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Learning Objectives

This chapter aims to provide the reader with:

- An understanding of health systems according to its inputs, processes, outputs and outcomes (using the Australian Health System as an example), and the various ways in which health systems' performance may be analysed and influenced.
- An understanding of the different categories and forms of health policies, and some of the key players that influence health policymaking.
- A discussion of health policy challenges for medical administrators.

these needs. As the outcome goals of these needs may be both convergent and divergent, health systems become more and more complex as new health policies are introduced into the existing health system.

Regardless of which sector within a health system you work as a medical administrator, you will find yourself in a position to influence health system and policy reform. It is important to develop a framework to understanding these complex connections within health systems to be able to effectively assist your clinicians with navigating through these systems to achieve the optimal results.

This chapter describes health systems according to its inputs, processes, outputs and outcomes. It also describes the economic and sociopolitical characteristics of a health system, using the Australian health system as an example. Some key concepts of analysing a health system are also described. In the second part of this chapter, some concepts on governing a health system and health policymaking are described. The chapter concludes with some discussion around health policy challenges for medical administrators.

5.1 Introduction

There is no perfect health system. As societies change, health systems and policies evolve to adapt to the health needs of the society. The health needs of a society are often subjective and shaped by the social and political environment, so too are the health policies made to respond to

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5.2 Content

A health care system can be described by its key players: patients, providers, and payers. It can also be described by its inputs, processes, outputs, and outcomes [1].

5.2.1 Inputs

Health system inputs can be broadly described by its workforce inputs, financial inputs, knowledge inputs, infrastructure inputs, and supply inputs. All these inputs are equally important, and are subject to health policy reform debates from time to time.

The workforce input of a health system includes all providers of care within the health care system. Commonly this refers to doctors, dentists, nurses, midwives, pharmacists, physiotherapists, psychologists, optometrists, speech pathologists, dieticians, social workers, occupational therapists, podiatrists, medical radiation practitioners, osteopaths, chiropractors, Chinese medicine practitioners and other practitioners who are paid to provide health care services; however there is increasing recognition of the unpaid health workforce such as carers, who are often unable to work due to their need to provide care to someone with severe disability or medical condition. Health policy reform considerations of the workforce input often revolve around improving the knowledge base of the workforce, balancing the demand and supply of workforce numbers, as well as maintaining the right skill mix of the health workforce.

The financial input of a health system includes all funding sources that pay for health services provided. Ultimately funding for health services is provided via taxation or via private contributions by individuals, either as health insurance premiums or out-of-pocket costs. Understanding the flow of health funding is important as it allows a medical administrator to understand the redistributive effects of various health financing policy decisions. Further discussion on health insurance funds is provided in Chap. 8, while further discussion on health economics is provided in Chap. 13.

The knowledge input of a health system includes all forms of knowledge that improves the processes, outputs and outcomes of the health system. Broadly speaking, knowledge input can be divided into explicit knowledge and tacit knowledge. Explicit knowledge refers to knowledge that is recorded and communicated through

mediums such as research publications, disease registries, conference presentations, published policies and guidelines. Tacit knowledge refers to experiential and intuitive knowledge that is often hard to communicate, and tends to only be passed on through socialisation and mentoring. While the effect of health policy decisions on explicit knowledge inputs are easy to recognise, as a medical administrator it is important to consider the effect of such decisions on tacit knowledge inputs.

The infrastructural input of a health system refers to all facilities that are used to provide health care services. These include hospitals, pharmacies, laboratories, medical consulting centres and all the premises of every individual health practitioner. Financing of construction of such facilities tends to be quite different from the financing of the operation costs of these facilities.

The supplies input of a health system include equipment such as radiological and laboratory diagnostic machines, prosthetic devices, surgical equipment, drugs, vaccines and so on.

5.2.2 Processes

Processes within a health system typically involve a series of complex interactions between the health system inputs. From a health care consumer's point of view, Bergman, Neuhauser and Provost [2] identified five main processes: Keeping Healthy (prevention), Detecting Health Problems, Diagnosing Diseases, Treating Diseases, and Providing Good End of Life care. The quality of these processes is largely determined by the quality of the seamless interaction between the health care inputs. As an example, the ability of a health care team comprising of the general practitioner, specialist, and allied health professionals to ensure comprehensive information exchange as the patient transitions from one health facility to another determines the patients' perception of the value of health care services received.

The key to success of the interactions of health services inputs is ensuring the output is greater than the sum of its parts. This is not easily

achieved given the complexity of the health care system, as the interactions are usually non-linear, and often emergent or spontaneous [3]. In later sections of this chapter there will be further discussion about the role of health policymaking in influencing the interactions between health system inputs.

