travel bans | Yes |
| UK | 4 | Standard | Yes | Limited global travel ban | Maps not interactive |
| Canada | 4 | Highlighted | Yes | Minimum level advisory avoid non-essential travel | Maps not interactive |
| Australia | 4 | Standard | Yes | International travel ban with limited exemptions | Maps not interactive |
| New Zealand | 4 | Highlighted | Yes | Advice to avoid all international travel but no outright ban | Maps not interactive |

US travellers, largely due to the USA being a superpower, tend to be more cautionary than those of Canada, Australia and New Zealand. Beshay's (2017) study which analysed US travel warnings to Egypt and a number of other Middle East and developing countries is one of the few studies which explored this concept and established that there was a tendency to issue cautionary travel advisories applying to those countries which had problematic relations with the USA (Beshay, 2017). These countries also share a degree of military and security intelligence between themselves (O'Neil, 2017). As is always the case with intelligence matters, the sharing is limited. The Five Eyes countries in turn share and receive intelligence from other "like-minded" countries. Of those, "like-minded countries" Japan has been actively advocating its inclusion into the Five Eyes group (Panda, 2020). The security element in travel advisories was, until the outbreak of COVID-19 in 2020, the most read and at times the most controversial element in government travel advisories. Prior to the COVID-19 outbreak most travel professionals and prospective travellers were more concerned about the risk of exposure to terrorism, political instability and crime as a major threat to tourists than they were about pandemics (Wilks et al., 2006).

Although the Five Eyes countries ultimately adopted a version of the Australian Consular Consulting Group, global tourism industry associations have expressed disappointment that more tourism generating countries have not developed their own version. The global tourism industry is strongly in favour of having a greater voice in government decisions relevant to tourism safety, especially in relation to travel advisories. Global and trans-national tourism organisations, including the United Nations World Tourism Organization (UNWTO), the World Travel & Tourism Council (WTTC) and the Pacific Asia Travel Association (PATA) have all expressed their support for the travel industry consulting with governments on travel advisories and tourism safety.

## Innovations in the Use and Presentation of Travel Advisories Pre-COVID-19

One of the most significant changes to travel advisories in recent years has been the enhancement in dissemination to the travel industry and to travellers. At the beginning of the twenty-first century dissemination of travel advisories was confined to government gazettes and a listing in a travel industry manual called TIM (*Travel Industry Manual*). By 2003 travel advisories were posted on the internet and foreign ministries, especially those from the Five Eye countries, developed easily accessible websites. The growing collaboration between foreign ministries and tourism organisations and businesses enabled travel agents, tour operators, airlines, cruise companies and national tourism offices to establish online links between their members and the relevant foreign ministry.

Since 2015 the foreign ministries of most tourism generating countries have enabled travel advisories to be integrated with social media sites including Facebook and Twitter and in Five Eye countries prospective travellers are able to add an app to their hand-held online devices (see Fig. 3). In the United States, the U.S. State Department has employed Dynamic Mapping (U.S. Department of State—Bureau of Consular Affairs, 2021) which is updated daily with the position and contact details of embassies and consulates. Travellers click on the destination and access information on fact sheets, safety and security, health, vaccinations, passport and visa, alerts—a whole description of how travel advisories assist with the health, safety and wellbeing of tourists (the three topics of this book).

In addition to those tourism associations and businesses with a direct link to government Foreign Ministries, private sector risk management companies which specialise in tourism, such as International SOS (2021) and Kenyon


**Fig. 3** Travel advisories are now delivered via a range of mobile technologies. (Source: Image courtesy of DFAT, used with permission)

(Kenyon International Emergency Services, 2021) have been active in the dissemination of travel advisories to their business travel clients. International SOS which is the world's largest travel-related risk management company, with a presence in over 50 countries, closely monitors travel advisories and other travel risk data from all over the world (International SOS, 2021). Independent websites such as Travel Pulse also maintain and publish information on travel advisories (Clarke, 2021).

## The Impact of COVID-19 on Travel Intentions of Australian Travellers

Research conducted by Quantum Market Research (2019) on behalf of DFAT and the Insurance Council of Australia prior to the COVID-19 outbreak revealed that 83% of Australian travellers were aware of DFAT's Smartraveller site (the site which hosts Australian government travel advisories) and 52% of those surveyed had visited the site. The emphasis the site placed on urging Australian travellers to take out travel insurance led to 90% of Australians travelling internationally with insurance. Interestingly, in 2019, 94% of Australians aspired to travel internationally. Prior to the COVID-19 outbreak travellers carefully considered the need to travel to a destination if the advisory was ranked at level 3 (reconsider the need to travel). The majority (62%) of respondents stated they would either cancel or delay travel to countries with a level 3 advisory.

Subsequent research conducted by Quantum Market Research in September (2020) revealed the significant impact of COVID-19. In September 2020, 41% of Australians surveyed had an imminent desire to travel and 60% expect to travel within 6 months of restrictions being lifted. There is apparent resignation that the lifting of restrictions is unlikely before late-2021 which would indicate Australians will experience over a year with negligible opportunity to travel internationally. The prospect of a quarantine period on return from an international trip is a major disincentive to international travel. Of those surveyed only 33% would accept self-paid quarantine. The majority of those surveyed, (91%) would seek insurance that covered them from the impact of a pandemic and 52% would be willing to pay a premium for such coverage.

Australian travel advisories have stated a blanket ban on international travel (with specified exemptions) which represents the ultimate disincentive to travel internationally. Awareness of government travel advisories in 2020 had dropped to 70% compared to 83% the previous year—one may be tempted to argue that absence of nuance in travel advisories during the pandemic have rendered them temporarily irrelevant. Overall the research indicated that the pandemic had led to Australians becoming far more risk-averse in their approach to international outbound travel, although a ban and the severe restrictions which apply to international travel is a more powerful disincentive than private perceptions.

## The Impact of COVID-19 on Travel Advisories and the Emergence of Pandemic-Related Travel Bans and Restrictions on Entry

As previously noted, until 2020 the majority of tourism generating countries rarely, if ever, imposed travel bans, as opposed to "do not travel" advisories applying to international travel to third countries. The primary exceptions to this rule applied to country pairs which were:

1. In a state of war or belligerency with each other
2. In cases where one country refused to recognise the sovereignty of another
3. There was either a severance or an absence of bilateral diplomatic relations
4. In the case of China, this applied to countries which were non-approved destinations
5. Cases where there was a trade boycott between one country and another.

In a few extreme cases an epidemic or a pandemic would lead to a temporary cessation of travel to countries. Prior to COVID-19 the most prominent example of this was a ban on travel by some countries (apart from medical and aid personnel) to Liberia, Sierra Leone, Guinea and The Gambia during the Ebola outbreak between 2014 and 2016 (Avraham & Ketter, 2016). More recent pandemics including SARS (2003) and H1N1 (Swine Flu 2009–2010) were highly disruptive to global travel and government travel advisories included them in their health warnings, but these pandemics never generated travel bans or border closures to the extent that has occurred with COVID-19.

The outbreak of COVID-19 which began in a virus referred to as (Severe Acquired Respiratory Syndrome) SARS-CoV-2, known as COVID-19, or widely referred as the coronavirus was first officially recorded in the city of Wuhan, Southeast China in November 2019 (World Health Organization (WHO, 2020b). The virus manifests itself as a flu-like condition and for the majority of those infected it tends to behave similarly to a common flu. However, it has proven especially but not exclusively fatal to people with a range of pre-existing medical conditions, the elderly, frail and people with depleted immune systems (see *Part I Health: Vulnerable Groups and Travel Health Considerations*). A key challenge in dealing with COVID-19 relates to the many unknowns related to this virus, some of which are mentioned below:

1. There is no absolute certainty about how the disease is transmitted from person to person, despite the fact that on the basis of a scientific brief released on July 9, 2020, WHO finally determined that it was transmitted in the air (WHO, 2020c).
2. Many carriers of the virus are asymptomatic, which means they may have the virus but lack visible or detectable symptoms.
3. There is uncertainty surrounding the incubation period of the virus after transmission. For the first few months of the outbreak, the general medical consensus was that the incubation period was up to 14 days but some medical authorities

have suggested that it exceed this (Bennet, 2021). One of the most significant challenges in dealing with COVID-19 was the fact that many carriers show no evidence of the condition visible to screening devices for a number of days.
4. There is no certainty that when a person has contracted and recovered from the disease that they are immune from future infections of COVID-19.
5. The spread and number of people affected by COVID-19 had exceeded 105 million by the beginning of February 2021.
6. During 2020 there was considerable progress made in developing vaccinations to treat COVID-19. By the end of 2020 several medical research institutes and pharmaceutical companies, including Pfizer, had developed vaccinations. Vaccines have become progressively available in some countries during 2021. It is widely acknowledged that an effective vaccine would be a critical game-changer in containing COVID-19 (World Travel & Tourism Council, 2020).
7. There is little knowledge about mutations of the virus that could alter the severity of the disease and its communicability (Kuhn, 2021).

The first officially recorded case outside China occurred in Thailand on 13 January 2020. On 30 January 2020, by which time COVID-19 outbreaks had occurred in many countries including Thailand, Iran, Italy, France, the UK and the USA, the World Health Organization declared COVID-19 to be "a public health emergency of international concern" (WHO, 2020a, para. 48). This definition was clearly short of the more severe and emotionally charged word, *pandemic*. On 11 March 2020a, the World Health Organization officially declared COVID-19 a pandemic.

On 31 January 2020, US President Donald Trump announced a ban on travel from China and to China, although two-way travel between the US and China continued well beyond that date (Farley, 2020). During 2020, Trump continued to refer to COVID-19 as the "China Virus" despite the fact that many outbreaks globally had little or no link with China. In late January 2020 the Chinese government announced a lockdown of the city of Wuhan and the surrounding Wuhei province and officially banned outbound international travel for Chinese citizens apart from government approved exemptions. Although the lockdown did contain the spread of COVID-19 in China, China's outbound travel ban was a massive blow to global tourism. In 2019 China was the world's largest tourism generating country, with over 140 million international tourists or 9% of the global total (China Mike, 2020). Many countries, especially in South East Asia, with a high degree of dependence on the Chinese tourism market experienced sudden declines in tourism arrivals which would be compounded as the pandemic spread globally.

This was the first of many lockdowns and border closures which would characterise the response of many countries and states, provinces and prefectures within countries in response to the rapid global spread of COVID-19 during 2020. As the pandemic spread and intensified, many countries responded by closing their borders to international visitation. In some cases this involved applying bans to citizens from selected countries and in some cases all international visitation was banned. Selective banning of at-risk nationalities was a widespread practice in Europe, the USA and

Canada. During early March 2020 the Australian government's *Smartraveller* website (DFAT, 2020a) announced that Australians were advised not to travel to any country outside Australia. By 25 March 2020 this advice officially became an outbound international travel ban (apart from government approved exemptions). The justification for the ban was that the advice of the Chief Medical Officer overrode all other considerations in the event of a declared pandemic. This opinion has been challenged by human rights and legal advocates. Ogg (2020), for example, claims that the outbound travel ban is in violation of the 1996 International Covenant on Civil and Political Rights. However, the Australian government claims that a state of emergency, including a global pandemic overrides such rights (T. Menadue, acting head of DFAT's Consular Branch, personal communication, September 20, 2020).

The unprecedented global spread and severity of COVID-19 has been a paradigm shifting event on many levels. In relation to government travel advisories COVID-19 marks the first global pandemic in which there have been widespread cases of government travel advisories factoring in a pandemic in relation to the right or advisability of tourists travelling outbound. Immigration departments and border control agencies have imposed multiple restrictions on entry into most countries, especially citizens from countries deemed at risk from the pandemic. Travel advisory websites have been critically important for disseminating information about requirements for international travellers to undergo quarantine periods on arrival and in some cases to show evidence of very recent testing for COVID-19. Countries in a state of lockdown routinely banned outbound international travel during lockdown periods. At various times this has included New Zealand, Italy, Israel, the UK, China and Samoa. Some countries banned all international arrivals (apart from citizens or specified exemptions). These include Australia, New Zealand, Samoa, China, Tonga, Thailand, Israel and Iran. Travel advisory websites present the latest information on restrictions and are updated every day. Similar country updates are provided by the Centers for Disease Control and Prevention (CDC) through its *COVID-19 Travel Recommendations by Destination.* (CDC, 2021) and the WHO through its *Coronavirus Disease (COVID-19) Dashboard* (WHO, 2021).

For economies with a high level of economic dependence on tourism (mainly developing countries), the restrictions on tourism imposed by the governments of their main source market countries have been economically devastating. Unlike Western countries, which have extensive and often generous taxpayer funded social service safety nets, government assistance to inactive businesses and their employees, such support in developing countries is minimal or non-existent. Many governments have experimented to implement reciprocal travel bubbles/travel corridors between countries in which COVID-19 has been deemed contained. Within these corridors, while travellers must show evidence they are COVID-free they can enter the participating country without quarantine. Several countries within the European Union participated in travel corridors but the massive spike in COVID-19 cases from September 2020 in France, Italy, Spain, UK and Germany required rapid changes to the rules for two-way travel, including mandatory quarantine on return to the country of origin (Beirman, 2020). While there is a great deal of government support for viable and COVID-safe travel bubbles all over the world, having seen

the havoc wrought by instant rule changes in the UK and Europe governments have tended to approach travel bubbles/corridors with understandable caution.

## Conclusion

Government travel advisories and the exercise of a government's duty of care towards its travelling citizens have never been more significant than during the COVID-19 pandemic. Although few countries have adopted the consultative model which has been a demonstrable success in Australia, the UK, Canada, New Zealand and the USA it is likely that the traumatic experience of COVID-19 and its impact on the tourism industry and the wider economy may serve to open lines of communication and collaboration between the travel industry and private business and government. Collaboration between government and the tourism industry has been proven to enhance the quality of travel advisories and practical cooperation during times of crisis.

The 2020 COVID-19 outbreak required all governments around the world to act quickly and decisively to limit the spread of the pandemic in each country. As there is no doubt that travel movements were a major contributing factor to the global spread of the pandemic, governments were required to take action to contain the spread. In doing so, tourism and tourists were subject to a range of unprecedented restrictions in their movements and activities. The COVID-19 restrictions have been especially damaging to countries and economies (many of them developing countries) whose high level of dependence on tourism made them vulnerable to significant reductions in their international arrivals. Many of the declines in tourism were a consequence of travel bans, negative travel advisories and onerous health and safety requirements for departing and returning tourists.

Tourism is a highly resilient industry. It has recovered from 9/11, terrorism, past pandemics, natural disasters, ships sinking and plane crashes. COVID-19 has proven to be the most challenging crisis for tourism since the Spanish Flu 100 years ago. Of course, very few people travelled internationally between 1918 and 1922. The COVID-19 pandemic hit an under-prepared tourism industry which had been riding the crest of 60 years of nearly uninterrupted growth. Most sectors of the economy and governments worldwide were also under-prepared to tackle the scale of the COVID-19 crisis. Governments worldwide have generally responded to the best of their ability to protect their citizens from the spread of COVID-19 and travel advisories have played an important role in this response.

The widespread availability of an effective vaccine in 2021, and the latent desire of people to see and experience the world, together are expected to result in a massive recovery of tourism over time. The lessons learned from COVID-19 are likely to result in a far more health and safety conscious approach from all sectors of the tourism industry and much stricter governance on health-related issues by government. These are almost certain to be reflected in the content of government travel advisories well beyond the pandemic.

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# Creating a Safer Journey: Exploring Emerging Innovations in the Aviation Sector

**Gui Lohmann, Bruno Pereira, and Luke Houghton**

**Abstract** The COVID-19 pandemic has affected the global aviation sector in an unprecedented way. It has brought changes to air passenger travel behaviour, with demand being reduced significantly due to border closures and concerns over the spread of the virus. As a result, the aviation industry has been required to adopt new technologies and procedures to offer a safer journey in terms of bio-safety and security. This unique scenario has presented an opportunity to redesign safety practices and create solutions to restore trust and reduce risks both in-flight as well as within airports. Examples include touchless/gesture-based self-service devices, airport-based passenger tracking technologies, contactless biometrics, autonomous handling services using robotics, and automated cleaning and sanitising innovations. This chapter describes some of these innovations and practices that are being adopted by major airports and airlines around the world, offering a value proposition for a bio-secure, safer environment, to enhance the wellbeing of air transport passengers.

**Keywords** Aviation · Innovation · Safety · Travel · COVID-19

## Introduction

Historically, aviation has operated as a highly regulated sector, under competitive pressure and strict safety levels. Its global presence and ongoing growth have facilitated the potential for the rapid spread of infectious diseases worldwide (Ikonen et al., 2018; Webster, 2009).

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_19

In the context of the travel and tourism industry, COVID-19 brought the sector to an unprecedented crisis. In 2020, forecasts showed that airline passenger revenues could fall by US$314 billion; in some cases airlines have reduced original capacity by to up to 90%, operating a skeleton network (IATA, 2020). Changes in consumer behaviour are emerging, primarily due to the fear of contracting the virus while travelling, leading to the avoidance of crowded environments, and concerns in relation to flying and visiting other places. Scientists have argued that the odds of catching COVID-19 on an airplane are slim (Hardingham-Gill, 2020). One explanation for the apparently low-risk level is that the air in modern aircraft cabins is replaced with new fresh air every 2–3 min, and most planes are fitted with air filters designed to trap 99.99% of particles (Hardingham-Gill, 2020). In addition, the perceived heightened risk of boarding could be reduced with innovations enabling greater passenger confidence, including new sanitising solutions, biometrics, screening procedures, and personal protective equipment. The belief of a *new normal* indicates a singular opportunity to engage the sector into an innovation paradigm, where turbulent times encourage new advances in safety technologies.

Although the barriers to restoring air passenger growth seem numerous, a window of opportunity for technological advancement is apparent. Emerging technologies are presenting as viable solutions for a safer environment, improving the traveller journey. These circumstances suggest the need for a new aviation security mindset that brings together key safety factors such as technology, intelligence, and procedures in a new complex environment (McLay et al., 2010). Examples include the introduction of cashless payment self-service shopping experiences, thermal scanning integrated into the security processes, and the use of predictive analytics to identify those at risk and to concentrate containment efforts (Future Travel Experience, 2020a).

Innovation has become a major focus for airports and airlines due to the biosecurity requirements imposed to create COVID-19 safety plans. In some cases, key players are fostering an open innovation approach by aggregating external collaborations to solve contingencies and challenges during the pandemic. For example, Emirates Airlines, through its Aviation X Lab, has created the Traveler Well-being challenge to accelerate and scale market-ready solutions and products from other companies to enhance health and safety for travellers (Arabian Aerospace, 2020). The Swiss start-up Xovis has begun tracking crowd movements through a passenger contagion map, as well as identifying contagious groups at an early stage, helping airports to foster procedures to keep physical distancing (Cision PR Newswire, 2020a). The Copenhagen Optimisation company, with its Better Airport platform, provides a cloud-based planning solution for airport operations, forecasting and managing baggage and passenger flow in real-time at Heathrow Airport, London (Silicon Canals, 2020).