5.2.3 Outputs and Outcomes

It is important to distinguish between health system outputs and outcomes. Health system outputs refer to the products of interactions between health system inputs. Health system outcomes, on the other hand, refer to the impact health system outputs have on the patients. The main difference between outputs and outcomes is that outputs can be managed directly, whereas outcomes can only be managed indirectly through managing outputs. The correlation between outputs and outcomes is however not entirely straightforward, and attempts by policy makers to influence outcomes through controlling certain outputs may result in unintended consequences.

Outputs and outcomes of the health system vary depending on what type of health service is being provided and the setting in which it occurs. They also vary depending on whether one is looking at the health system from a macro or micro level. Examples of outputs include number of doctor consultations, hospital bed occupancy rates, and average length of stay in hospitals. Examples of outcomes include mortality and morbidity of patients, life expectancy at birth, quality of life, and satisfaction of service.

5.3 Some Unique Characteristics of a Health System

The characteristics of a health system are influenced by economic factors, and often evolve over time. Health systems of developed countries now tend to focus their economic resources on organising inputs to combat chronic diseases such as cardiovascular, cerebrovascular and oncological diseases, while health systems of developing

countries with lower economic resources, despite having the same issues, also face the additional challenge of having to simultaneously deal with larger scale public health and personal health care problems such as infectious diseases, malnutrition and poor housing.

The sociopolitical values also shape the characteristics of a health system. The societal value on collectivism versus individualism determines how much financial and organisational responsibility the society assumes for the provision of health care services. In societies with high collectivism values, the society assumes more responsibility for the planning and distribution of resources, while in societies that view ill health as the problem of an individual, the individual assumes more responsibility. The more society assumes responsibility over the planning of the health system, the more highly organised a health system is considered to be [1].

5.4 A Health System Example: The Australian Health System

In Australia, the provision of health care services can be separated into primary and secondary health care services [4]. Primary health care systems refer to a consumer's first point of contact with the Australian health care system. This includes services provided by general practitioners, dentists, nurses, pharmacists, other allied health professionals, and Indigenous health workers. No referral is needed for patients to access primary health care services. Secondary health services include health care services provided by hospitals and specialists upon referral by a primary care practitioner. Both primary and secondary health services are provided by a mixture of public and private providers.

Publicly funded health services are provided by all levels of government—the Commonwealth government, State and Territory governments, and Local governments. Public primary health care services and non-hospital secondary services are mostly funded by the Commonwealth government. Public hospitals are funded by both

State and Territory and Commonwealth governments; however they are managed by State and Territory governments.

The overall governance of the Australian health system is the joint responsibility of all Australian health ministers from the Commonwealth, States and Territories, which are collectively referred to as the COAG (Council of Australian Governments) Health Council. These health ministers also manage the individual Commonwealth, State and Territory health systems within their own jurisdiction. The COAG Health Council is supported by the Australian Health Minister's Advisory Council (AHMAC).

The health clinical workforce is regulated by Australian Health Practitioner Regulation Agency (AHPRA) under the National Registration and Accreditation Scheme. The key function of AHPRA is to protect the health and safety of the public by ensuring only suitably qualified and trained health practitioners are registered. Professional bodies such as the Australian Medical Association (AMA), the Australian Nursing and Midwifery Federation (ANMF) and Australian Physiotherapy Association (APA) on the other hand provide advocacy for the health professional groups. Australian universities, such as Melbourne University, and professional education bodies, such as the Royal Australasian College of Surgeons, contribute towards building a competent health workforce within Australia.

The patients within the Australian health system vary between Australian citizens, overseas visitors, temporary and permanent visa holders and asylum seekers. All patients are represented by patient advocacy bodies such as the Consumers Health Forum of Australia.

5.5 Analysing Health System Performance

Analysing a health system's performance is often necessary in order to achieve successful strengthening and reform of the system. There is no right or wrong way to analyse a health system; however, various frameworks have been pro-

posed by several authors. Duckett and Willcox [5] used four criteria to evaluate the health system: equity, quality, efficiency, and acceptability. Van Olmen et al. [6] proposed a framework that analyses ten elements of the health system: (1) goals and outcomes; (2) values and principles; (3) service delivery; (4) the population; (5) the context; (6) leadership; (7–10) the organisation of financial, human, infrastructural and supply and knowledge and information resources. In Australia, the National Health Performance Framework recognises the different domains of analysing and reporting on a health systems performance [7]. The first domain looks at the health status of Australians, and includes measures of death, health conditions, human functions, and well-being. The second domain looks at the determinants of health, and includes measures of bio-medical factors, community and socio-economic factors, environmental factors, and health behaviours. The third domain looks directly at various aspects of the health system performance and includes measures of accessibility, continuity of care, effectiveness, efficiency and sustainability, responsiveness, and safety.