The aviation sector's growth is equally important to maintain passenger safety and safe experiences for travellers. Innovative technological solutions need to emerge to restore a distressed value chain from collapsing and help the sector to rebuild. In addition, new policies, anticipatory planning, and comprehensive screening procedures will need to be enacted. Stronger network coordination, fast response

**Fig. 1** The mandatory use of face masks in airports and aboard many flights is now widespread throughout the world. (Image courtesy of Professor Donna Pendergast)

to flight cancellation and ongoing and effective coordination of disease control will also be required (Webster, 2009).

This chapter presents an overview of safety and security innovation within air transport, from September 2015 to September 2020, as the sector/industry moves towards the fourth industrial revolution. This revolution is based on the paradigm of Aviation 4.0, where a new cycle emerges and demands innovation adoption to ensure survival and adaptation within the new normal context. The overview includes current cases and a discussion of the emerging technologies, highlighting the practices and policies that aggregate industry value (see Fig. 1). The chapter concludes with a discussion comprising of practical insights to create a safer journey from the perspective of bio-safety and security.

## Innovation and Safety in the Aviation Sector: Context and Evolution

The aviation sector supports the tourism and travel chain and, more widely, other businesses, contributing to global productivity as a catalyst for world trade (Chapman, 2007; Chen et al., 2015). The sector is technology-driven, where innovation plays a key role driving advances for the entire aviation sector and a thriving

supply chain (Halder, 2013; Lee & Mo, 2011; Mrazova, 2013). The development and expansion of this sector have important effects on society and economies, demanding greater efforts related to capacity and safety during a travel journey (Gao et al., 2009; Rissman et al., 2013).

Since 1944, the Chicago Convention on International Civil Aviation, promoted by the International Civil Aviation Organization (ICAO), set out minimum standards for civil aviation safety and environmental protection. These standards include control measures to prevent the spread of disease as a result of air travel (Groenleer et al., 2010; ICAO, 1944; Lohmann & Pereira, 2019). In a globalised environment, safety and security remain a constant challenge to the aviation sector, where policies, practices and technologies should be implemented for effective and rapid remediation to minimise contingencies and potential economic impact (Fox, 2014; Watson et al., 2011).

Innovation has become a driver of progress providing solutions for diverse operations within the aviation sector (Franke, 2007; Nicolau & Santa-María, 2012). Recent technologies have facilitated access to international and domestic markets, supporting wellbeing benefits, and impacting on the relationship between customer satisfaction and value (Chen et al., 2015; OECD, 2018). The safety and security dimension of air travel is indispensable to the value proposition compared to other factors such as convenience, comfort, and meals (Chen et al., 2015; Hofer & Wetter, 2012).

While the aviation sector has experienced several significant advances over the years, challenges such as the COVID-19 pandemic have forced breakthroughs with the adoption of technological innovations. The pandemic has required that biosecurity strategies focus on risk analysis and prevention, and emphasise the importance of circulation, contingency, and connectivity (Brueckner & Pai, 2009; Martin, 2010).

The COVID-19 pandemic is an ongoing concern for airlines and airports (see Fig. 2) as it comprises of novel problems in relation to environmental, health, and security concerns that cannot be effectively addressed by existing solutions (Fox, 2014; Groenleer et al., 2010). Innovation in safety and security may help to prevent and minimise these problems and ensure the health and wellbeing of passengers (Fox, 2014). Emerging innovations such as touchless/gesture-based devices, tracking technologies, biometrics, autonomous services, and robotics may address these concerns. The enabling of technological adoption into airports and airlines will improve the travel experience and help to adapt to the *new normal* COVID-19 context.

However, emerging innovations need to be initiated, managed, and materialised in a target-oriented manner to achieve value creation and tangible results, assuring travellers a feeling of safety during their journey (Franke, 2007; World Travel & Tourism Council [WTTC], 2020). The innovation adoption is a complex process which requires certain procedures to allow for further development and change. The innovation process and subsequent adoption involve varying stages including the identification of opportunities, the selection of strategic options, appropriate resourcing, and implementation measures (Halder, 2013; Matthews, 2000). In


**Fig. 2** As air travel resumes social distancing and face masks are essential safety measures. (Photo by Pexels, used with permission)

addition, when facing new demands, these stages form a paradigm for technology adoption in the relationship between markets, passenger, and practices (Perl, 1998).

In this context, the use of adequate technologies, procedures, and operations should be encouraged to manage emerging issues, particularly potential safety risks, and provide opportunities to foster innovation (ICAO, n.d.). To explore the emerging innovations within the aviation sector, it may be relevant to reflect on the recent history of the evolution of safety and security technologies.

To provide this overview, an online search was carried out using the Griffith University library database to collect technical and practice material. Only resources fully available online, in English, were selected, covering a publication period from September 2015 to September 2020.

Terms related to aviation, safety, and innovation were searched in the title field, by using the following combination of keywords and Boolean operators (*aviation* OR *airline* OR *airport* OR *air transport* OR *air transportation*) AND (*safety* OR *safe* OR *security* OR *secure* OR *health* OR *well-being* OR *disease* OR *contamination* OR *pandemic* OR *outbreak* OR *virus*) AND (*innovation* OR *innovative* OR *technology* OR *solution* OR *advance* OR *novelty*).

The search resulted in 500 results. The Mendeley Web Importer plugin was used to collect and organise the material. Next, a .xml document was exported to an Excel spreadsheet to remove redundancies. Material that did not fit the study criteria was also removed. The removed items included academic papers, event announcements, tender and contract notices, or paid reports. In addition, material that was not

directly associated with the aviationcontext were also removed, such as news related to airport-tech style measures implemented in prisons security (Williams, 2019).

A total of 135 items were selected for analysis. The results comprised of newspaper articles, trade publication articles, magazine articles, web resources, and reports. Figure 3 synthesises the recent evolution of safety and security innovations in the context of the aviation sector (2015–2020).

When analysing this data, it was noticeable that a new technology paradigm supported the new normal context. Prior to 2020, most innovations aimed to address safety and security issues related to terrorism attacks, accidents, and warning situations at airports and in flight. These technologies were developed in response to concerns following the 9/11 terrorism attack in the United States of America in 2001. Since the beginning of 2020, with the COVID-19 pandemic, most results comprise of innovations addressing issues related to bio-safety, security, and health and wellbeing during the passenger journey.

By examining this new context, it is possible to note that the aviation sector has not reduced its attention to terrorism and security threats. In fact, the sector is fostering the emerging innovations to address an additional, critical issue. Response to both the 9/11 terrorism attack and the COVID-19 pandemic suggest that the sector has been reactive rather than proactive to potential future threats. For example, just after the Pan-Am Lockerbie bombing in 1988, involving a Boeing 747 heading from London's Heathrow Airport bound for New York City, more robust explosive detection technology was implemented for checked baggage (ABC News Australia,

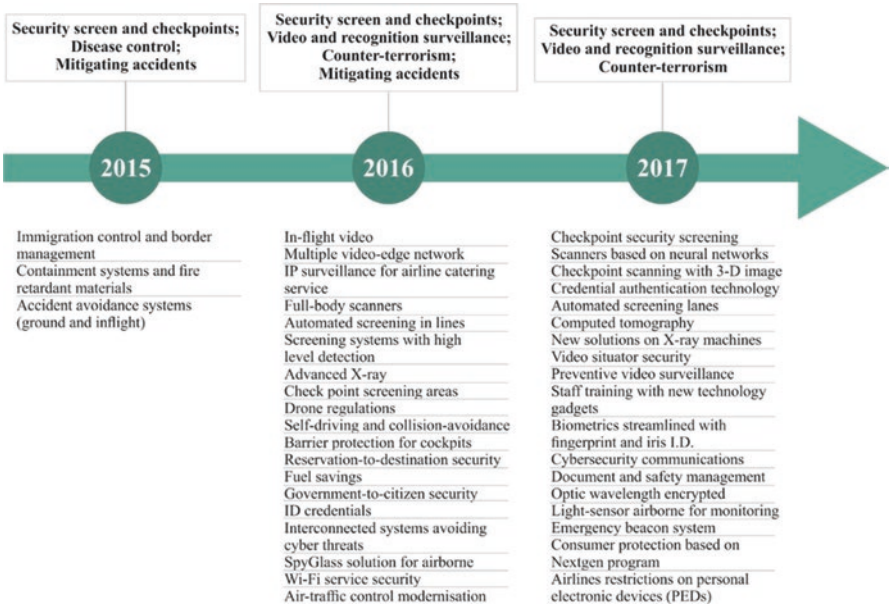


**Fig. 3** The recent evolution of safety and security in the aviation sector: main themes and innovations (2015–2020)

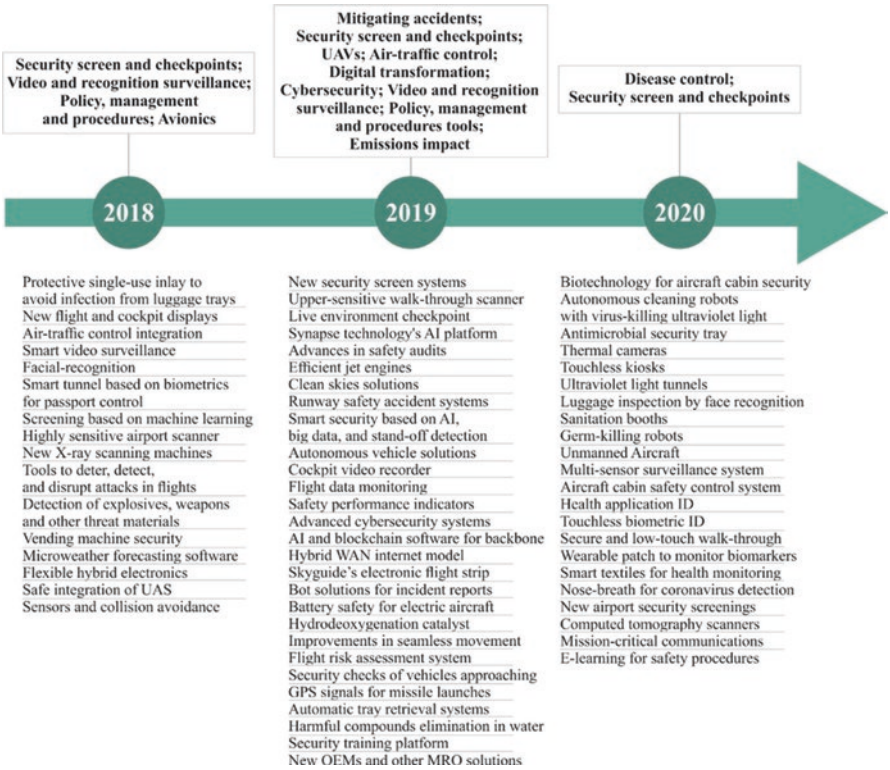


**Fig. 3** (continued)

2020; Cox et al., 2011). More recently, just after the 9/11 terrorism attack in the US, the Transportation Security Administration was established to retrain the workforce and accelerate the implementation of more advanced security technologies (Cox et al., 2011). One explanation for this reactive behaviour is that there is no start or endpoint to the diffusion of innovations or digital change. It involves a continuous process of improvements that can increase costs within airlines and airports (Halpern et al., 2021).

The COVID-19 crisis has become a serious concern for all business sectors, especially the aviation sector within the scope of global operations (Serrano & Kazda, 2020). This crisis has created the necessity to adopt a continuous technology paradigm, requiring an innovative mindset to return the sector to sustainable growth. The continuous technology paradigm also requires policies, practices, and new business models to be adopted by airports and airlines to accelerate and enhance the diffusion of innovations within the sector.

## The New Normal and Emerging Innovations: Technologies for a Safer Journey

Within the evolution overview of safety and security in the aviation sector, it was noticeable that there have been emerging innovations relating to health since the COVID-19 pandemic. The following discussion presents a comprehensive description of these solutions, adopted by major airlines and airports globally, into five innovation groups. These groups include:

1. Sanitising and cleaning technologies
2. New anticontamination material and barriers
3. Touchless, biometrics, and automated passenger processing
4. Real-time monitoring, screening, and thermal detection technologies, and
5. Apps and devices for a digital new normal.

### *Sanitising and Cleaning Technologies*

After the emergence of COVID-19, airlines and airports introduced new rules and measures to minimise the chances of infection by expanding the cleaning of public spaces to reduce the presence of the virus and by deploying sanitising technologies. Germ and virus-killing robots, autonomous cleaning, and new products for sanitising are prominent innovations in this context. For example, Gatwick became the first airport in the United Kingdom to treat security trays with ultraviolet (UV) light energy. The aim is to protect passengers and staff and reduce the spread of COVID-19 and other infections on these high-touch surface areas (Future Travel Experience [FTE], 2020b).

Los Angeles, San Francisco, and New York's JFK airports adopted a germ and virus-killing robot that sanitises airplanes (Legacy MedSearch, 2020; NS Medical Devices, 2020). This technology is equipped with a ground-breaking system that utilises ultraviolet-C (UVC) light that is capable of killing disease-causing pathogens (Dimer, n.d.). It has been proven safe and highly effective in eliminating germs that cause infectious diseases, including coronaviruses, influenza, and Ebola (Businesswire, 2020a). Similarly, Hong Kong airport has deployed autonomous cleaning machines equipped with virus-killing ultraviolet light, applied antimicrobial coatings to frequently touched surfaces, and used air sterilisers to disinfect toilets and other passenger areas (Martín, 2020). Clean tech machines were adopted here as part of a full-body disinfection facility, incorporating ultraviolet light and nano needles to pierce the cell membrane of bacteria and viruses to disinfect humans and clothing (Jamil, 2020; Pitrelli, 2020). The Hong Kong airport has also adopted photocatalyst technologies and sanitising sprays, all meant to protect travellers and airport staff from potential viral infections (Snow, 2020).

### *New Anticontamination Material and Barriers*

Person-to-surface contact became a critical concern with the COVID-19 pandemic, requiring new materials and surfaces to reduce contamination. For example, Edinburgh Airport has upgraded the airport's security tray return systems with antimicrobial tray technology to minimise the spread of bio-contamination from person-to-surface contact (Airport Technology, 2020). The antimicrobial technology is built into the security tray during the manufacturing process and minimises the presence of microbes throughout the security tray lifecycle (Cision PR Newswire, 2020b; Leidos, 2020). The trays prevent the reproduction of a broad spectrum of bacteria, including staphylococcus aureus (staph), E. coli, and antibiotic-resistant bacteria like MRSA (Methicillin-resistant Staphylococcus aureus) and VRE (Vancomycin-resistant Enterococcus), by 99.99% (Caswell, 2020).

Inside the aircraft, technologies such as air curtains around passengers are easily adapted to prevent the spread of viruses (Morris, 2020). The personal protection window is an example of a cheap technology that utilises barriers designed to protect passengers from the risk of droplet transmission and is made from transparent polycarbonate. These can be installed without the need to reconfigure aircraft interiors (Newton, 2020; Street, 2020).

The wearing of a Personal Protective Equipment (PPE) travel kit, including a protective jacket with hood, gloves, mask, and face shields (see Fig. 4) has been called on to be mandatory for all passengers on any mode of transport (Chandra, 2020). Airlines such as Qatar Airways, AirAsia, Thai Airways, and Philippine Airlines have commenced offering PPE to cabin crews to protect themselves and the passengers (Snow, 2020). Most airlines are adopting soft inner cotton or linen linings to make the PPE more comfortable. However, with the advent of new technologies and materials, it may be possible to design these materials differently. For example, adopting sustainable materials such as PPE with bio-filters composed of bamboo fibres, silk, silver, or carbon. In addition, sensors can be integrated into aircraft to continuously measure crew and passenger temperatures (Chandra, 2020; Thomasy, 2020).

### *Touchless, Biometrics Technologies and Automated Passenger Processing*

Technology is the primary driver to achieve passenger touchless travel (Serrano & Kazda, 2020). Innovations can further unlock the potential of seamless next-generation processing solutions, making mobile-enabled and touchless airport processes a reality (Express Computer, 2020).

Low-touch and automated passenger processing can comply with new hygiene requirements and be in line with recommendations from the Airports Council International (ACI) and International Air Transport Association (IATA) (Global

**Fig. 4** Passenger on repatriation flight from Europe to Australia in full protective Perspex face shield as well as personal mask. (Image courtesy of Andrew Purchase)

Travel Media, 2020; Kastelein, 2020). These innovations allow passengers to use their digital identity on their mobile phone whenever they travel, at each step of the journey. Collaborations such as those between SITA Company and NEC Corporation are providing a combination of technology for common use platforms and artificial intelligence (AI) solutions in which key touchpoints will automatically recognise a passenger (Business Daily Media, 2020). This integrates a biometric identity to check-in, payments, bag drops, pass through security, immigration, and boarding by simply scanning (Express Computer, 2020; NEC, 2020).

The touchless option has new appeal in light of the COVID-19 precautions and may help travellers to feel safer traversing the airport (Best Travel Tale, 2020). For example, the Nashville International Airport fostered clear biometric identity scanners, providing passengers with an expedited, touchless security screening option (Mazza, 2020). The kiosks utilise iris or fingerprint scans to verify users' identities and flight information (Baratti, 2020; International Airport Review, 2020). Instead of waiting in line to present an identification card and boarding documents, customers can go to a kiosk, and gaze briefly into the scanner or apply their fingerprint for recognition. It displays the person's name and photo as they are cleared to pass through the checkpoint (Flager, 2020; Mazza, 2020).

### *Real-Time Monitoring, Screening Detection, and Thermal Technologies*

Pandemic-free air travel requires a pandemic-free airport, where infectious disease detection is a crucial factor. New technologies may be able to deliver this capability at an affordable cost (Tabares, 2021). For example, GE Aviation introduced the Health Application ID for the aviation sector, incorporating blockchain technology for safe airline travel and to restore passenger confidence (Businesswire, 2020b; Reuters, 2020a). The technology enables airlines, airports, and related transportation operation areas to set test result protocols and check compliance to new COVID-19 medical screening for employees and passengers (Bloomberg, 2020; Gavine, 2020). This application uses the Microsoft Azure Blockchain Service and related technologies that create a protocol to embed passenger identity information, ticket information, and medical screening results into the boarding process in a highly secure environment (Bloomberg, 2020; Nelson, 2020).

At Delhi Airport, India, all bags go through a UV tunnel as a new safety measure to ensure a safer environment (Phadnis, 2020). This solution enables the air coming inside the terminal to go through air handling units fitted with UV lights. The air is then disinfected, by going through a high-efficiency particulate air (HEPA) filter (Barnes, 2020; Frey, 2020). In addition, real-time and tracking solutions are being adopted to map passengers' complete journeys, taking measures to ensure social distancing by indicating which part of the airport is more congested (Hussey, 2020).

Despite the lack of accuracy, and the fact that having a temperature is not necessarily a conclusive indication that a person has corona virus, the use of infrared temperature scanners and cameras is on the rise (U.S. Food and Drug Administration [FDA], 2020). The technology is already being used at major airports such as Hong Kong International Airport, London's Heathrow, Los Angeles International, Kuwait International, and others (PI, 2020). The advantage of the thermal cameras is that human screeners do not have to touch or stand near passengers. Instead, screeners can monitor a television screen from a distance to see passengers' thermal images and temperatures (Nguyen et al., 2010; PI, 2020; Roxby, 2020). With thermal cameras at airports, a passenger who generates an unusually high temperature is automatically denied entry and then directed to a separate area where nurses or other trained professionals can perform a more thorough examination (Martín, 2020).

Airbus and Koniku Inc. are extending research activities to include biological hazard detection capabilities with a disruptive biotechnology solution (Airbus, 2020). The technology, which was initially focused on the contactless and automated detection, tracking, and location of chemicals and explosives, is now being adapted to detect COVID-19 contamination and other biological hazards (GBP Aerospace and Defence, 2020; Intelligent Aerospace, 2020). Based on the power of odour detection and quantification, this technology uses genetically engineered odorant receptors that produce an alarm signal when they come into contact with the molecular compounds of a hazard or threat (Airbus, 2020).

Many start-ups in the aviation sector, namely, air travel techs, are helping the industry to foster emerging innovations. For example, Nanoscent, an Israeli start-up, developed a device to detect coronavirus in patients' nose-breath (Reuters, 2020b; Solomon, 2020). This device integrated a chip that allows electronic devices to smell odour to help detect the reaction of the body to coronavirus. A combination of hardware, software, and sensors developed by the firm can be used for mass 30-second screenings, at stores, hospitals, and airports or border entries (The Science Times, 2020). The technology includes a disposable plastic bag attached to an exhaling pipe that goes into the nostril and includes a recorder equipped with a pneumatic device to clean the sensor after every use (Nanoscent Labs, n.d.; Solomon, 2020).

## *Apps and Devices for a Digital New Normal*

Digital transformation based on devices and apps can create value by using real-time services and procedures via smart data capabilities (Halpern et al., 2021). Mobile boarding passes, virtual wayfinding, and near-field communication apps greatly reduce unnecessary touching and contact (Pallini, 2020).

Airlines, such as SpiceJet in India, believe the sector will adopt a 100% e-check, in which even the baggage tag will be scanned electronically through mobile phones (Phadnis, 2020). In addition, mobile applications can be further enhanced to provide wait-time tracking, notify of boarding calls and zones, allow payments, optimise queues, and ensure a safe distance between groups/passengers around check-ins, boarding gates, bathrooms, stalls, and security areas (Airlines IATA, 2020).

Newly emerging technologies such as the Internet of Things (IoT), AI, machine learning, and blockchain enable integrative connections and smart data-based devices to provide more connected services into mobile communications. For example, common pass web applications, digital health apps that enable travellers to present standardised and verifiable proof that they have tested negative for COVID-19, have been adopted by companies such United Airlines, offering integrated services between Newark and London, and Cathay Pacific trips from Hong Kong to Singapore (Financial Review, 2020).

The IATA is currently working on the production of new standards to allow the remote use of self-service kiosks from mobile devices and integrations based on the One ID initiative (Future Travel Experience, 2020c). One ID, a mobile app, appears to be a critical tool for passengers, introducing an opportunity for the passenger to further streamline their journey with a document-free process based on identity management and biometric recognition (FTE, 2020c; IATA, n.d.). In addition, ACI (2020) has launched a new smartphone app which provides passengers with information about health measures, in place at individual airports around the world, as a result of the COVID-19 pandemic (see Fig. 5).


**Fig. 5** A range of smartphone apps are now available. (Source: Photo by Pexels, used with permission)

## Aggregating Value Towards a Safer Journey: Policies, Practices, and Innovations Integration

Although many new technologies have been developed to support the aviation sector to recover and to bring travellers back, it is also necessary to adopt policies and procedures within the integrative frameworks. Based on policies and practices suggested by organisations such as ACI, IATA, and ICAO, we summarise the safety and health measures integrated with emerging technologies that may lead to safer travel experiences (see Table 1).

Innovation and digital change are more than just the use of technology (Halpern et al., 2021). Several factors influence emerging solutions for a safer journey during a pandemic, including strategic planning, collaboration, innovation in business models, and integrative frameworks (Nguyen et al., 2010). The innovations proposed, together with other measures, can provide a healthier and safer environment in the aviation sector.

**Table 1** Integrative propositions for a safer journey: policies, practices, and emerging innovations (airports and airlines)

| Policies and practices | | Emerging innovations supporting operations |
|---|---|---|
| Trained staff to execute operational plans | ⇨ | E-learning and extended reality for safety procedures |
| Consistent processes and procedures for sanitation, disinfection, and deep cleaning practices | ⇨ | Autonomous cleaning and germ-killing robots,<br>Antimicrobial security trays and equipment surfaces,<br>Ultraviolet tunnels,<br>Sanitising booths,<br>Sanitising sprays |
| Security and facilities working towards seamless journeys within airports | ⇨ | Multi-sensor surveillance systems,<br>Health applications ID based on blockchain,<br>Real-time and tracking solutions |
| Implement measures for health screening and detection | ⇨ | Thermal cameras,<br>Infrared temperature scanners,<br>Luggage inspection by face recognition,<br>Smart textiles for health monitoring,<br>Computed tomography scanners,<br>Nose-breath devices for virus detection,<br>Wearable patch to monitor biomarkers,<br>Odorant receptors to detect compounds of hazard threats |
| Health procedures for arrivals, check-in, embarkation, and disembarkation | ⇨ | Touchless kiosks,<br>Low-touch walk-through systems,<br>Biometric identity to check-in,<br>Immigration and boarding by scanning,<br>Mobile boarding passes |
| Implement measures to ensure health and safety for crew and passengers on-board | ⇨ | Biotechnology barriers for aircraft cabin security,<br>Aircraft cabin safety control systems,<br>Personal protection windows and curtains,<br>Personal Protective Equipment (PPE) with biofilters and IoT sensors |
| Providing transparency and communications with travellers | ⇨ | Virtual wayfinding and near-field communication,<br>Smartphone apps providing health measures to passengers |
| Improvements in finance/purchasing procedures | ⇨ | Biometric payments,<br>Touchless vending machines,<br>Pre-purchase apps based on pickup click and collect |

## Conclusion

The ongoing COVID-19 global pandemic has affected the economic sector and directly impacted on various industries (Nižetić, 2020; Serrano & Kazda, 2020). The aviation sector is no exception as this industry involves global connections, markets, and the movement of a high volume of people into airports and aeroplanes for business, tourism, and other activities. Airlines and airports need to adopt short and long-term measures to establish healthier and safer environments, to change travellers' behaviours and their intention to travel. Based on a bio-safety and security perspective, emerging innovation can support the sector to create greater confidence for travellers and employees.

This chapter aimed to provide an overview of the emerging safety and security innovations as critical and integrative solutions to support airports and airlines. Various examples from around the world were presented to demonstrate how major airports and airlines are adopting emerging technologies to aggregate value and support the *new normal* context.

The adoption of new technologies is necessary for a readiness approach supporting the future of the aviation sector. Together with adequate policies and procedures, advancement in innovation includes touchless devices, real-time data analytics, screening, cleaning, and communication technologies.

The potential to foster emerging innovations together with health responsibilities and appropriate use of industry standards are key elements to create a safer journey (Tabares, 2021). The aviation sector is continuously exploring practices and measures to reset passenger air travel. However, this atypical and critical moment requires more integrative measures and processes, including strategic planning, collaboration, new business models and integrative frameworks. In addition, in the context of airports and airlines, openness to diverse collaboration with external partners will be imperative to transform new ideas into useful solutions.

This chapter identified and described technological safety and health practices to aggregate value towards a safer travel experience. In addition, the chapter has provided insights into combining emerging innovations with policies and practices to create integrative frameworks.

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# The Great Reset: Hospitality Redefined


**Marianna Sigala**

**Abstract** COVID-19 has been a transformational stressor and accelerator for hospitality. The crisis has also magnified the existence and impact of pre-existing challenges and issues (e.g., technology evolution and climate change) and intensified the need for urgent industry action. This chapter identifies and discusses the major changes taking place in hospitality by clustering them into the following categories: the hospitality offerings; the safety, cleanliness and hygiene protocols; the servicescape design; employees management; and brand communication and marketing. The chapter also analyses both the immediate and long-term implications of these changes for the industry, with the purpose to start a debate and inspire research directed to the re-imagination and the re-setting of the hospitality industry. Overall, COVID-19 imposed changes affect the core DNA of hospitality by resetting our understandings and practices of the essence of hospitality. The chapter concludes by discussing how the crisis directs all hospitality stakeholders to rethink and re-imagine their business and social practices, which in turn reform hospitality in the next normal.

**Keywords** Hospitality · Health · Safety · Risk management · COVID-19

## Introduction

The COVID-19 crisis has already resulted in an acute human and economic toll to the global hospitality industry and its stakeholders, namely employees, guests, students, educators, company shareholders and communities (American Hotel and Lodging Association [AHLA], 2020; Dube et al., 2021; Lock, 2020; Sigala, 2021a). As Arne Sorenson, Marriott CEO, claimed, "COVID-19 is having a more severe and sudden economic impact on our business than 9/11 and the 2009 financial crisis

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_20

combined" (Marriott International, 2020a). From an immediate and unforeseen global halt of operations, hospitality was forced to substantial changes in order to allow a safe industry reopening. Hence, apart from the unprecedented damage, the pandemic has also resulted in an accelerated change in both hospitality demand and supply that will have long-term implications in the industry. The slow-down of the economy, the forced changes and the necessity to urgently innovate to ensure business continuity and survival, have given the opportunity to hospitality stakeholders to reflect, rethink and reimagine their practices. These transformations, some of which had pre-started before the pandemic, are claimed to be resetting (Sigala, 2020) or innovating the business models (Breier et al., 2021) of hospitality, hopefully helping the industry to also build back better.

This chapter aims to identify and discuss the major ways in which COVID-19 is impacting and changing the hospitality industry by (re)-setting its marketplace, business models and operations. To achieve that, the chapter begins by debating the implications of COVID-19 on the hospitality services, which in turn have caused several alterations on consumer behaviour and industry operations. The chapter continues by analysing the major changes introduced in hospitality to restart the industry. These changes are discussed by clustering them into the following categories: hospitality offering; safety, cleanliness, and hygiene protocols; technology and digital innovation; servicescape design; employees management; and brand communication and marketing (including price, promotion and distribution). The chapter concludes by debating the long-term implications of these changes on resetting the hospitality industry by redefining the nature of the hospitality experience or even purpose and essence of hospitality. The practical and research implications of these changes are also discussed.

## COVID-19 and Hospitality Services

COVID-19 is a highly contagious and transmittable virus through direct and indirect people's contact. The most known transmission paths include: coughing and sneezing; through the air in confined spaces; and through virus-containing surfaces of objects. Consequently, direct contact with others (e.g., shaking hands, touching) and indirect contact (being or using public spaces and facilities) create high anxiety and strong desires to avoid them. In addition, social distancing rules have been imposed by governments to eliminate and/or regulate personal and/or social interactions and activities.

By definition and nature, hospitality is based and entails people's interactions. By being a high touch and highly labour intensive industry, COVID-19 has placed hospitality in an extremely challenging situation whereby employees' and guests' health become a top priority (Kim et al., 2021a). A few studies have already emerged discussing the enhanced occupational stress that COVID-19 has generated to hospitality employees, severely affecting their mental health and long-term wellbeing (Wong et al., 2021; Yu et al., 2021a). Similarly on the demand side, industry reports

(Haas et al., 2020) document that returned guests experience increased anxiety not only at touchpoints featuring active employee-customer encounters (e.g., ordering, receiving and/or paying for hospitality services) and distance/back-of-the-house interaction with employees (e.g., meal preparation, housekeeping), but also at touchpoints whereby guests are found in close proximity to other guests and/or objects that the latter may have touched (e.g., hotel rooms and facilities such as lobbies, waiting areas, toilets). Hence, it appears that guests' safety anxiety is generated and heightened by even distant and passive interaction with others (e.g., leaving or arriving at hospitality venues).

Numerous studies advocate that more than any other crisis, the people's safety, health and risk perceptions and attitudes are driving their decision-making and behaviour during and after the COVID-19 pandemic. Cleanliness and safety have become decisive and top factors shaping hospitality demand requirements, expectations and behaviours (Kim et al., 2021c; Shin & Kang, 2020). Workplace safety and corporate's commitment to staff wellbeing and personal/career development are also claimed to highly determine the hospitality's ability to attract, maintain and accelerate the performance of talent in the industry (Sigala, 2021a). As the world adjusts to COVID-19 and hospitality reopens, the hospitality managers' priorities are focused on creating reassurance and taking measures to restore the people's confidence in the industry (Rivera, 2020). To achieve this, we also need to re-comprehend people's beliefs and the main factors driving their behaviours.

Recently, Hazée and Van Vaerenbergh (2021) adopted a contamination approach in order to understand how customers' contamination concerns will transform the service industry in the post-COVID-19 period. Two major changes are found: preference to more introverted and socially distance services; and positive attitudes, purchase intentions and choices towards brand/services emphasising safety. From a contamination approach, four major cues are also found to generate customers' safety risks and concerns (Hazée & Van Vaerenbergh, 2021):

- Product-related contamination cues including product location, product-body proximity, product scarcity and product packaging
- Social-related contamination cues mainly relating to the number of sources believed to have come into contact with the target and the characteristics and/or nature of the contact source
- Environmental cues including the organisation/design, cleanliness and sanitary of the contact location and servicescape
- Brand-related cues such as brand communications (e.g., advertising, promotions)

Hence, to respond to customer contamination concerns and government imposed COVID-19 safety regulations, the hospitality industry has fast introduced and continuously develops numerous interventions in the following four major areas: hospitality offering; safety, cleanliness and hygiene protocols; service interactions through the whole customer journey affecting the reorganisation of the servicescape, the employee and customer experience; brand communications and marketing practices (including distribution, pricing and promotion). Many of these changes are here to stay and continue to transform the industry in the long term (Skift &

Oracle Hospitality, 2020), while cleanliness, health and technology are considered as the three major issues in post-COVID-19 hospitality marketing and management (Jiang & Wen, 2020; Sigala, 2020).

The following sections identify and discuss the COVID-19 induced changes taking place in hospitality within the abovementioned areas. The sections also analyse both the immediate and the long-term industry implications of these changes.

## Hospitality Offering

The sudden halt of the global hospitality industry has led the industry to alter and/or re-purpose its service offerings in various ways in order to maintain business continuity and/or contribute to the public good. The restaurant and catering sector has limited food and beverage options to prepackaged meals and redesigned menus to include locally sourced supplies and migrate property dining services to home delivery services; some providers have virtualised dining and drinking experiences (e.g., online cooking classes, online social drinks, virtual wine tastings and disco/DJ parties). Many caterers penetrated the convenience store market by delivering daily food items (Becker et al., 2020). Hoteliers have responded similarly: hotel rooms were converted into home offices to cater for the increased demand of remote working; hotel restaurants and leisure facilities (e.g., gyms, spas) were shut and equipment redirected to provide more in-room or outdoor services (e.g., socially distanced picnic basket dinner at Hyatt Regency, California); guestrooms were redesigned to match home-centred lifestyles (e.g., access to personal online fitness classes and Netflix/Spotify services through the guestroom TV). In response to the increasing consumers' demand for wellbeing, Batat (2021) claimed that COVID-19 has also accelerated the hospitality's re-direction towards more healthy eating and lifestyles.

In response to COVID-19 challenges, some hospitality players have totally transformed their offerings and business models. For example, restaurants have developed *dark* or *ghost* kitchens to specifically cater for the food delivery market. Shared accommodation providers renting out their "accommodations" for people to host "private" small-scale functions and parties, use them as self-quarantine places, or home offices.

Hospitality offerings have also been adapted to match the "new" emerging customers' lifestyles, for example, blur of leisure and work life, that is, staycations and workcations (World of Hyatt, 2021); and small events such as micro-weddings (Deane, 2021). In the long-term, the questionable return and future expectations of the corporate and events market have made the hospitality industry to rethink the nature and purpose of hospitality facilities and services. Function and business spaces are being equipped to support hybrid meetings and events (e.g., hybrid weddings at Hyatt) (Oliver, 2020), as well as redesigned to accommodate the needs of the booming digital nomad market.

During the lockdown, the industry has repurposed and donated many unused resources (staff, equipment, facilities and supplies) for public good. For example,

more than 16,000 hotels have signed up for the American Hotel and Lodging Association's *Hospitality for Hope* program, which connects hoteliers to the public sector to provide facilities to medical staff (Sperance, 2020a); hotels donating cleaning and food supplies to people in need, while underutilised hospitality staff volunteered to support essential services (Price, 2020). Some hotels have introduced (online) social campaigns (#INTHISTOGETHER campaign by Choice hotels) to communicate their social causes and boost their brand image and responsibility (Choice Hotels, 2021). It is unknown whether COVID-19 accelerated philanthropy within the sector is to be continued, but current pressures have intensified the need to boost the (corporate) social responsibility of the industry. Indeed, because of its nature and by refocusing on its core essence, the hospitality industry can make a significant contribution to progress from the (commercialised) experience economy of our capitalistic world to what is called the purpose and/or compassionate economy. It is thus imperative for both hospitality scholars and professionals to seriously re-imagine and reset the purpose and delivery of the hospitality offering in the post-pandemic. It is also their responsibility to help shaping and (re)-forming a "new" and true meaning of hospitality that is away from any woke-marketing practices aiming to simply please cultural and political changes and/or regulatory imperatives.

## Safety, Cleanliness and Hygiene Protocols

Cleanliness and hygiene are emphasised as major attributes of hospitality service quality (Sifuentes et al., 2014; Vos et al., 2019). Guests can recognise hygiene in hospitality experiences through various factors including: the spaces used by customers (i.e., lobby, washrooms, rooms, and restaurants); personal hygiene of staff (e.g., uniform, hands, and head); and spaces used by staff (e.g., computers, desks, and chairs). Guests also wish to experience hygiene and feel safe at every stage and touchpoint of their whole customer journey (i.e., before, during and after their stay).