Even within some universally agreed measures of health system performance, there is always an element of subjectivity depending on who is making that evaluation, and whether the health system is analysed from a macro or micro perspective. Consider the following example. Efficiency is often used as a performance measure in health care as health care resources are considered a scarce resource. From a micro perspective, clinicians who are exhausted from working long hours and with skeleton staff may assume the health system is already quite lean and efficient, and advocate against health funding cuts; health administrators or funders, on the other hand, due to having to work with fiscal constraints within the health system, often argue from a macro perspective that there are always areas of inefficiency within the health system that can be improved on. Of course, there are various types of efficiency in health economics, such as technical efficiency, cost efficiency and allocative efficiency, and an additional layer of subjectivity in the analysis of

the health system occurs depending on how much the individual understands the difference between these efficiency types. Further discussions around the concepts of efficiency in health economics are available in Chap. 13.

The sociopolitical values of a society also influence how the performance of a health system is perceived. The key concept here is acceptability of the various inputs, processes and outputs within a health system by the patients, providers and payers.

5.6 Health System Governance and Health Policymaking

According to the World Health Organization, health system governance refers to a wide range of steering and rule-making functions carried out by governments/decision makers as they seek to achieve national health policy objectives that are conducive to universal health coverage [8]. It is a political process, and is often about balancing competing influences and demands within the society. One way to achieve good governance of health systems is through health policies.

What is health policy? According to Palmer and Short [9], health policy refers to actions or intended actions by public, private and voluntary organisations that have an impact on the health care system. Policy may refer either to a set of actions and decisions or to statements of intentions.

Health policies may be categorised according to their focus:

- *System level policies* such as policies about funding, like private health insurance, or access to services, like the Pharmaceutical Benefits Scheme in Australia.
- *Institutional level policies* such as policies about the mix and volume of services; gate-keeping policies such as the role of General Practice in the Australian Medical Benefits Scheme; or organisational policies such as organisational structures of hospitals.
- *Task level policies* that outline targets of various tasks, such as elective surgery waiting list

targets, emergency department treatment targets and immunisation targets.

- *Individual level policies* that outline expected behaviour of individuals regarding various matters such as illicit drug use and smoking in public places.

Health policies may also be categorised according to how it is used as a policy instrument to achieve a desired outcome:

- *Distributive policies* provide health services or benefits to particular population groups, i.e. Aboriginal health care or aged care.
- *Regulatory policies* limit behaviour of organisations or individuals, i.e. licensing of food handlers, or smoking bans within hospitals.
- *Self-regulatory policies* are set by an organisation for its own benefit, i.e. registration of health professions.
- *Redistributive policies* change the distribution of income, wealth, property or rights between groups, i.e. the Australian Medicare Levy of taxable income above a threshold.

There are four main forms of health policies: legislation, rules and regulations, operational decisions, and judicial decisions [10]. Legislation refers to laws enacted by Parliament that are binding and legally enforced. These laws are supported by rules and regulations, also called subordinate legislation, which are designed by executive agencies responsible for implementing laws to guide their implementation. Operational decisions are less permanent decisions made by the executive agencies as part of implementing a new law, and are usually in the form of procedures and protocols. Judicial decisions made in the court system also shape health policy by helping clarify the interpretation of laws.

There are also different subgroups of health policies, ranging from personal health care policies, health care financing policies, health workforce planning policies, medical research policies, digital health related policies, global health policies, and many more.

The World Health Organization observed that strong health policy proposals generally have the following traits [11]:

- It is inspired by an intimate knowledge of the context and a systemic, long-term, realistic approach.
- There is evidence from other contexts that it has produced the results that are expected in the present environment.
- It frankly admits the weaknesses and the distortions that plague the sector, proposing sensible ways of overcoming them.
- It is explicit about preconditions and risks, the measures to be introduced, the obstacles likely to be encountered, and the relative prioritisation of the proposed actions.
- It tries to anticipate processes and events, rather than trying to mend those that already took place or are under way.
- Its design is technically sound and recognises the resource and capacity implications of successful implementation.
- It is formulated in terms understandable to different actors and is widely disseminated.
- It tackles issues perceived as central to concerned actors.
- It recognises the power games going on at the country and sector level, tries to strike workable trade-offs and look for political alliances.

health policy agenda. Some examples of non-governmental special interest groups include (using Australia as an example):

- *Professional groups*, such as the Australian Medical Association, the Australian Nursing Federation and Australian Physiotherapy Association.
- *Industry groups*, such as Medicines Australia, Pharmacy Guild, Private Hospitals Association, Australian Healthcare Association, and Catholic Healthcare Association.
- *Consumer groups*, such as Consumers Health Forum, Australian Consumer's Association, and Australian Council of Social Service.
- *Disease/Disability groups*, such as the National Heart Foundation, Cancer Council Victoria, Diabetes Australia.
- *Sector groups*, such as National Rural Health Alliance, Council on the Ageing and Mental Health Council of Australia.