Because of the highly contagious nature of COVID-19 and its transmissions through direct and/or indirect contact, hospitality operators have adopted heightened cleaning and safety measures. The latter were not only a response to guests' concerns but also a requirement to comply with government imposed COVID-19 safety regulations. Because of different government policies and public-health approaches, various regulations were introduced in different countries, which made it difficult for multinational hospitality players to standardise their practices across the globe (Krishnan et al., 2020). Nevertheless, the industry has adopted the following major safety and cleanliness measures:

- Limited capacity (distance tables, chairs, number of guests, time lags between guests, for example, 24-h empty guestrooms between their occupancy)
- Rigorous sanitation: cleaning cycles and enhanced procedures, sanitisers, communication, frequent sanitisation and/or scrubbing of high-touch areas (such as counters, self-checkout screens, and door handles)

- Personal Protective Equipment (PPE) for employees and for customers (masks, gloves, temperature checks)
- Employee training regarding enhanced cleaning standards and strict protocols for providing personal service while keeping social distancing and minimising human contact.

Temperature screening (at check-in and/or property entry points), hand sanitisers, social distance markers and guests' lists and tracking (e.g., "check-in" through COVID-19 mobility tracing applications) have become the most commonly visible hygiene and safety items in hospitality venues. Due to the nature of the COVID-19 virus, the industry is forced to adopt new cleaning equipment and/or products, e.g., High-Efficiency Particulate Air (HEPA) filters (removing more than 99.9% of particles including airborne viruses and bacteria), laser beams and electromagnetic sprayers (e.g., used by Marriott staffers for cleaning). The new cleaning protocols, products and higher frequency cleanings could cost the entire hotel industry as much as $9 billion annually (Sperance, 2020b). Hospitality operators might pass the increased operating costs to customers, but the question arising is whether cleaning procedures will ever go back to the old "standards"? Based on marketing theory, once customers are "upgraded" and got used to new services, product standards are also elevated to new "standards" and it is very difficult to go back to old "standards" as this will be seen as a product (quality) downgrade. In other words, how can hotels start providing again "less" cleaning without guests perceiving that their rooms are less clean? Would guests in the future trade off less cleaning for even lower prices? As customers' perceived hygiene attributes critically affect not only their quality perceptions and visit intentions but also their perceived hotel/offering image (Yu et al., 2021b), the prolonged provision of COVID-19 enforced hospitality operations are very likely to contribute to the establishment of "new" industry standards.

Almost all major hospitality operators (spanning from budget to luxury hotels, resorts, vacation ownership and even Airbnb representing the shared accommodation) developed, branded and adopted their own COVID-19 hygiene protocol (Skift & Oracle Hospitality, 2020). Some (Sperance, 2020c) have also criticised hotels for engaging in a show-off "hygiene theatre", that is, use of expensive gadgets and practices to make guests feel good rather than effectively clean their properties. Such hygiene theatrics may include guests' temperature checks in the entrance to build confidence and extensive use of communication paraphernalia such as sanitary bags covering the remote controls and guest room doors sealed with a CleanStay label to show that they have been cleaned and not used since housekeeping serviced them. Nevertheless, the industry has undertaken several efforts to establish credibility and accountability of its hygiene standards.

Some branded hotel chains have partnered with medical and cleaning experts. For example, Hilton's CleanStay deep cleaning program is co-created with Lysol and Mayo Clinic (Sperance, 2020d) and Marriott launched a Global Cleanliness Council including many research and professional experts (Marriott International, 2020b). Industry associations have also developed hygiene standards to help independent and small hospitality operators to learn about and implement new cleaning

standards, as well as benefit by communicating and linking their hotels with a well-recognised body accrediting their hygiene practices. For example, the American Hotel and Lodging Association has launched its *Safe Stay* cleaning protocol, which has been used by many small but also big players (e.g., Wyndham uses it as a foundation for their own practices). In addition, several third-party accreditors have emerged that provide training and accreditation services to hospitality operators (e.g., Blue Canary (2020); International WELL Building Institute (2020) offering its own branded WELL Health-Safety Rating). Such third parties are of course garnering more interest from independent hotel owners than major brands (Sperance, 2020e).

Apart from third-party auditing, major hotel operators also include the following practices for ensuring adherence to their new health, safety, and cleaning guidelines (Sperance, 2020e):

- Regular staff training and monitoring
- Internal monitoring and auditing including: daily colleagues surveys to get staff feedback, guest satisfaction surveys on cleanliness, hotel owner self-evaluations, and on-site COVID-19 *marshals* and/or "Cleanliness Champions" who are responsible and accountable for the standards' implementation
- In the era of social media and customer empowerment, many hotel brands are also using user-generated content (reviews, social media posts) for continuously monitoring their cleanliness performance and brand's associations with COVID-19 issues.

Table 1 provides an overview of initiatives and guidelines developed by major hospitality operators.

## Technology and Digital Innovation

COVID-19 has accelerated technology adoption and use in hospitality from both a consumer and supply perspective (Sigala, 2020). Technologies have been instrumental and vital for hospitality operators to maintain their business continuity and safeguard the safety of their staff and customers, as well as plan for the next normal. Indeed, the role of technology in supporting the recovery but also the redefinition of hospitality in the post-COVID-19 industry is widely argued (Gilliland, 2020; Pillai et al., 2021; Shin & Kang, 2020). This is also confirmed by studies (Kim et al., 2021c) showing a clear change in guests' preferences from human-based to technology-based services because of COVID-19 perceived risks.

Technologies that have been slowly adopted and transforming hospitality before COVID-19 are now being rapidly introduced and innovate every type of hospitality operation. Technology induced innovation in hospitality is categorised in the following areas:

**Table 1** Safety, cleanliness, and hygiene protocols and initiatives in hospitality

| Hospitality operator | Initiatives/protocol | Guidelines |
|---|---|---|
| Marriott | Marriott global cleanliness council | Commitment to clean |
| Hilton | Hilton clean stay | New standard of cleanliness |
| Accor | ALLSAFE | The ALLSAFE label framework |
| IHG | IHC clean promise | IHC way of clean enhancement |
| Omni | Omni safe & clean | Stay A part of safety |
| Four Seasons | Lead with care | Global program guidance |
| Wyndham | Count on us | Health & safety protocols |
| Choice Hotels | Commitment to clean | Protocols and products |
| Best Western | We care clean | Five key areas |
| Loews Hotels | Safety & wellbeing protocols | Service promise and protocols |
| Airbnb | Enhanced cleaning initiative | ECI teaser |
| VRBO | Enhanced cleaning & disinfection of vacation rentals | New vacation rental standards |
| Red Roof Inn | Red roof RediClean | Protocols for employees and cleanings |
| Extended Stay America | STAY confident | Stay safe, stay healthy, stay comfortable |
| American Hotel & Lodging Association | Safe stay | Safe stay guidelines |
| OYO Hotels & Homes | Sanitised stays | Corona concierge |
| Margaritaville | Health & sanitation commitment | Guidelines & reopening schedule |
| AMResorts | CleanComplete verification | Quality safety, & hygiene protocols |
| Montage International | Peace of mind commitment | Peace of mind commitment traveler guidance and protocols |
| G6 Hospitality | Clean@6 | Initiative overview |
| Club Med | Safe together | Protocols & standards |

Source: Adapted from Skift and Oracle Hospitality (2020, pp. 8–9)

- New distribution channels: digital channels for supporting food/beverage delivery. Apart from the booming adoption of food tech companies (e.g., UberEats, Deliveroo), hospitality operators worldwide have also "pushed" to innovate and develop their own controlled digital food delivery services, for example, Barossa Eats (Kelly, 2020) and Apocalypse (Wilson, 2020).
- Digital customer service and communication making them contactless and/or touch-free: technologies are introduced to streamline, personalise as well as increase the effectiveness and safety of customer experiences along their whole journey (e.g., Mystay, 2021; Portier Technologies, 2021). For example:
  - before the stay: digital (website, mobile app, kiosks-based) bookings, ordering and payments
  - during the stay: mobile check-in and check-out, digital key technology, robots and drones to deliver food and beverage, robot concierges/receptionists, robot cleaning systems, digital self-service touchless service for coffee (Rovins, 2020) or beer (Smithers, 2016)

  - after the stay: digital customer communication for complaints/feedback management

- Digital customer engagement. Hospitality operators have increased use of technologies to deepen and maintain their engagement with current (loyal) and potential customers. From using technologies to update and inform customers about COVID-19 news, booking refunds/cancellations and so on to "entertaining" customers during lockdown and boosting their psychological state and emotions.
- Digitalisation/virtualisation of experiences and offerings: hospitality operators offering online cooking classes (Le Méridien Angkor, 2021) and/or virtual drinks, to online parties (Ewe, 2020) with virtual gigs and DJs, virtual or hybrid conferences/events
- Employee management including remote working, e-training and e-learning
- Market intelligence referring to the use of big data and AI/machine learning to make better forecasting to forecast and manage risks, develop scenarios for strategic planning, marketing and pricing (Hollander, 2020), for example, traxo.com, trooptravel.com. For example, technology using big (geo)-data about COVID-19 cases, contact tracing to predict future virus out-breaks, lockdowns and cancellations and re-organisation of events
- Technologies for health and safety. For example:

  - contact tracing and self-reports
  - crowd management technologies for managing social density, contactless temperature controls and face recognition for tracing usage of masks, e.g., crowdvision technology (Airport Technology, 2021)
  - new technologies (e.g., UV cleaning equipment, electrostatic sprayers, cleaning robots, etc.) for enhanced disinfection (Garcia, 2020); robots for automating cleaning and sanitise and disinfect guest rooms without employee contact (Hotel Business, 2020).

It is envisaged that the use of these technologies will also continue in the post-COVID-19 era, because of a demand pull and supply push. Customers have tried, become familiar, and become experts in using the new technologies. These new customers' e-routines and e-habits are expected to continue, as people have realised the benefits of such technologies and have managed to effectively integrate them into their lives without disturbing their wellbeing. Equally, hospitality firms have accelerated their take-up of technologies and have benefited from the new "business" opportunities and cost savings. Consequently, professionals and guests see technology-based services as a complimentary rather than a substitute to traditional hospitality offerings. In the future, customers would expect digital (mixing digital and physical) customer service and offerings. For example, a dining customer may use technologies to reduce contact with service staff (e.g., e-payment, e-ordering), but would still like to dine in a restaurant and interact with others, but simultaneously also use a mobile app to find out information about the calories and nutritious value of a restaurant menu, and/or watch and interact with a chef in the back office

preparing his/her meal. Virtual and hybrid hospitality offerings and services are also a way to internationalise and expand the reach of hospitality services giving operators a new revenue stream and market to penetrate. COVID-19 has accelerated technology uptake by both hospitality demand and supply, and this is transforming the hospitality experience, operations and offerings forever.

## Servicescape Design

Being a multi-sensorial experience, servicescape significantly influences employees and guests' behaviour, mind, body and emotions (Sigala, 2021b). Servicescape atmospherics are an integral part of hospitality experiences affecting customers' satisfaction, behaviour and intentions, quality and brand image perceptions. However, the re-opening of the hospitality industry after the pandemic requires various interventions in servicescape design that have changed the hospitality experience and are challenging its future nature.

Due to COVID-19 safety and hygiene rules, hospitality operators were forced to make interventions, as well as innovate all aspects of their servicescape design:

- Ambient conditions (including temperature, music, odour/scent, colours) once used to create the hospitality experience are now changed. Operators make increased use of disposable single-use cups, utensils and menus. Scents being part of hotels' brand identity/personality (e.g., Hyatt, Westin) and experience are now being covered by disinfectant odours. Voices can generate a moist breath zone and increase viral spread. Consequently, various hospitality experiences have been adjusted: karaoke, and hospitality event spectators are required to sit down and avoid singing and co-creating the event experience; wineries are only allowed to offer sitting down wine tastings.
- Spatial layout and functionality have also been affected by COVID-19. For example, greater space between tables and chairs, dedicated exit and entrance points, installing glass or plastic separators of tables, private rooms for meal experiences. There has also been some innovation in servicescape design and experience with operators using "space bubbles" or greenhouses to separate guests amongst each other
- Signs, symbols and artefacts (e.g., COVID-19 signage and guidance, social distance markers, sanitiser points, queue management signals) have been increasingly used for informing guests about cleanliness and safety measures and generating comfort but also for educating and enforcing COVID-19 safe behaviour amongst employees and customers. This servicescape element is important as it does not only matter what operators do, but also how they communicate and enforce hygiene protocols to their patrons and employees.
- Social servicescape, referring to the social presence and interactions of people within hospitality venues, including the provision of emotional labour. COVID-19 imposed measures (such as social distancing, wearing of masks, face shields and

gloves by staff and guests) inhibits the provision of personal service and traditional aesthetic/emotional labour. Superior customer value is traditionally related to close interactions, while emotional labour refers to both *static appearance* (e.g., dress code, appearance, personal grooming and bodily characteristics) and *performative mannerisms* (verbal and non-verbal mannerisms) (Wu et al., 2020) such as, body language and service with a smile. Emotional labour is found to be an essential factor contributing to rapport-building, which eventually leads to customer satisfaction and perceptions of service quality (Warhurst & Nickson, 2007). COVID-19 imposed measures on social servicescape and customer service seems to inhibit the provision of this traditionally perceived high touch human-based hospitality service, while it is also altering people's perceptions of the characteristics and standards of good customer service. In fact, it might be that the COVID-19 paraphernalia and social distancing may become part of a *new normal* of hospitality staff appearance and uniform that symbolises and communicates the new frontier and perceptions of hygiene face-to-face personal service. Crowding in servicescapes once reflecting popular choice and evidence of good quality (e.g., crowded beaches, bars, restaurants) are now perceived as risky and low-quality hospitality experiences. Under COVID-19 capacity restrictions, customers have also discovered the benefits of "private" hospitality experience without the delays and noises of other guests around them.

The adjustment of the servicescape theatre to the COVID-19 cleaning and hygiene requirements is creating a new "hospitality" experience, a new psychological conform and expectations of the hospitality consumer. Future research is required to examine how the new servicescape is shifting the customers' perceptions, behaviours and feelings about the quality of aesthetics, comfort, safety and cleanliness. Preliminary results provide conflicting and diverging results. For example, Kim and Lee (2020) provided evidence of increased demand of private rooms in restaurants, but consumers have also reported to miss the social interactions in hospitality places operating with reduced capacity. Restaurants have used mannequins or dolls to fill up seats at unused tables in dining rooms (Associated Press, 2020), so that they can replicate the feeling of others' social presence. However, Taylor (2020) found that in relation to dining rooms with mannequins, customers found and preferred dining rooms with partitions between tables as more visually attractive, cleaner looking, more welcoming, safer looking, more entertaining, more sanitary and more comfortable.

## Employees Management

Hospitality employees have not escaped from the COVID-19 health and economic crisis. For some (Baum et al., 2020; Wong et al., 2021), the pandemic is one more crisis that has loudly amplified the pre-existing conditions, concerns and problems of hospitality staff during their pre-COVID-19 precarious "normal" lives. Being a

highly labour-intensive industry the halt of the global hospitality industry resulted in millions of job losses worldwide, negatively affecting lives, livelihoods and communities. To keep hospitality operators and jobs alive, numerous governments launched programs (e.g., subsidies, salaries support); executives of hospitality multi-nationals such as Hilton (Tyko, 2020) and Hyatt (Kostuch Media, 2020) have forgone salaries; and hospitality staff accepted salary cuts and compulsory unpaid leave. But despite these sacrifices, the hospitality workforce has suffered a lot, while it is experiencing a new reality whose long-term effects and rules are still unknown.

At an individual level, studies already report the severe economic, psychological, and physical wellbeing impacts on hospitality staff (Wong et al., 2021; Yu et al., 2021a) including salary cuts, enhanced stress and anxiety from job insecurity and health risks undertaking, even mental health problems and suicides (Taylor & Siradapuvadol, 2021). Hospitality staff find themselves in a new work environment featuring the use of masks, temperature checks, mobility tracing, COVID-19 tests or vaccine passports required for entering the workplace and/or for getting/maintaining a job. To safeguard the wellbeing of staff and guests, hospitality operators have intensified their workforce care, training and professional development services. Numerous industry training programs are provided by governments (e.g., Queensland Government, 2021), hospitality operators and associations (AHLA, , 2021) alike aiming to (up)-skill employees to the new COVID-19 imposed health, safety and hygiene standards. Development of new skills refers to both technical and soft competencies including professional specialised abilities in identifying and communicating with people being affected by COVID-19, such as risk communication, cultural sensitivity, disease transmission, isolation, quarantine and other measures, for example courses to become a certified contact tracer (Purdue University Global, 2021). Hence, it is not surprising the increased research attention on employees' safety performance and behaviours. However, employees' compliance with the new procedures does not solely depend on their knowledge and skills. Research (Guzzo et al., 2021; Hu et al., 2021; Kim et al., 2021b) reveals that employees' participation and motivation to implement safety/hygiene protocols is also heavily influenced by the organisation's crisis communication and management practices, the organisational trust and commitment shown towards Corporate Social Responsibility values and actions. The latter significantly highlights the magnified and urgent need of the hospitality industry to heighten its efforts to become a more responsible and sustainable industry to address the overdue demands and issues pertaining not only consumers and the society overall but also its major asset, namely its employees.

At a macro-level, the (global) hospitality industry and labour market have experienced several impacts due to COVID-19 with serious knock over effects and long-term implications. Good talent exited the hospitality industry to seek employment. This huge brain drain is envisioned to crucially affect hospitality in the long term, as professionals are not expected to return to hospitality (especially when they experience better remuneration and career options in other industries). The hospitality industry is still also unable to absorb the emerging graduating talent (Sigala, 2021a). Current hospitality graduates are demoralised due to frozen internships, placements

and recruitment programs and often re-directed to other industries, as hospitality skills are highly transferable and widely sought. Hospitality education providers have also experienced significantly reduced student registrations for the last 2 years.

Efforts continue to recover tourist numbers and at the same time industry jobs to the pre-COVID-19 period, however little is done to retain, develop and attract talent in the industry. Scholars and industry members alike need to address not only the future labour shortages, but also the various issues challenging the quality of hospitality work. COVID-19 has intensified the impact and the need to respond to many of these challenges, and research is still required to better understand and guide policy makers and industry alike about:

- the new skills and competencies required from hospitality employees due to the *new normal*, the changing consumer sentiment and demand, the accelerated adoption and use of technologies (e.g., AI, machine learning, robots) in hospitality automating all job tasks from low level (mechanical) to high level (cognitive/analytical and emotional) skills
- the best ways to develop the new skills/abilities to the existing and the new hospitality workforce (e.g., revised/new pedagogies, curricula, professional training)
- the talent management practices that can satisfy the needs of the new generation entering the hospitality labour market.

## Brand Communication and Marketing: Price, Promotion and Distribution

Despite the halt of the industry, hospitality operators have intensified their customer communications and use of digital channels to address urgent customer service issues, maintain customer engagement, and win future loyalty. The core focus of customer communications has been shifting during the crisis:

- At the beginning of lockdowns: communications aimed to help affected customers and employees, e.g., dealing with stranded guests, cancellations, refunds and/or credits for re-bookings, expiring loyalty points and status in a period when loyal guests cannot collect and/or redeem points, revision of policies/rules and/or the whole design of loyalty programs
- During the lockdowns: communication gave emphasis on boosting the morale of depressed consumers being in lockdown not being able to travel. Purpose or cause marketing on social media skyrocketed with operators launching campaigns to sell "hope" and seek people's solidarity to stand by each other and address the current crisis, "entertain" but also to keep people tourism-inspired and interested while being locked down and not able to travel. The hashtags of many such campaigns became known worldwide and received a lot of support (i.e., "likes" and "shares"), for example: #inthistogether #stayinspired #DreamNowVisitLater #travellater #TogetherInTravel #donotcancelrebook #OneTravelIndustry #togetherathome (Collins, 2020).

- The re-opening of the industry: communications focused on generating customer confidence to return by creating awareness and trust on two aspects: the hygiene/safety protocols; and the "flexible" booking/pricing policies (e.g., no penalties for rebookings, cancellations, refunds)

The focus of these communications does not only reflect the industry's challenges and responses to the crisis. These communications also epitomise the introduction of industry "innovations" whose prolonged use has a great potential to alter the operations and nature of hospitality. A good example is the effectiveness of hospitality loyalty programs and their ability to address contemporary industry developments. Loyalty programs in hospitality have resulted in "pointification" systems measuring and trading customer loyalty as an exchange relationship of purchases and points. These loyalty programs have offered little room for differentiation within the hospitality industry and converted guests to "point hunters" being loyal to the program and not the hospitality brand. Hospitality operators are overdue to re-think about what is guest loyalty and how to build it by understanding that customers can co-create (but also co-destroy) value at all touchpoints of the value chain and not just at the purchase/consumption stage. Technologies enable customers to engage with brands and co-create value at the design, production, marketing and after-sales stage. Hence, the industry should re-think the way it measures customer value and reward customer engagement and loyalty that goes beyond the traditional customer lifetime value metrics of loyalty programs focusing solely on frequency and value of customer purchases. Several other contemporary trends demand the industry to change: customers are loyal to everyone but no one (customer polygamy in several loyalty programs), do not like being locked-in but prefer instant rewards of their co-creation activities, and are accustomed to subscription services (i.e., unlimited use for the paid period such as, Netflix, Spotify). The industry is overdue to re-think customer loyalty and engagement and the ways to build and win it in a hyper-competitive and flux world, where there are no distinction walls between industries and the role of producer and consumers.

In response to the COVID-19 situation, numerous hospitality operators have relaxed their booking and pricing policies (e.g., flexible cancellations/refund policies, frequent price discounts, removal/reduction of min/max lengths of stays and deposit/pre-payment requirements). Customers have experienced these changes for a rather long period and re-adjusted their expectations as well as understanding of hospitality pricing or "profiteering" tactics. This questions whether the industry can go back to the old normal or it is time to revisit and reform its revenue management policies and practices. For example, the introduction of subscription programs (Munoz, 2021) have been debated as an effective way to restart the industry and make it competitive in the post-COVID-19 era.

The (over)-use of cause marketing by hospitality operators during the crisis is not surprising. The industry has always used cause marketing to respond to society's challenges such as climate change, sustainability, equality, racism/discrimination. However, to what extent this (over)-use of cause marketing is not another one woke-marketing or COVID-19 washing marketing, but it rather reflects an authentic and

honest re-direction of the industry to build back better. Have hospitality operators really begun to re-think their practices, re-imagined and become ready to restart the industry with responsible and sustainable practices, or is this a cultural/political marketing practice and they will soon go back to the old normal? Many things have been written about the transformational opportunity that COVID-19 has provided to the industry, but very little has been debated on how hospitality can become a true and authentic contributor to the purpose economy. More research is still needed to provide a roadmap on how hospitality as an industry and social practice can generate a meaningful value and purpose to the society. Probably a "refreshed" return to the roots and values of hospitality can be one way to achieve this. Nevertheless, more time is needed to conclude whether COVID-19 can and has been a milestone for a new 'better' beginning of the industry.

Finally, the aggressive and immediate response of the industry to (co-)develop (with medical experts), accredit and implement/police measures to protect the safety and hygiene of its major stakeholders (i.e., customers/employees) signifies another critical issue for discussion and future investigation. It implies the emerging role and importance of brands (and not institutions) to protect citizens and take civil action by setting, establishing mechanisms and brand credibility to build trust and assurance to what traditionally been considered the role of state governance. This is for example confirmed by research findings (Jiménez-Barreto et al., 2021) showing how hospitality operators have used and developed their brand personality to communicate health and safety and create consumer confidence by institutionalising brand "qualities". The ability and the role of industries and markets to be self-regulated with limited and/or no governments' interventions has been a topic of discussion for centuries. Is COVID-19 again a milestone whereby the role of governance will be once again re-thought and/or start to be diminished? Do (hospitality) brands have the credibility and responsibility to assume the role of governance and are markets sufficiently capable enough to regulate and re-build a better normal?

## Conclusions and Implications: Hospitality Redefined

COVID-19 has been a transformational stressor and accelerator for hospitality. The health crisis has subsequently generated economic, socio-cultural, psychological and political crises, and has introduced and fostered changes, interventions and innovations in hospitality. The crisis has also magnified the existence and impact of pre-existing challenges and issues (e.g., technology evolution and climate change) and intensified the urgent need that the hospitality industry should take action. The continuous changes affect all aspects of the industry: the hospitality offerings and business operations; the physical and social environment of the hospitality experience; the hospitality experience itself; the business and social practices as well as the mindsets of all hospitality stakeholders (namely companies, shareholders, brands, employees and guests).

Overall, by affecting the core DNA of hospitality, COVID-19 imposed and nurtured changes that make us re-think how the crisis might redefine and reset the nature and provision of the concept of hospitality itself. Under the fear of contamination and the realistic scenario that we will have to live with the continuous existence of "a" virus, people have become and may see as *normal* to be socially avoidant, more introverted and less tolerant to "strangers". These new mindsets can critically redefine and reform our concept of hospitality, customer service and quality in the next normal. Preliminary findings (Bonfanti et al., 2021) show that there are new expectations of intended hospitality experiences in terms of how vital concepts are being understood and interpreted in practice, for example:

- re-assurance viewed as reduced perceived risk, communication practices, trust on employees' capabilities
- quickness and promptness seen as provision of fast convenient service
- intimacy interpreted as the capacity limits in the use of hospitality spaces
- proximity defined by emotional and social closeness rather than by physical closeness

This chapter aimed to identify and discuss the major changes taking place in hospitality because of the pandemic. The chapter also analyses both the immediate and long-term implications of these changes for the industry, with the purpose to start a debate and inspire research directing to the re-imagination and the re-setting of the hospitality industry. To achieve these, the chapter discuss changes related to: the hospitality offering; the safety, cleanliness and hygiene protocols; the servicescape design; employees management; and brand communication and marketing. The chapter discussions examine how these interventions change the physical structure and relational/social aspects by which hospitality spaces are re-constructed and re-designed and as a result redefine the hospitality experience and the essence of hospitality itself. It becomes evident that COVID-19 has "forced" hospitality operators to rethink the redesign of all aspects of the customer experience in hospitality including, the (digital) touchpoints, the stages and sequence of the customer journey, the design and expanded frontiers of the customer journey. Overall, COVID-19 is affecting the way hospitality is defined and experienced, the way hospitality spaces are conceived, constructed and consumed, the way hospitality stakeholders can re-imagine their business and social practices to co-create (meaningful) value to a new and hopefully better economy.

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# Cruise Ships and Passenger Health

**Peter A. Leggat and Richard C. Franklin**

**Abstract** Cruise ships were carrying record numbers of passengers each year until COVID-19 struck in early 2020. With COVID-19 vaccination commencing in many major source countries for cruise ship passengers, it is expected that cruise ship travel will start to recover in the latter part of 2021. Cruise ship travel remains a relatively small part of the overall global travel market, but it remains popular in North America. Cruise ships are like a floating hotel with many facilities to entertain passengers varying from basic to high end. Part of their service includes medical facilities often available 24 h at a cost. Cruise ship medical staff treat a small percentage of cruise ship passengers and crew each cruise. Common conditions occurring amongst travellers include gastrointestinal and respiratory ailments.

**Keywords** Cruise ships · Passenger health · Medicine · Safety · COVID-19

## Introduction

The United Nations World Tourism Organization (UNWTO, 2021) reported that there was a record 1.46 billion international tourist arrivals worldwide in 2019 and world tourism was on track to create a further record in 2020 until COVID-19 struck. Early in the pandemic, the UNWTO (2020) press release on 7 May 2020 reported that international tourism numbers could fall 60–80% during 2020, but this was assuming that tourism would be able to open back up in some way before December 2020. Global tourism is set to recover in 2021 and beyond as a global vaccination program against COVID-19 begins; however, reaching the same numbers as pre-COVID-19 will take time.

While most tourists travel by air (55%) and road (39%), a small number of travellers travel by water (4%) and rail (2%) (UNWTO, 2021). Prior to COVID-19, the

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_21

cruise ship industry was growing consistently each year and 27 million passengers were expected in 2020 (Cruise Market Watch, 2021). In 2020, Worldwide Passengers carried on cruise ships slumped to just over 7 million (7,092,600) (Cruise Market Watch, 2021) with a recovery taking place this year.

However, to help put this in context:

> If all the cruise ships in the entire world were filled to capacity all year long, it would still only amount to less than half of the total number of visitors to Las Vegas annually. (Cruise Market Watch, 2021, p. 1).

The arrival of the Cruise Ship Ruby Princess in Sydney on 19 March 2020 with a COVID-19 outbreak and 2650 passengers onboard brought the growing COVID-19 pandemic into sharp focus in Australia. Passengers were allowed to disembark and travel back to their respective homes in other states and abroad. Sixty-two persons in Australia became infected through secondary transmissions (BBC, 2020). At least a dozen cruise ships were subsequently banned from docking at Australian ports due to their virus risk.

There were similar reports from around the world, such as the Diamond Princess with 712 persons infected on the cruise ship docked at Yokohama, Japan. Quarantining occurred from 5 to 23 February 2020 (Jimi & Hashimoto, 2020). Interestingly, a few lessons were learnt from this incident, which included that being confined to cabins reduced the spread, medical staff interacting with patients need to take care, not working across multiple sites, and that older people were at greater risk (Baraniuk, 2020).

The tourism cliff from COVID-19 is described as a 1 in 100 year event, although cruise ship companies have seen lesser impacts from the 9/11 attacks and the 2008 global financial crisis in more recent years (Radic et al., 2020). The last such event was the Spanish Flu, but there have been others such as H1N1, influenza, measles, Legionnaires' disease, and multiple outbreaks of norovirus onboard ships (Holland, 2020). COVID-19 (SARS-CoV-2) would see tourism decline by 60–80% over 2020 (UNWTO, 2020). Recovery depends on the opening of "travel bubbles", delivery of effective vaccines, and uptake of vaccinations (see *Introduction: Issues in Tourist Health, Safety and Wellbeing*). This is by far the worst crisis that international tourism has faced since records began in 1950. The impact will be felt to varying degrees in the different global regions and at overlapping times, with Asia and the Pacific expected to rebound first (UNWTO, 2020).

## Global Cruise Ship Fleet

A cruise line is a company that operates cruise ships and markets cruises on oceans or rivers to the public. Cruise lines are distinct from passenger lines, which are primarily concerned with transportation of their passengers. At the beginning of 2020, there were 205 cruise lines and most cruise lines had just one to two ships. There were five cruise lines which had no ships. There were just 12 major cruise lines

(with 15 or more ships) and some of these had common parent companies. Carnival Corp & PLC had greater than 100 vessels across ten cruise line brands. Largest was Costa Cruises with 38 Ships (Cruise Ships by Nautical Cities, 2021).

In early 2020, there were 296 cruise ships in service plus 22 chartered cruise ships and nine converted to hotels as well as two gambling ships (Cruise Ships by Nautical Cities, 2021). The industry classification of cruise ships is given in box below. Marriott International became the only provider of luxury accommodation on land and at sea and launched a 190 metre hotel ship, which can accommodate up to 298 passengers and features 149 suites (includng two 158 square metre Penthouse Suites). This was part of their Ritz-Carlton Yacht Collection.

**Industry Classification of Cruise ShipsMainstream cruise ships (floating resorts)**

- Mega cruise ships
- Small cruise ships (motor or sail)
- Ocean cruise ships
- Luxury cruise ships (motor or sail)
- Adventure cruise ships (motor or sail)
- Expedition cruise ships (incl. icebreakers)
- River cruise shipsSource: Adapted from Wind Rose Network, 2021, paras. 6–13.

COVID-19 has slowed down the ocean passenger cruise industry for more than 12 months over 2020 and 2021. It also accelerated the retirement of numerous ships as fleets become more modern and environmentally friendly. Between 2019 and 2021 a total of 31 ships are leaving worldwide ocean cruise operations, reducing passenger capacity by 49,105 (Cruise Market Watch, 2021). These numbers are offset to a degree by eight new ships with passenger capacity of 34,312 that will be added in 2021. This places worldwide ocean cruise passenger capacity at 581,200 from 323 ships, which will be able to carry a total of 13.9 million passengers at end of year 2021 (a 96.2% increase over 2020 and a −49.4% decline from 2019). Worldwide passengers carried estimates for 2021 assumes that post-COVID-19 sailings begin March 1, 2021 at 50% capacity and reach 90% capacity by end of year (pre-COVID-19 sailings were at 105–109% capacity) (Cruise Market Watch, 2021). North America is a key market for the cruise ships.

## Regulation

The cruise industry is one of the most heavily regulated industries with robust, clearly defined standards and rigorous enforcement by outside authorities. The average ship undergoes dozens of announced and unannounced safety inspections per

year, involving hundreds of hours and the implementation of thousands of specific requirements set by the International Maritime Organization (IMO) and other authorities (Cruise Lines International Association [CLIA], 2021). These regulatory authorities set comprehensive standards for safety, security, crewmember protections, health, and environmental performance. International regulators include the IMO, International Labour Organization (ILO), and the World Health Organization (WHO). Also, agencies such as the U.S. Coast Guard, the Centers for Disease Control and Prevention (CDC) and the Environmental Protection Agency (EPA) have full authority to regulate and enforce compliance for ships entering or departing from U.S. ports (CLIA, 2021). This does not include the local requirements for other countries.

In terms of health regulation, cruise ships implement syndromic surveillance of acute gastroenteritis (AG) cases using standard definitions, as described in guidelines from the World Health Organization (WHO, 2011), and as required by national and international inspection programmes for cruise ships (EU Healthy Gateways, 2021). For example, the European Manual for Hygiene Standards and Communicable Disease Surveillance on Passenger Ships includes a chapter for the prevention and control of AG, and recommends standards for syndromic surveillance and outbreak management plans on passenger ships sailing in European Union (EU) countries' waters (*EU SHIPSAN Act,* 2016). Moreover, this manual suggests that pre-defined thresholds for outbreak alert reports and control measures should be agreed and included in the outbreak management plan. When increased numbers of AG cases are diagnosed in the ships infirmary, outbreak management plans are activated, intensifying the routine prevention measures and implementing additional ones, such as active surveillance, enhanced environmental disinfection, discontinuing the self-service buffet, and social distancing (*EU SHIPSAN Act,* 2016; WHO, 2011). Activating the outbreak management plans in a timely manner is important and can help to prevent the further person-to-person transmission that results in large outbreaks (*EU SHIPSAN Act,* 2016; WHO, 2011). The *International Health Regulations (IHR) 2005* requires ship captains to notify the port public health authority of any public health risk onboard a vessel before arrival at the port (WHO, 2016). The port health authorities are responsible for checking that valid health and hygiene plans, including outbreak management plans, are in place, when notified of a risk onboard.

The CDC Vessel Sanitation Program (VSP) (CDC, 2021) receives reports from cruise ships with information about diarrhoeal disease cases 24–36 h before arriving in the US from a foreign port and additional reports when the cumulative AG attack rate among either passengers or the crew is $\geq 2\%$ and $\geq 3\%$ (Mouchtouri et al., 2017).

The VSP at the CDC (2021) assists the cruise ship industry to prevent and control the introduction, transmission, and spread of gastrointestinal illnesses (GI) on cruise ships. VSP operates under the authority of the Public Health Service Act (42 U.S.C. Section 264 Quarantine and Inspection Regulations to Control Communicable Diseases). VSP is part of the National Center for Environmental Health's Division of Environmental Health Science and Practice. VSP scores for major cruise lines, including: cruise line, year, number of inspected ships and average inspection score are maintained at this site.

Shipboard sanitation includes a wide variety of areas (Wheeler, 2005), including:

- Food, water, air
- Living quarters (passenger and crew)
- Public areas
- Waste (trash, garbage, sewerage, HAZMAT)
- Pests (vermin, insects)

### *Expectations of Cruise Ship Passengers*

In general, cruise ship passengers expect (Wheeler, 2005):

- Beautiful ship
- Comfortable stateroom
- Great food
- Exciting activities
- Competent medical care
- Safe and sanitary environment

## Cruise Ship Medicine

The practice of medicine aboard cruise ships is designed to provide passengers and crew members with timely access to quality medical services for minor to severe illness and injury so that they can get on with the rest of their cruise. Depending on the size of the ship, each cruise ship will have a medical centre as well as medical staff. On Holland America Line (2005), medical services normally include a North American-trained passenger physician, two to four registered nurses, and a crew physician (usually trained and board-certified in the Philippines). This medical group is on call 24/7.

Holland America Line (2005) also has a

- Fleet Medical Director
- Fleet Nursing Director and Medical Operations Officer

Cruise ship medical staff are an integral part of the ship's safety, health and hygiene team responsible for (Wheeler, 2005):

- Prevention of illness and injury
- Surveillance
- Incident response
- Diagnosis
- Treatment (can refer off ship for specialist treatment)—passengers and crew

The medical staff must also keep superiors informed of any health issues that could impact the ship's operations, such as an infectious disease outbreak or the need for an emergency medical evacuation.