Interest groups are most readily observed trying to influence the governments in policymaking through criticism or praise of the government and its policies in the media. Alternatively, they may be active in lobbying government decision makers, participating in expert stakeholder consultation sessions, commissioning research, and advertising to promote the interests of the members they represent.

5.7 The Role of Government and Interest Groups in Setting the Health Policy Agenda

While the formal health policy agenda of a country is set by its government and various Departments, these agendas are invariably shaped by special interest groups who are affected by these health policies [12]. In general, the more organised special interest groups are, the more effectively they exert influence over the

5.8 Health Policy Challenges for Medical Administrators

The challenge of a medical administrator is to maintain an up-to-date understanding of policies at different levels of the health system to ensure sustainable scale up or scale down of health interventions. A medical administrator also faces the challenge of translating health policies into meaningful health intervention and actions that are understood by clinicians within their health service.

5.8.1 Consider the Following Example

The Australian Commission on Safety and Quality in Health Care (ACSQHC) was established by the Australian, State and Territory Health Ministers under the National Health Reform Act 2011. Following its establishment 10 National Safety and Quality Health Service (NSQHS) Standards were published that outlined the standards of care expected of health service organisations, and a national safety and quality accreditation scheme was endorsed by the Health Ministers which required all hospitals, day procedure services, and majority of public dental services across Australia to be accredited against the 10 NSQHS standards.

Some key practical questions for a medical administrator to consider in the example above include:

- How does a medical administrator keep up to date with relevant legislative changes in health policy (such as the above National Health Reform Act 2011) that impact on the organisation in which he/she is responsible for?
- How does a medical administrator working in a metropolitan health service apply the 10 NSQHS standards within their health service? How does the medical administrator translate the practical implementation of these standards to clinicians?

Medical administrators are also often in positions to influence policymaking and policy reform, and act as advocates on behalf of patients, clinicians and management. It is thus critical to ensure that medical administrators engage in wide consultation with the various stakeholders

when developing, analysing, implementing or reforming health policies.

Similarly, by virtue of the positional leadership held by medical administrators within the health system, medical administrators are often approached by national or state health authorities to provide feedback on various draft policies as part of their stakeholder consultation process. When providing feedback in an advocacy role, it is occasionally tricky for medical administrators to determine which interest group he/she is representing, especially when different interest groups have differing positions on the same issue. Do they represent the voice of the patient? Do they represent the voice of clinicians? Do they represent the voice of the health service organisation that they work in? Some medical administrators choose to advocate for the most poorly represented group of the three; other medical administrators instead choose to provide a balanced discussion of the viewpoints of all three groups; yet others choose to align themselves with only one particular interest group. Either way, it is important for the medical administrator to be self-aware of what outcomes he/she wants to achieve when adopting a particular advocacy position.

5.9 Ready Reckoner

- Health systems can be described by its various inputs, processes, outputs and outcomes.
- Health system inputs include workforce inputs, financial inputs, knowledge inputs, infrastructure inputs, and supply inputs.
- Health system processes are the non-linear, emergent or spontaneous interactions between its inputs.
- Health system outputs and outcomes are the results of these interactions and their impact to the patient.
- The characteristics of a health system are influenced by the economic and sociopolitical environment in which it operates in, and evolve over time.

- While there are several proposed frameworks for analysing the performance of a health system, there is always a subjective element to the analysis.
- Health policymaking is a political process that attempts to balance competing influences and demands within a society.
- There are different categories and forms of health policies, all of which regulate the complex interactions between the health system inputs.
- Medical administrators face the challenge of keeping up to date with health policies that affect the health system in which they work within, as well as translating these policies into meaningful action for clinicians.
- Medical administrators also face the challenge of making a value judgment on who to be an advocate for in the health policymaking process.

5.10 Reflections

Whilst this chapter has attempted to simplify the complexities of health systems and policies, the concepts described in this chapter are just the beginning of a medical administrator's lifelong journey of learning about this topic. As health systems become more and more complex, so too does the task of the medical administrator in successfully navigating these health systems and effectively implementing positive health policy changes within these systems. The key is to never stop learning!

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