## Common Health Problems on Cruise Ships

Prior to COVID-19, the ten largest cruise ships were carrying 4000–6400 passengers with many operating at more than 95% capacity. On a typical one week cruise on an average cruise ship, the medical staff will see (Wheeler, 2005):

- 1% of the total population on-board each day
- 50% crew, 50% passengers
- 90% non-urgent problems
- 5% urgent problems
- 5% emergent/life-threatening problems
- Occasional health problems from on-board/onshore activities

Table 1 shows the ten most common health issues on cruise ships compared to presentations in hospital emergency departments. As can be expected in a more confined environment the rate of respiratory presentations is greater on cruise ships, but this can also be a reflection of many passengers being in an older demographic.

A five-year study by Marshall et al. (2016) from 2009–2013 of reports by passengers and crew to Barbados Port Health Department indicated that there were 4.86 million passenger and crew visits (70% passengers). Communicable disease events were reported at 15.7 cases/100,000 passengers. Predominantly the conditions reported were gastrointestinal illnesses and influenza (87% for crew; 93% for passengers). Non-communicable diseases represented 3.4 per 100,000 passengers (Marshall et al., 2016).

**Table 1** Ten most common diagnoses by organ system for cruise ships compared to U.S. Emergency Departments

| Cruise Ships | % | U.S. Emergency Departments | % |
|---|---|---|---|
| Respiratory | 26–29 | Injury-related and Poisoning | 25.6 |
| Injury-related | 12–18 | Respiratory | 12.3 |
| Nervous and Sense Organs | 9 | Nervous and Sense Organs | 5.4 |
| Gastrointestinal | 12–16 | Gastrointestinal | 5.8 |
| Cardiovascular | 3–7 | Musculoskeletal | 5.4 |
| Genitourinary | 3 | Cardiovascular | 3.9 |
| Musculoskeletal | 3 | Genitourinary | 4.4 |
| Skin and Subcutaneous Tissue | 3–13 | Skin and Subcutaneous Tissue | 2.8 |
| Endocrine and Immune | 0.8 | Mental Disorders | 3.3 |
| Mental Disorders | 0.7 | Endocrine and Metabolic | 1.6 |

Source: Wheeler (2005)

## *Gastrointestinal*

The vast majority of outbreaks of gastroenteritis acquired on cruise ships are due to noroviruses. There have been multiple outbreaks of these infections on multiple cruise ships over the past years, one of the most famous was in 2014 when 600 passengers and crew became ill on the Royal Caribbean liner Explorer of the Seas and returned home early (*Maritime Injury Guide,* 2021). These infections are often facilitated by the close living quarters, common food supplies, and intermingling of individuals that occur on cruise ships. Several routes, including faecal-oral transmission, aerosolisation during vomiting, food and water as vehicles, and environmental contamination by symptomatic patients or asymptomatic carriers, can spread these viruses. The widespread use of reverse transcription-PCR (polymerase chain reaction) techniques has led to improvement in the diagnosis of this infection and an increased appreciation of the role of this virus in causing widespread epidemics of diarrhoea on cruise ships. The control of an outbreak is often very difficult and should involve aggressive infection control, with active disinfection, isolation of sick individuals, strict hand-washing techniques, and training of food handlers in proper food handling procedures.

Though less common than noroviral outbreaks, bacterial gastroenteritis outbreaks have occurred on cruise ships. The bacterial pathogens implicated in cruise ship outbreaks of gastroenteritis include enterotoxigenic *Escherichia coli*, *Salmonella* species including *Salmonella enterica* serovar Typhi, *Shigella* species, *Vibrio* species, *Clostridium perfringens*, *Campylobacter jejuni*, and *Staphylococcus aureus* (Kak, 2015). These infections tend to be more severe than those caused by noroviruses and have led to some deaths of cruise ship passengers. The majority of these outbreaks were caused by contamination of the ship's water supply by sewage.

The prevention of gastrointestinal infections on cruise ships involves controlling potential deficiencies in food and water handling as well as in cooking and catering, preventing sewage contamination of the water supply, and isolating sick people. In the absence of effective vaccines for the prevention of infections by the majority of the above-mentioned organisms, with the exception of S. enterica serovar Typhi, these efforts are the primary preventive methods to decrease the burden of gastrointestinal illnesses on cruise ships.

## *Respiratory*

There have been well-documented reports of both influenza A and influenza B outbreaks on cruise ships (Kak, 2015). These infections tend to have a high attack rate, with a large number of individuals being infected before the epidemic is contained. These outbreaks can occur year long on cruise ships, because individuals from different hemispheres introduce the virus into the cruise ship population (Kak, 2015).

The prevention of influenza on cruise ships involves annual vaccination of all passengers and crew. The vaccination of passengers should occur at least two weeks before travel, especially if they are at high risk of complications from influenza. In addition, antiviral chemoprophylaxis should be considered for prevention of infection in exposed people, who are at high risk for complications or for controlling influenza outbreaks on cruise ships, especially if the cruise has a high proportion of passengers who may have a high risk of influenza complications (Kak, 2015).

Among the bacterial pathogens that cause respiratory infections on cruise ships, the most common infections reported have been due to Legionella species.

## *Varicella*

The most common infection on cruise ships reported to the CDC is varicella (Kak (2015). Varicella causes frequent outbreaks aboard cruise ships, and because varicella complications occur more frequently in adults, cruise ship outbreaks have the potential to involve serious illness since most cruise ship passengers and all the crew are adults. The crew members on a cruise ship are more likely to be susceptible to varicella than the general North American passenger because they often are from the tropics, where varicella infection typically occurs at a later age compared to temperate areas. They also have overall lower immunisation rates compared to the North American passengers. The travellers at highest risk for severe disease are immunocompromised people or pregnant women without a history of varicella disease or vaccination (Kak, 2015).

## *Dental*

Typically cruise lines do not staff a dentist or have dental facilities onboard. Dental problems are however a significant issue reported on travel insurance claims by Australians travelling abroad constituting about 7% of travel insurance claims (Leggat & Leggat, 2002). The best case scenario is that cruise ship arranges for dental consultation at the next port. A few long and remote cruises do have the need for dental personnel to treat urgent dental care needs of passengers and crew. This does emphasise the importance of a pre-cruise dental check-up.

## *Deaths*

There have been a limited number of studies concerning mortality on cruise ships, which are generally retrospective. In a five year study by Marshall et al. (2016), there were 21 deaths, which were mainly due to myocardial infarction. An 11 year

retrospective study by Oldenburg et al. (2016) from 1998 to 2008, using the German Civil Central Register, found that 110 passengers died on cruise ships (75.6% male; 24.4% female) from an estimated 5.97 million German cruise passengers. The crude mortality rate of shipboard death for males and females was 2.5 and 0.8 per 100,000 German passengers with a mean age of 71.2 years (*SD* 16.0 years) and 73.3 years (*SD* 16.0 years), respectively. The causes of death were natural causes 96.5% (including circulatory) and unnatural causes 3.5% (two drowning and one accidental fall), where cause was documented (Oldenburg et al., 2016). A 10-year retrospective study from 2010 to 2019 examining cruise ships within the International Cruise Ship Wave Network by Heggie and Burton-Heggie (2020) examined all fatal reports for 51 registered ocean cruise ships and 27 registered river cruise ships. They found 623 reported deaths, of which 89% were passenger deaths and 11% were crew deaths. For the passenger deaths, they were mostly due to falls overboard or onto lower decks (23%), suicide, murder and a terror attack (19%), unspecified natural causes (18%) and cardiac incidents (16%).

## Emergent Problems

In recent decades of cruise ship travel, a number of emergent infectious disease problems have impacted on cruise ship travel. Tarlow (2017) indicates that infectious disease outbreaks challenge cruise ships and these health risks also have the potential to harm the reputation of the cruise ship line. Recent outbreaks have included:

- COVID-19
- Norovirus
- Influenza
- Legionnaires' disease

Other non-infectious issues that have arisen have included:

- Hijacking/Terrorism
- Sexual assault
- Worker health and safety
- Bed bugs
- Fire
- Slips, trips and falls
- Other accidents such as being hit by objects falling from upper decks, drowning, chemical injuries, broken railings and ladders, recreational accidents while participating in activities delivered by the cruise line
- Rarely murder

## *COVID-19*

COVID-19 was a serious issue for cruise lines in 2020 and has had an ongoing impact in 2021. In Australia, the cruise ship Ruby Princess became the largest COVID-19 epicentre, when 2700 passengers were allowed to disembark in Sydney on 19 March 2020. Of these, 130 had flu-like symptoms and were tested for COVID-19. Four tested positive. Amongst those who had disembarked, the number testing positive rose to 162 by 27 March 2020. By this time the passengers had spread far and wide and the debacle led to an official enquiry by the Government of New South Wales. As a result of this, a class action was launched by passengers against Carnival Plc and Princess Cruise Lines Ltd over their mishandling of the deadly COVID-19 outbreak onboard the Ruby Princess (Shine Lawyers, 2021).

The largest cluster of COVID-19 cases outside mainland China occurred onboard the Diamond Princess, which was quarantined in the port of Yokohama, Japan on 3 February 2020 (Jimi & Hashimoto, 2020). On 6 March 2020, cases of COVID-19 were identified on the Grand Princess off the coast of California and quarantined. By 17 March 2020, confirmed cases of COVID-19 had been associated with at least 25 additional cruise ships. In due course, many countries banned cruise ships from arriving in their ports early in the pandemic (Moira et al., 2020).

An interesting correlation and regression analysis of risk factors for COVID-19 attack rates on cruise ships worldwide with reported COVID-19 from 1 January 2020 to 11 May 2020 was undertaken by Quigley et al. (2021). It showed that the number of available cabins had a moderate inverse correlation with the attack rate. The number of cabins, the number of decks with cabins and passenger-to-space ratio were significantly associated with attack rate; however, the duration at sea was not related.

## *Norovirus*

Norovirus has been shown as the cause of gastrointestinal disease on cruise ships with outbreaks of nausea, vomiting and diarrhoea (CDC, 2018; Holland, 2020). The main route of transmission appears to be faecal-oral transmission, especially through contamination of food, and to a lesser extent through person to person transmission. Only small infectious doses of 10–100 virus particles are needed to transmit the disease and viral shedding occurs over three weeks or more. Norovirus survives 0–60 °C and also chlorine 10 ppm. The incubation period is around 24–48 h and results in an illness lasting between 12 and 60 h. It is a relatively mild and short-lived illness. Testing is available.

## *Influenza*

Influenza A and B have been found on cruise ships and it has been known for decades that they can spread novel influenza viruses (Miller et al., 2000). Transmission tends to be person to person via respiratory droplets, as well as environmental surface contamination. The incubation period is 1–4 days and the duration of acute illness is typically 3–7 days. The infectious period ranges from 1 day prior to and 5 days after onset of symptoms. Annual influenza vaccination can assist in prevention. A study by Rogers et al. (2017) highlighted a number of issues, where cruise ship medical staff collected 2–3 nasopharyngeal swab specimens per week from passengers and crew members presenting to the ship infirmary with acute respiratory illness. Of 410 nasopharyngeal specimens, 83% tested positive for at least one respiratory virus and 71% tested positive for influenza A or B virus.

## *Legionnaires' Disease*

Legionnaires' disease has been reported on cruise ships. It has presented following aerosolised transmission via contaminated water sources, such as whirlpool spas, hot tubs, and showers, as well as through cooling systems, humidifiers, fountains, and respiratory therapy equipment. There is generally no person to person transmission. The incubation period is 2–14 days. Presenting features of Legionnaires' disease include fever, chills, cough, pneumonia, headache, and myalgias. Generally, the illness lasts 2–4 weeks. There is a 10–25% mortality rate generally from multisystem organ failure.

Mouchtouri and Rudget (2015) undertook a systematic review of travel-associated Legionnaires' Disease (LD) in hotels and passenger ships. Four of nine ship-associated events occurred repeatedly on the same site. Ship-associated cases were most commonly linked to hot tubs (59/83, 71.1%). Common contributing factors included inadequate disinfection, maintenance, and monitoring; water stagnation; poor temperature control; and poor ventilation.

## *Hijacking/Terrorism*

There have been several examples of hijacking and terrorism over the past 50 years (Holland, 2020; Nikolić & Missoni, 2013), including:

- Santa Maria, 1961 Portuguese rebel group
- Achille Lauro, 1985 Palestinian "terrorists"
- More recently Somali pirates off the East Coast of Africa

- MV Seabourn Spirit, 2005: Somali pirates attacked/driven off by crew through use of high-pressure water hoses/Long Range Acoustic Device (sonic cannon)—ship was fired upon by machine guns and rocket-propelled grenades (Holland, 2020)
- MS Nautica, 2008: Somali Pirates attacked/driven off by crew; Evasive manoeuvres/outran pirate boats
- MSC Melody, 2009: Somali pirates attacked/driven off by passengers and armed security guards

### *Injury*

There are a range of incidents, which occur on cruise ships that have resulted in a person being injured and dying (*Maritime Injury Guide,* 2021). These include: drowning; falls, slips and trips; sexual and physical assault; being hit by falling objects; musculoskeletal injuries; alcohol poisoning; and chemical-related injuries to name a few.

Prevention of injuries on cruise ships is no different to other locations. For example, for drowning prevention, it will be important to make sure that children are supervised and for adults to have a buddy; good footwear is important for moving around the ship; looking up to see what is above you; minimising your alcohol intake, and so on.

## Pre-Travel Health Advice

The CDC (2020) advises the following for cruise ship passengers:

- Vaccination: national schedule/travel-related, including influenza/consider destination advice
- Hygiene: hand washing/use of alcohol-based hand sanitiser/respiratory etiquette
- Monitor/consider chronic diseases
- Adequate travel/evacuation insurance
- Check safety and security
- Seasickness: may need medication

Preventive measures for sea sickness (CDC, 2017):

- Don't go! Avoid ocean going cruises if you suffer severely
- Get a central cabin on ship
- Eat before the onset of symptoms
- Caffeine
- Reducing sensory input, e.g., closing eyes; looking at horizon
- Stimulating other senses, e.g., aromatherapy, ginger candy, flavoured lozenges, and so on.

Treatment of motion sickness usually involves one of three main groups of products

- Antihistamines, e.g., dimenhydrinate (longer acting)
- Anticholinergics, e.g., hyoscine hydrobromide
- Ginger preparations (may aid gastric emptying)

There are a range of commercial products marketed for sea sickness including Travacalm and others such as Kwells, Avomine (promethazine), Maxalon (metaclopramide), and Stemetil (Prochlorperazine).

Travel insurance will be important, especially travel insurance that covers medical expenses aboard the cruise ship and evacuation expenses. It may be useful to take a travellers' medical kit for common problems that may arise during a cruise.

### *Pregnancy*

Various cruise lines have restrictions concerning pregnant travellers and most relate to being within the first 24 weeks (see Table 2).

## Post-travel Consultation

It may be useful to arrange a post-travel health consultation following the cruise, especially to follow up on:

- Significant ailments or exposures abroad or to follow-up on further rehabilitation required for injuries
- Complete vaccination courses if required

**Table 2** Pregnancy restrictions for various cruise lines

| Cruise Line | OK to cruise[a] | Additional information |
|---|---|---|
| Carnival | ≤24 Weeks | Physician's letter |
| Celebrity Cruises | <24 Weeks | All guests-health questionnaire<br>Physician's "fit to travel" note |
| Costa Cruises | <24 Weeks | Doctor's certificate |
| Cunard Line | <24 Weeks | Doctor's or Midwife's letter |
| Holland America Line | <24 Weeks | Physician's letter |
| Norwegian Cruise Line | <24 Weeks | Doctor's letter |
| P&O Cruises | <24 Weeks | Doctor's or Midwife's letter |
| Princess Cruises | <24 Weeks | All guests-health questionnaire<br>Physician's "fit to travel" note |
| Royal Caribbean International | <24 Weeks | All guests-health questionnaire<br>Physician's "fit to travel" note |

Source: These are taken from cruise ship websites

[a]Cannot accept guests who are beyond this cut-off anytime during or by the end of the cruise

There may also have be encounters with diseases of public health importance that may be notifiable.

## Conclusion

Apart from the downturn during the recent COVID-19 pandemic, cruise ship travel has been becoming more popular in recent decades. Cruise ship medical staff are an integral part of the health and hygiene response on a cruise ship. Problems occur commonly, but there are significant emergent issues with at-risk groups. Simple travel health precautions can help make the cruise more enjoyable. Regulators, such as the CDC, have instituted a Vessel Sanitation Program that rates cruise ships in terms disease control and prevention, in particular gastrointestinal diseases.

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# Safe Travel: The Legal Duty of Care to Keep Tourists Safe

**Anthony J. Cordato**

**Abstract** While the main focus of tourist safety has been on health issues during the COVID-19 pandemic it is important to also recall that the legal duty of care owed to travellers is very broad and extends right across the tourism industry. This chapter revisits the legal responsibilities of airlines, cruise lines, tour operators, and accommodation and entertainment providers to protect tourists from harm. Legal responsibilities are illustrated through examination of cases decided by the courts and commentary provided on the reasonable safety precautions the industry should take in the new normal.

**Keywords** Travel law · Duty of care · Safety · Risk management · COVID-19

## Introduction

*Safe travel* is much more than *bon voyage*. *Safe travel* is a serious legal obligation for the travel and tourism industry, be they: airlines; cruise lines; hotels, resorts and clubs; theme parks and tourist experience operators; tour operators and recreational activity providers; or local authorities (tourist attractions). The legal obligation is known as the *duty of care to take safety precautions*.

In this chapter we examine the safety precautions the travel and tourism industry should take to protect tourists from harm, drawing mainly on Australian case law and legislation, and noting the COVID-19 safety precautions to be taken.

We start with an overview of the law, followed by case studies on how the law applies to sectors of the travel and tourism industry followed by COVID-19 health and safety notes.

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J. Wilks et al. (eds.), *Tourist Health, Safety and Wellbeing in the New Normal*,
https://doi.org/10.1007/978-981-16-5415-2_22

## Overview of the Law

The law in Australia is found in the Civil Liability Laws which are in force in every state and territory:

- *Civil Liability Act 2002* (NSW),
- *Civil Liability Act 2003* (Qld),
- *Wrongs Act 1958* (Vic),
- *Civil Liability Act 2002* (Tas),
- *Civil Liability Act 1936* (SA),
- *Civil Liability Act 2002* (WA),
- *Civil Laws (Wrongs) Act 2002* (ACT),
- *Personal Injuries (Liabilities and Damages) Act 2003* (NT).

These laws provide clear guidelines upon what is legally known as the *tort of negligence* (a *tort* is a civil wrong). The laws are very similar because the states and territories used a 2002 law reform report from New South Wales (NSW) (Ipp et al., 2002) as the template for their laws.

A person who has been injured (or their legal representative if they are dead), must satisfy three requirements before they can recover damages (financial compensation) for negligence. They are:

1. Duty of Care

   A person owes a duty of care to take precautions against a risk of harm if:

   (a) the risk was foreseeable (i.e., it is a risk of which the person knew or ought to have known), and
   (b) the risk was not insignificant, and
   (c) in the circumstances, a reasonable person in the person's position would have taken precautions.

2. Breach of the Duty of Care

   A person is in breach of their duty of care if:

   (a) the harm would probably not have occurred if the precautions were taken, and
   (b) the harm is serious, and
   (c) the precautions are not too difficult to take, and
   (d) the activity is normal.

3. Causation

   There must be causation—a connection between the breach of the duty of care and the harm caused.

   There is no causation/no breach of the duty of care if:

   (a) the risk is an obvious risk, that is, a risk which is physically observable or is a matter of common knowledge, or
   (b) the activity is a recreational activity and a risk warning has been given, or
   (c) the person has voluntarily accepted the risk.

Note the exception in paragraph (b) if the activity is a *recreational activity*. This is very relevant to the tourism industry. We will examine this exception in more detail in the tour operators section below.

The law of duty of care is replicated in a different form under the *Australian Consumer Law* (ACL 2020), a Commonwealth Law. This law applies in addition to the Civil Liability Laws. It takes the form of a consumer guarantee, that is:

> Section 60—If a person supplies […] services to a consumer, there is a guarantee that the services will be rendered with due care and skill.

Normally, this consumer guarantee *cannot* be excluded (section 64 ACL). But the guarantee can be excluded: if *recreational services* are supplied, *and* the disclaimer is *limited to death or a physical or mental injury* (section 139A *Competition and Consumer Act 2010*).

We now turn to how the travel and tourism industry complies with the duty of care to take safety precautions. We start with airlines.

## Airlines

Airlines have high safety standards because flying is an inherently dangerous activity. Safety is aviation's number one priority, according to Alexandre de Juniac, Director and CEO of IATA (International Air Transport Association) in an address at IATA's first COVID-19 media briefing (Aviation Ghana, 2020). Special laws apply to airlines which lay down a strict duty of care. The laws are found in the *Civil Aviation (Carriers' Liability) Act 1959* (Commonwealth) and equivalent Acts in each state and territory in Australia. These laws replicate the international aviation law for liability, which is known as the *Montreal No. 4 Convention* (https://www.iata.org/contentassets/fb1137ff561a4819a2d38f3db7308758/mc99-full-text.pdf). The key provisions make the airline more liable and the passenger less liable than they would be under the Civil Liability Laws. They are:

### *Airline Liability*

The carrier is liable for damage sustained in the event of the death or wounding of a passenger or any other bodily injury suffered by a passenger, if the accident which caused the damage so sustained took place onboard the aircraft or in the course of any of the operations of embarking or disembarking (Article 17 of the *Convention*).

This provision imposes a strict duty of care upon the airline to provide safe travel. The airline is *liable if a passenger suffers an injury caused by accident* which occurs onboard an aircraft, without the passenger needing to prove the airline breached its duty of care or caused the injury. The trade-off for the airline is that their liability is capped at AU$925,000 for injury or death on a domestic flight in Australia. The cap is lower for international travel.

### *Passenger Liability*

If the carrier wants to defend the claim, it must prove that the damage was caused by or contributed to by the passenger. If the carrier proves the passenger contributed to their injury, then the Court may exonerate the carrier wholly or partly from liability (Article 20 of the *Convention*).

An airline can escape liability or reduce the amount payable by proving that the passenger caused or contributed to their injury. This is known as contributory negligence.

## Case Studies on Airline Liability

In both case studies, Qantas was found to be not liable. In the first, it was because Deep Vein Thrombosis (DVT) was not an *injury* caused by an *accident*, in the second Qantas had done all it could reasonably do to prevent environmental smoke drift and so satisfy its duty of care.

### *Developing DVT During a Flight*

***Povey v Qantas Airways Limited* [2005] HCA 33**

This is the leading Australian case on Article 17. The High Court of Australia had to decide whether deep vein thrombosis (DVT is a medical condition where a blood clot forms in the veins of a leg) which developed during a long haul flight was an *accident*. If so, Qantas was liable.

Mr. Povey claimed that he developed DVT on two long haul flights—Sydney to London via Bangkok (and return)—because he was in a seated position in a "confined and restricted physical environment" for long periods, discouraged from moving around the cabin and was not warned about the risk of DVT and measures he might take to reduce that risk (such as exercise or wearing compression stockings).

The High Court of Australia rejected the claim because Mr. Povey could not point to an *accident*. The flight conditions were normal: nothing unusual or unexpected occurred which might amount to an *accident*.

Since Povey's Case, airlines have played it safe by including warnings about DVT in their in-flight safety video, and in the "health and safety" section of their in-flight magazines there are suggestions for in-flight exercises to reduce the risk of DVT. More recently Qantas was the first airline to address threats of DVT with an instructional video on all international flights (Cortez, 2015).

### *Exposure to Cigarette Smoke*

***Qantas Airways Limited v Cameron* [1996] FCA 349**

This is a case relevant to COVID-19 because it dealt with an environmental health hazard, namely smoking. Back in 1992, smoking was permissible on aircraft. Airlines recognised the health risks to other passengers, and divided the aircraft into smoking and non-smoking sections, separated by a curtain. Mrs. Cameron selected and was seated in the non-smoking section.

The separation was not effective. Environmental tobacco smoke circulated throughout the aircraft cabin. Mrs. Cameron and other passengers suffered from eye irritation, nausea and nasal symptoms due to exposure to the smoke.

Mrs. Cameron and the other passengers alleged that Qantas was negligent in having sold non-smoking seats when in breach of its duty of care it allowed environmental tobacco smoke to drift into the non-smoking seats parts of the cabin in its aircraft.

The Full Court of the Federal Court of Australia found that Qantas had done all it could reasonably have done to avoid the risk of harm, and found Qantas was not negligent.

Smoking has been banned on international flights to or from Australia since 1995. This ban now extends to e-cigarettes.

## Airlines: COVID-19 Health and Safety

Is exposure to COVID-19 on a par with developing DVT or exposure to tobacco smoke? The likely answer is *yes*. Either it is an *accident* for the purposes of Article 17, or alternatively, the airline owes a duty of care. If so, what safety measures should an airline take to avoid liability?

Qantas and other airlines have introduced the following safety measures to protect against COVID-19 transmission:

- At the Departure Gates there is: temperature scanning, social distancing, hand sanitiser stations, fly-well packs with a face mask and sanitising wipes, self-scanning of boarding passes and enhanced cleaning throughout the terminal. Pre-flight tests are being trialled. Proof of full vaccination is mandatory.
- Onboard the Plane: wearing a face mask is strongly recommended (and mandatory on some flights), cabin air is filtered with hospital-grade HEPA filters, a fly-well pack is given to passengers, requests are made to limit movement around the cabin, there is a reduction in food and beverage offering, no in-flight entertainment or magazine and enhanced cleaning of the cabin (see also *Part V Government and Industry Activity: Creating a Safer Journey: Exploring Emerging Innovations in the Aviation Sector* on other aviation safety and security measures).

## Cruise Lines

Cruise Lines owe a duty of care for safe travel under the Civil Liability Laws if their port of departure or return is an Australian port, even if the incident occurs on the high seas.

The duty of care takes many forms, as these case studies demonstrate.

### *Falling Panels*

***Smith v Carnival Plc Trading as P&O Cruises Australia* [2018] NSWSC 782**

Montana Smith was on a cruise aboard the *Pacific Jewel* on the high seas. She was standing in a companionway when three ceiling panels fell suddenly, hitting her on the head and left shoulder as they fell to the floor. She did not lose consciousness but felt sore and shocked. The cruise line admitted liability.

The Supreme Court of NSW awarded Ms. Smith (aged 14 at the time of the accident) a total of AU$445,372.00 under various heads of damages, including for non-economic loss (pain and suffering), out of pocket expenses (for medical care and medication) and economic loss (loss of earnings).

### *A Loose Brick*

***Szczerbanik v Carnival PLC t/as Carnival Cruise Line* [2019] NSWDC 197 & 198**

The injury occurred while playing "Putt-Putt" golf onboard the cruise ship. The passenger placed her left foot on a loose brick marking the edge of the course. The brick moved, causing her to twist her ankle. The cruise line denied liability.

Before the hearing, the passenger abandoned the claim and accepted that the cruise line had not breached its duty of care "to provide its services in a fashion to avoid the risk of harm".

The reason was that the risk was insignificant—not enough for a claim. In fact, the District Court of NSW found that there were no reasonable prospects of success in bringing the action (Fig. 1).


**Fig. 1** Carnival Spirit (Carnival Cruise Line) docked at Circular Quay, Sydney. (Image courtesy of Anthony Cordato)

## Cruise Lines: COVID-19 Health and Safety

It is a Commonwealth Government responsibility under the *Biosecurity Act 2015 (Cth)* to provide for the management of the risk of Listed Human Diseases (LHD) or any other infectious human diseases entering Australia, or emerging, establishing themselves or spreading in Australia. The responsibility is shared with the state Departments of Health. This responsibility applies to all cruise ships docking in Australia.

### *Special Commission of Inquiry into the Ruby Princess*

On 15 April 2020, the Special Commission of Inquiry into the Ruby Princess was established, led by Bret Walker SC, with a report issued 14 August 2020 (Walker, 2020). The report found that as a result of a clearance given by the Expert Panel, passengers were allowed to disembark the Ruby Princess cruise ship and travel onward interstate and internationally at the conclusion of their cruise on 19 March

2020, when it docked in Sydney. They were allowed to do so, despite the risk of spreading a COVID-19 infection.

The Special Commissioner recommended that the NSW Health Biosecurity Officer Guideline be reconsidered to reflect an appropriately precautionary public health approach. Also, that the *Biosecurity Act 2015* (Cth) be reviewed to make human biosecurity control orders more applicable.

A mandatory hotel quarantine regime of 14 days duration has applied for international arrivals in NSW since 28 March 2020. Other states and territories either have similar regimes or have closed their borders. Cruise lines have "paused" sailings because it is not practical for passengers to undergo a 14 day quarantine period on their return to port in Australia.

When cruising returns, cruise lines will put protocols into place to minimise the risk of COVID-19 infections. These protocols will include testing of all guests and team members before boarding, policies for wearing masks by all guests and team members, enhanced medical staffing, facilities, equipment, onboard testing capabilities and quarantine/isolation resources, and applying protocols to shore excursions (see also *Part V Government and Industry Activity: Cruise Ships and Passenger Health*).

It should be mentioned that Shine Lawyers has commenced a class action on behalf of all passengers affected by the outbreak of COVID-19 onboard the Ruby Princess (Shine Lawyers, 2020). It is alleged that the outbreak of Coronavirus on the Ruby Princess resulted from a failure to take appropriate measures to ensure that passengers were safe and protected from contracting the virus on the ship. It is further alleged that this failure constitutes breaches of the cruise owner and operator's duty of care to its passengers, and of the consumer guarantees and other provisions of Australian Consumer Law.

## Hotels, Resorts and Clubs

Hotels, resorts and clubs owe a duty of care for the safety of their patrons and their guests under the Civil Liability Laws. Most injuries are caused by violent assaults upon guests or by "slip and trip" incidents, as the following case studies illustrate.

Hotels, resorts and clubs take precautions against the risk of harm by taking measures such as:

- stationing security staff at the door and elsewhere in the premises
- conducting regular walkthroughs
- using CCTV cameras to monitor the premises, car parks and entrances
- immediately dealing with any signs of violent, quarrelsome or disorderly conduct by cautioning or removing the patron from the premises (and barring re-entry)
- following responsible service of alcohol guidelines

The case studies that follow demonstrate how a function centre or club can take precautions to satisfy their duty of care to keep guests safe and so avoid liability.

## *Altercation on the Dance Floor*

### *Adeels Palace Pty Ltd v Moubarak* [2009] HCA 48

The incident occurred at a large and crowded New Year's Eve function held at the Adeels Palace reception centre and restaurant in Punchbowl, Sydney. Sparked by an altercation on the dance floor at about 2:30 am, a mêlée broke out with punches, chairs, plates and bottles being thrown. A patron injured in the mêlée left the premises and returned with a gun. He shot and seriously wounded the patron who had injured him. The patron claimed damages for injuries caused from Adeels Palace.

The High Court of Australia formulated the duty of care as:

> a duty to take reasonable care to prevent injury to patrons from the violent, quarrelsome or disorderly conduct of other persons … particularly with regard to allowing persons to enter or remain on those premises (Judgment, p. 10).

The High Court of Australia found that there was no breach of the duty of care. Even if Adeels Palace had provided more security, it was not shown that this would probably have prevented the patron's injuries—only that it might have done so.

## *A "Wallop" Punch*

### *Tilden v Gregg* [2015] NSWCA 164

The incident occurred at the Ettalong Memorial Bowling Club on a quiet Sunday night. Tilden was drinking with a friend seated at a table outside in the "old smoking area". Gregg, who was seated nearby, gave Tilden 20 min of verbal abuse and niggling. Gregg then came over to Tilden who retorted "You only hit disabled people or women". Gregg then "wallop" punched Tilden in the face. Tilden was injured as he fell backwards and his head hit a brick wall.

The NSW Court of Appeal decided that the Bowling Club had not breached its duty of care for these reasons:

1. Gregg had no history of violent behaviour which suggested that a "stronger eye" ought be kept on him
2. the half hour frequency of the walk-through inspections by the duty manager was sufficient supervision; and
3. the installation of a CCTV camera would not have deterred the behaviour, and even if it were installed and monitored, it would not have alerted the staff to a problem because the assault came without warning.

Finally, there was no causation—it was not shown that "but for" more frequent walk-throughs or monitoring with a CCTV camera, the assault would have been prevented.

### *Falling Down Stairs*

***Parker v City of Bankstown RSL Community Club Ltd* [2015] NSWCA 246**

The incident occurred when Mrs. Parker was making her way down the stairs from an upper tier of the club's auditorium. The house lights were down because a performance was underway, and the stairs were lit only by strip lighting. Mrs. Parker missed a stair and fell heavily. She claimed damages.

The NSW Court of Appeal decided that the club had not breached its duty of care. The club had taken adequate precautions by having strip lighting which adequately lit the stairs, and by having non-slip metal strips on the stairs. The Court said that Mrs. Parker had not taken adequate care for her safety.

## Hotels, Resorts and Clubs—COVID-19 Health and Safety

Hotels, resorts and clubs are required to have a COVID-19 Safety Plan, send it to their state or territory Department of Health and register as a safe business.

The safety plan must address four requirements:

- Wellbeing of staff and customers—for example: Advise staff and visitors who are unwell with respiratory symptoms or fever to immediately get tested and place themselves in isolation until they have received their results.
- Physical distancing—for example: Calculate the floor area to determine the maximum number of people who can safely occupy the space. Display signs at entrances. Ensure staff always maintain 1.5 metres physical distancing.
- Hygiene and cleaning—for example: Adopt good hand hygiene practice and ensure hand hygiene facilities are available to customers and staff. Limit the use of cash transactions by encouraging contactless payment options.
- Record keeping—keep a copy of the COVID-19 Safety Plan at the business premises.

## Theme Parks and Tourist Experience Operators

Operators of theme parks and other tourist experiences owe a duty of care under the Civil Liability Laws to ensure that visitors and participants are kept safe. They are also exposed to criminal prosecution under Work Health and Safety Laws for injuries and deaths.

When there is a death, a coroner's inquest will be held to examine the fatal incident and report. The coroner may recommend criminal prosecutions to the Work Health and Safety Authority.

These studies illustrate a coroner's inquest and a criminal prosecution.

### *Thunder River Rapids Tragedy—The Dreamworld Coroner's Inquest*

A Coroner's Inquest was held into the deaths of Kate Goodchild, Luke Dorsett, Cindy Low and Roozbeh Araghi at Dreamworld on 25 October 2016. The fatal incident occurred on the Thunder River Rapids Ride (TRRR), a family-oriented "moderate thrill ride" operated at the Dreamworld Theme Park, on the Gold Coast, Queensland. It was the most popular ride at the theme park.

Not long after 2:00 pm on 25 October 2016, the raft carrying the victims had completed the course. The raft was picked up by a conveyor, and on reaching the top, collided with the raft in front of it which was stuck at the top. The raft carrying the victims flipped upon collision and four passengers were caught in the mechanism of the ride and were killed. The other two passengers were thrown to safety.

The Coroner's Report made findings about the causes of the fatal incident and made recommendations about further actions and safety measures to prevent a similar incident from occurring in the future. The Coroner's Report (issued in February 2020) did not make findings of liability for negligence (Coroners Court of Queensland, 2020).

The findings were:

- At the time of the incident, the poor design and construction of the TRRR at the conveyor and unload area, particularly the lack of automation and engineering controls, posed a significant risk to the health and safety of patrons.
- The absence of effective and complete record-keeping essentially precluded any staff from being in a position to be able to appropriately and adequately assess and manage the risks which may be present, particularly for rides like the TRRR.
- There was a lack of safety management systems to cope with the multiple hazards evident on the ride, including no automated system to monitor the water level, the risk of pump failure, the inadequate training of the ride operators, ambiguous and poorly worded operating procedures.
- There was a systemic failure by Dreamworld, in relation to all aspects of safety, to ensure that the amusement rides open to the public were safe, well-maintained and designed to minimise the risk they posed to patrons and the staff.

The Coroner's Inquest findings were referred to the Queensland Health and Safety Prosecutor who prosecuted Ardent Leisure for breaches of the *Work Health and Safety Act 2011* (Qld). The breach was of its primary safety duty under the Act to ensure that the health and safety of members of the public was not put at risk. Ardent Leisure pleaded guilty and was fined $3.6 million (Huxley, 2020).

The Coroner's Inquest findings will prove invaluable to prove a breach of a duty of care in the civil actions under the Civil Liability Laws that the legal representatives of the deceased, and the survivors and their families will bring against Ardent Leisure, the owner of Dreamworld (Fig. 2).

The next case study illustrates a prosecution by the Work Health Authority of the Northern Territory.

**Fig. 2** Floral tributes at Dreamworld after the tragedy. (Photo credit: Mr. Richard Gosling, Newspix, (Coroners Court of Queensland, 2020))

## *A Scarf Strangulation*

***Work Health Authority v Outback Ballooning Pty Ltd* [2019] HCA 2**

The incident occurred on the morning of 13 July 2013, when Outback Ballooning took a tourist group for a hot air balloon flight at sunrise at a location near Alice Springs. Beanies, scarves and gloves were recommended to ward against the cold.

The tourists were given a short briefing during which they were told to avoid the inflation fan. The fan was a stand-alone piece of equipment driven by a motor with a metal guard around its blades. The fan was started.

Whilst the balloon was being inflated, the basket to hold the passengers was laid on its side pointing towards the balloon (see Fig. 3). Three passengers boarded. As the fourth, Stephanie Bernoth, approached the basket, the long lightweight tassels on her scarf were sucked into the inflation fan and became entangled in the blades. She was dragged towards the metal guard and her scarf pulled tightly around her neck, strangling her. Ms. Bernoth later died from the injuries she sustained (Australian Transport Safety Bureau, 2015).

The High Court of Australia found that Outback Ballooning had breached its duty of care both under the Aviation Law (which made it liable for damages) and under the Work Health and Safety Law (which made it liable to a fine).

**Fig. 3** The outback ballooning hot air balloon being inflated before the tragedy. (Photo credit: C. and J. Siviour, from the Australian Transport Safety Bureau, Incident Report)

The breach was: to put at risk *the health and safety of passengers by its failure to eliminate or minimise risks to embarking passengers that arose from the use of a fan to inflate the hot air balloon at a workplace*.

## Theme Parks and Tourist Experience Operators—COVID-19 Health and Safety

Work, Health and Safety Laws require businesses to comply with statutory requirements including notifying the SafeWork Authority of any work-related fatality, serious injury or illnesses (including COVID-19). This includes developing and implementing safe systems of work and monitoring the COVID-19 situation.

## Tour Operators and Recreational Activity Providers

Tour operators and sporting and recreational activity providers owe a duty of care under the Civil Liability Laws to ensure that their guests and participants are kept safe.

The Civil Liability Laws provide protection for the operators and providers by limiting liability for negligence if the tourist or visitor is engaged in a *recreational activity.*

The Civil Liability Laws provide that: A person *does not owe a duty of care* to another person who engages in a *recreational activity* to take care in respect of a risk of the activity if the risk was the subject of a *risk warning* to the plaintiff. The key is to have an effective risk warning for the recreational activity.

A tourism operator is able to give a *risk warning* verbally or in writing. A *risk warning* can be contained in risk waiver form (containing disclaimers of liability) signed by the person, or displayed on a sign or ticket, or given verbally at a safety briefing. Even if a risk is an *obvious risk* where a risk warning may not be necessary, a careful tourism operator will provide a *risk warning*.

A *risk warning* will usually be displayed on a sign or ticket or booking conditions or be given verbally for a recreational activity, and in a signed waiver form for a *dangerous recreational activity*.

A *recreational activity* is defined as including:

(a) any sport (whether or not the sport is an organised activity), and
(b) any pursuit or activity engaged in for enjoyment, relaxation or leisure, and
(c) any pursuit or activity engaged in at a place (such as a beach, park or other public open space) where people ordinarily engage in sport or in any pursuit or activity for enjoyment, relaxation or leisure.

The Civil Liability Laws provide that: A person is *not liable in negligence for harm* suffered by another person as a result of the materialisation of an *obvious risk* of a *dangerous recreational activity* engaged in by that other person. For these activities, injured persons are presumed to be aware of an *obvious risk* without any warning being required.

A *dangerous recreational activity* is defined as a recreational activity that involves a significant risk of physical harm.

Under the Australian Consumer Law, liability under the consumer guarantee to provide the service with "due care and skill" cannot be excluded by a *risk warning* (disclaimer or waiver). The sole exception is if *recreational services* are supplied *and* the disclaimer is *limited to death or a physical or mental injury* (section 139A *Competition and Consumer Act 2010*).

As the following case studies demonstrate, the courts are called upon to decide the effectiveness of the *risk warning* given (disclaimer or waiver) when an injury occurs in the course of a r*ecreational activity,* and whether the risk of harm is an *obvious risk* when a person is engaged in a *dangerous recreational activity*.

In addition, tourism operators will rely on the lack of *causation* between the alleged negligent act and the injury.

## *A Chairlift Accident*

***Perisher Blue Pty Ltd v Nair-Smith* [2015] NSWCA 90**

A skier, Dr. Nair-Smith, claimed for personal injuries suffered when boarding a chairlift operated by Perisher Blue. She was watching for the lift attendant to raise the safety bar and was not standing in proper alignment or watching the chair when it came around the bullwheel. The right armrest from the chair struck her from behind severely injuring her right buttock and lower back.

Her claim was made under the consumer guarantee of "due care and skill" under the Australian Consumer Law. The trial judge awarded her $1,368,700 in damages.

The NSW Court of Appeal found no breach of the consumer guarantee for these reasons:

- Perisher Blue was under a *duty of care* to exercise reasonable care and skill in the provision of its chairlift services to avoid harm to skiers using those services.
- The *reasonable care* that Perisher Blue had to exercise was that the lift attendant needed to observe the condition of the chair as it came around the bullwheel.
- The *relevant risk* was the risk of physical injury if the skier reacted because the lift attendant did not raise the safety bar on the chair until it was almost at the "load line".
- There was *no causation*—the lift attendant's late response in raising the safety bar had not caused the skier to be out of alignment with the chair.
- The injuries were not inevitable—they were *not the materialisation of an inherent risk* (i.e., unavoidable by the exercise of reasonable care and skill).

The principal reason why there was no breach of the consumer guarantee was because there was *no causation*—there was no connection between the breach of the duty of care and the harm caused.

Although it was not necessary to reach its decision, the NSW Court of Appeal considered the validity of the disclaimer which was printed on the reverse side of the Perisher Blue ski pass ticket. It read:

> By purchasing or using this ticket, YOU ACKNOWLEDGE THAT ALPINE ACTIVITIES (INCLUDING SKIING & SNOWBOARDING) ARE RISKY AND DANGEROUS AND THAT YOU WILL UNDERTAKE SUCH ACTIVITIES AT YOUR OWN RISK. … You also acknowledge that we are not liable to you for any loss, damage, injury or any incidental, indirect, special, consequential or economic loss or damage … whether to person or to property and whether arising from default, negligence, misconduct or otherwise by us, our employees or our agents … (Cordato, 2015).

The NSW Court of Appeal decided that the disclaimer was not valid. It did not comply with section 139A of the Act because it excluded liability for more than death or personal injury. It was therefore void in its entirety.

As a consequence, to be valid under section 139A of the Act, a disclaimer needs to be carefully drafted to be limited to death or a physical or mental injury.

## *A Dolphin-Watching Cruise*

***Lormine Pty Ltd & Anor v Xuereb* [2006] NSWCA 200**

Lormine conducted dolphin-watching cruises on its catamaran "Avanti" in the waters off Forster, in the mid-north coast of NSW. Mrs. Xuereb booked a tour after reading the brochure which stated: *Forster has its own unique pods of resident Dolphins which reside in the calm ocean waters 10 minutes offshore*.

Before boarding, Mrs. Xuereb was given a form to initial for the six members of her party. She was told it was for the purposes of a headcount, and her attention was not drawn to the printed portion of the form (the waiver) which was headed:

> RELEASE OF LIABILITY, WAIVER OF CLAIMS EXPRESS ASSUMPTION OF RISK AND INDEMNITY AGREEMENT.

When the catamaran reached the "wave zone" which was as close as 35 metres to the beach, some of the passengers went swimming with the dolphins. Mrs. Xuereb took up the captain's invitation to sit on the bow. She sat with one child, holding the bow rail.

The captain spotted a large wave but was unable to turn the boat to face the wave in time. As the wave crashed over the bow Mrs. Xuereb was swept astern, slamming her back into the rear of the bow area. She ended up wedged in the hatchway and was severely injured.

The NSW Court of Appeal agreed with the trial judge that the captain (and therefore Lormine) was negligent in that he should have, but did not, keep a proper lookout considering the area he was in or take precautions by removing passengers from the bow of the vessel. As a result of this negligence, he exposed the passengers to the foreseeable risk that the vessel would collide with a significant wave, which it did.

Lormine relied upon the waiver to avoid liability as being an adequate *risk warning* for a recreational activity, under the Civil Liability Laws. But the NSW Court of Appeal said that the waiver was not effective for these reasons:

- The waiver form was not brought to Mrs. Xuereb's attention until after she had booked the tour. This was too late—the contract had been entered into and so the waiver did not form part of the contract, unless it was represented as variation of contract when she initialled it.
- When the waiver form was given to her to initial, she was told it was a "headcount statement". She was not told it contained releases of liability and other exclusions.
- The form did not apply because it only covered injuries sustained through SCUBA diving or snorkelling.

Lormine also argued that it was exempt from liability because this was a dangerous recreational activity, and the injury was caused by the materialisation of an obvious risk. The Court rejected this argument, saying that this was only a gentle recreational activity. The risk was not obvious, and not inherent in the sense that it was avoidable by the exercise of reasonable care and skill.

The Court concluded that Lormine was liable to compensate Mrs. Xuereb for her injuries because its negligence (breach of the due care and skill guarantee) had caused the injuries.

## *White-Water Rafting*

***Samahar Miski v Penrith Whitewater Stadium Ltd* [2018] NSWDC 21**

The activity was white-water rafting in the controlled environment of a purpose-built course.

On 12 November 2011, Mrs. Miski went with a group of friends to the Penrith Whitewater Stadium and participated in the activity of white-water rafting.

They pre-booked their tickets. On arrival, they went to a counter where a piece of paper was given to everybody. Mrs. Miski signed the paper, as did everyone else. The paper was a risk warning/waiver.

They went to a room where they put on life jackets and a helmet. They went to an area where staff members came out and gave a safety briefing, which lasted about 10 min. They boarded the raft and the guide who was on the raft gave a safety briefing before setting off.

They traversed the course several times for almost an hour before Mrs. Miski fell out of her raft into the water in the rapids. She floated downstream to the calm water at the foot of the course, a distance of 75 metres (and for 20 or 30 s). Somewhere between falling out of the raft and attempting to stand for the first time she fractured her right ankle. She claimed damages.

The District Court of NSW found that there was a duty of care because the risk of harm was foreseeable and was significant. But the claim failed both because reasonable precautions were taken and the risk of harm was an obvious risk. The legal analysis was:

1. Did the Stadium take the precautions that a reasonable person would have taken against the foreseeable risk?

   The Court found these precautions were taken: safety briefings which contained full and proper information and instructions; a waiver document which warned of the risk, which participants could read before they signed it to accept the risk; competent staff being present; a timely rescue.

   The Court found the precautions taken were reasonable. The Court concluded there was no negligence—no breach of the duty of care under the Civil Liability Laws or the consumer guarantee of "due care and skill" under the Australian Consumer Law.
2. Was the Stadium protected because white-water rafting was a *dangerous recreational activity* and the risk of falling into the water and suffering injury was an *obvious risk*?

The Court found that the risk was obvious to Mrs. Miski because: she had signed the risk acknowledgement; she was warned in the safety briefing, and the risk was obvious to her from her observation of the rapids and other participants falling into the water for almost an hour before she fell into the water.

## *A Coward's Punch*

***Packer v Tall Ship Sailing Cruises Australia Pty Ltd* [2015] QCA 108**

The incident occurred onboard a licensed pleasure cruise ship hired for an all-day staff Christmas party. The cruise was to South Stradbroke Island for lunch. Alcohol was served.

After boarding for the return leg, the victim approached a "loud and boisterous" group in the ship's bar and asked them to "keep their language down". Without warning, the victim (Mr Packer) was hit in the face with a "coward's punch", thrown by a member of the group in the bar. He suffered serious injuries.

The Queensland Court of Appeal decided that the cruise operator had not breached its duty of care. It found that the cruise operator *had exercised reasonable care* by stationing a crew member at the top of the stairs near the bar; and the group's behaviour was not "quarrelsome or disorderly" so as to warrant removal from the ship. There was no "inkling that the situation was either likely to or might produce violence".

## Tour Operators and Recreational Activity Providers—COVID-19 Health and Safety

Tour Operators and Adventure Activity Providers need to have a COVID-19 policy. This is an example from an international travel provider:

> We have reviewed all our health and safety policies to increase hygiene and sanitation standards to protect against COVID-19 infection. Our new standards are in line with recommendations from the World Health Organization and follow the World Travel & Tourism Council's (WTTC) Safe Travel protocols for tour operators. Before we resume trips in any destination, our itineraries will undergo a comprehensive risk assessment and audit, while leaders and suppliers will complete COVID-19 health and safety training (Intrepid Travel, para. 17).

## Local Authorities (Tourist Attractions)

Local Authorities provide places such as a beach, park or other public open space where people ordinarily engage in recreational activities such as sport, or in any pursuit or activity for enjoyment, relaxation or leisure.

Local Authorities have the benefit of the Civil Liability Laws exemption that:

> A person does *not owe a duty of care* to another person who engages in a *recreational activity* to take care in respect of a risk of the activity if the risk was the subject of a *risk warning* to the plaintiff. (Civil Liability Act 2002, S. 5M (NSW)

Local Authorities (the "defendant") rely on warning signs to provide *risk warnings* to tourists and members of the public who visit these places. These rules apply to *risk warnings:*

- A risk *warning* to a person in relation to a recreational activity is a warning that is given in a manner that is reasonably likely to result in people being warned of the risk before engaging in the recreational activity. The defendant is not required to establish that the person received or understood the warning or was capable of receiving or understanding the warning.
- A *risk warning* can be given orally or in writing (including on a sign or otherwise).
- A *risk warning* need not be specific to the particular risk and can be a general warning of risks that include the particular risk concerned (so long as the *risk warning* warns of the general nature of the particular risk).
- A defendant is not entitled to rely on a *risk warning* unless it is given by or on behalf of the defendant or by or on behalf of the occupier of the place where the recreational activity is engaged in.
- A defendant is not entitled to rely on a *risk warning* if it is established (on the balance of probabilities) that the harm concerned resulted from a contravention of a provision of a written law of the State or Commonwealth that establishes specific practices or procedures for the protection of personal safety.
- A defendant is not entitled to rely on a *risk warning* to a person to the extent that the warning was contradicted by any representation as to risk made by or on behalf of the defendant to the person.

Two case studies follow. In the first, the warning sign was not effective to protect the Local Authority against a personal injury claim. In the second, the sign was effective.

## *Falling off a Jetty*

### *Coffs Harbour City Council v Polglase* [2020] NSWCA 265

On 30 September 2011, a little boy then aged five (Polglase) was walking with his grandparents along the Coffs Harbour Jetty which extends from the shore over a sandy beach then to the harbour. It is a tourist attraction. It is a wide wooden jetty with a middle rail and a top rail on each side.

They had stopped at the railing to look out at the people swimming. As they resumed their walk, the grandparents took their eyes off the boy, and that is when he fell through the rail and landed onto hard sand some 4 metres below. He suffered serious injury, including to his brain.

The Council owed a duty of care because the jetty was under its care, control and management. The risk of harm was *foreseeable* and was *not insignificant*—the Council knew that children had fallen, or nearly fallen on three occasions previously. On one occasion there were serious consequences.

The NSW Court of Appeal considered that a *reasonable person* in the position of the Council would have made the railing safe by installing additional strands of wire or mesh infill to narrow the gaps in the railing, to prevent children from falling through.

The Council relied upon a sign at the entrance to the jetty as a risk warning. This was the sign (Fig. 4):

The "GENERAL WARNINGS" words, and the yellow diamonds (and words below) refer to the dangers of diving into shallow water. At the bottom are the words:

> USE OF THIS FACILITY MAY BE HARZARDOUS. PLEASE BE CAREFUL

The Court concluded that the Council could not rely upon the sign as a risk warning to avoid a duty of care for these reasons:

> Read as a whole, the sign was directed to the risk of diving from the jetty into water whose depth varied with the tide. There is nothing in the warning alerting the reader to a quite different risk, one which is potentially very dangerous for young children, namely, falling from the wharf more than four metres onto hard sand. The risk warning did not warn of the general nature of the particular risk—the risk of a young child falling through the railing onto the hard sand below—which eventuated in this case. (The Judgment, para. 119).

The Court ordered the Council to pay more than $750,000 in damages for the child's injury.


**Fig. 4** The former warning sign at Coffs Harbour Jetty. (Photo credit source: The Judgment (Coffs Harbour City Council v Polglase [2020] NSWCA 265))

## *Slippery Boat Ramp*

***Bowman v Nambucca Shire Council* [2020] NSWSC 1121**

It was mid-afternoon on a hot February day. After enjoying afternoon tea in the picnic area at Forster Beach, Scotts Head in the mid-north coast of NSW, Mr. Colin Bowman decided to go down to the water via the boat ramp. The boat launching ramp consisted of smooth concrete slabs which extended down to the water. Shortly after stepping on the ramp, Mr. Bowman slipped. He fell backwards. The back of his head hit the concrete ramp and he suffered severe concussion. He sued the Nambucca Shire Council for negligence.

The Council relied upon a large sign which was positioned next to the entrance to the boat ramp to warn against the danger of slipping on the ramp (Fig. 5).

At the top left of the sign is the word "WARNING" in red and large print, and at the top right are the words "This beach may be dangerous. Look out for hazards to yourself and people in your care." One yellow diamond has a picture of a boat ramp with the words "Boat ramp" beneath it. Another has an icon of slippery ground with squiggles and a person slipping over onto their back, with the words "Slippery area" below it.


**Fig. 5** The warning sign at the boat ramp on Forster Beach. (Photo credit source: The Judgment)

Mr. Bowman argued that the sign was not an adequate risk warning because it was too general—it was not specific about the slippery nature of the ramp.

The NSW Supreme Court rejected that argument, saying that: "the only surface that could logically have posed a risk of slipping was the boat ramp, which was directly behind the warning sign."

"In any event, any lack of specificity in the warning does not negate its applicability to the boat ramp. Rather, it implies that all surfaces will or may be slippery, including the boat ramp, which is specifically referred to in the sign."

In addition, the Court found no causation because Mr. Bowman was aware of the warning sign and knew boat ramps could be slippery.

## Local Authorities (Tourist Attractions)—COVID-19 Health and Safety

Local Councils in NSW have been told by the state government to streamline the application process for outdoor dining and drinking by identifying areas within their towns, such as central business districts and high streets, where outdoor dining is

appropriate and encourage businesses to consider using these areas for outdoor dining purposes (https://www.nsw.gov.au/projects/outdoor-dining).

This increased use of public areas will mean that Councils need to survey the adequacy of signage and physical infrastructure of public areas to ensure they satisfy their duty of care.

## Conclusion

Whatever part an operator, supplier or provider plays in the travel and tourism industry, they must take safety precautions to protect tourists from harm when providing their service.

- Airlines are liable if a passenger is injured or killed by an accident, without the passenger needing to prove the airline is at fault.
- Cruise lines must take care that the ship is safe and the health measures they take are sufficient to prevent the spread of infectious diseases.
- Hotels, resorts and clubs must take precautions to prevent assaults, slip and trip hazards.
- Theme Parks and tourist experience operators must make sure their rides or experience are safe and operate safely.
- Tour operators and recreational activity providers should provide risk warnings to tourists.
- Local Authorities should provide warning signs of dangers at beaches, parks and tourist attractions.

All must provide COVID-19 safe environments.

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