Long-Term Care in Ageing Populations

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Sarah L. Barber, Paul Ong, and Zee A. Han

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Abstract

Long-term care (LTC) involves a range of services that help people live independently and safely when they can no longer carry out routine activities on their own. This chapter focuses on LTC for older persons. Many countries, particularly in the developing world, rely on household members and the local community for most LTC services. However, as populations age, countries face increased demands at acute care facilities, reductions in supply of informal caregivers,

S. L. Barber (✉) · P. Ong
Centre for Health Development, World Health Organization, Kobe, Hyogo prefecture, Japan
e-mail: barbers@who.int; ongp@who.int

Z. A. Han
Department of Maternal, Child, Adolescent Health and Ageing and Health, World Health Organization, Geneva, Switzerland
e-mail: zhan@who.int

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and the need for alternatives in managing chronic and social problems. With increasing pressure on health systems, governments play a larger role in organization and funding formal LTC services and institutions. LTC has been organized and financed in different ways to meet the needs of older persons. There are differences in whether systems are formalized, rely on informal care providers, or are publicly financed. These differences reflect varying demands for health and social services, as well as different economic levels, political systems, and cultures. Based on equity and efficiency reasons, many governments have shifted toward universal LTC systems in which all older people have the right to needed benefits. Financing LTC has posed many challenges, and there are ongoing efforts to reduce the growth in costs while ensuring access to LTC services for those in need. However, even with the expanded role of government in LTC, a strong role remains for households and the community to complement formal care. LTC planning requires consideration of the formal LTC systems and financing as well as support to informal caregivers.

Keywords

Long-term care · Health care · Social care · Financing · Organization · Older adults

Introduction

Long-term care (LTC) involves a range of health, assistive, and personal care services that aim to help people live independently and safely when they are no longer able to carry out routine and meaningful activities on their own. Depending on individual needs and the country context, LTC can be provided at home or in the community, or within a range of facilities and locations such as residential facilities, community care centers, as well as hospital settings. People that provide this care can include individuals or teams with a broad range of qualifications. A great deal of LTC is provided by household members and the community within the home. People that require LTC may include anyone with limitations in functional abilities, regardless of age, and persons needing high-intensity care. In this paper, we focus on the LTC needs for populations as they age and face functional decline.

Global population ageing is the result of our successes in public health. Declines in infant mortality, fertility, and premature death have enabled longer life expectancy in many countries. By 2050, 1.5 billion people will be 65 years of age or older, representing 16% of the world's population (UN DESA 2020a). Such shifts are now apparent. Older persons (65 years and older) are gradually increasing in numbers with their share comparable to the number of children and youth under 19 years by 2100. And unlike just a few decades ago, it is not uncommon for people to live actively into their 80s and beyond. Japan, the Republic of Korea, and many countries in Europe are preparing for rapid increases in the oldest old – those 85 years and older.

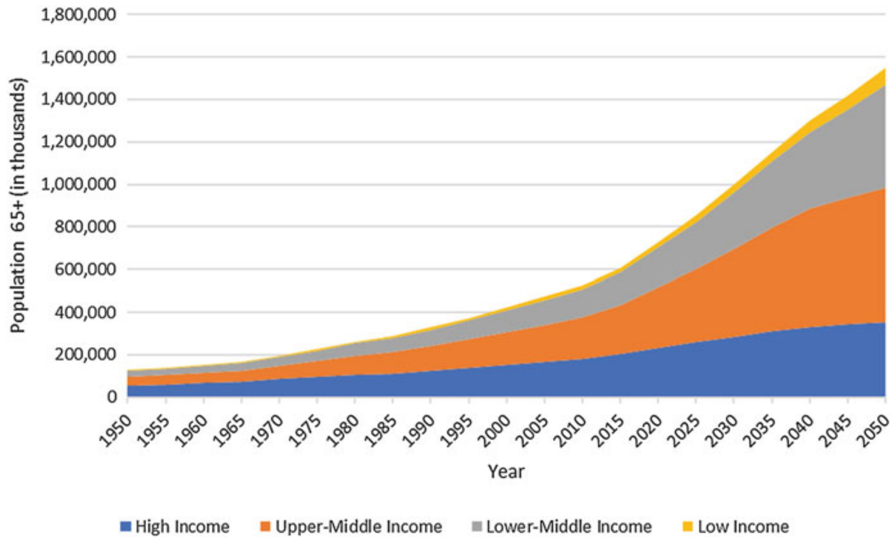

Fig. 1 Number of persons 65 years and older, by country income groups, 1950–2050 (UN DESA 2020a)

In high-income countries, almost one in ten persons will be 85 years or older by 2100 (UN DESA 2020a). Yet even relatively young nations will experience a substantial growth in older populations in the coming decades. By 2050, 71% of people 65 years and older will be in middle-income countries (Fig. 1) (UN DESA 2020a). These profound demographic shifts will require changes in how countries organize and pay for the care of people as they age.

Older persons have diverse health and social needs. Understanding these needs and the level and severity of limitations in functional abilities among older persons is critical to understanding the demands for LTC services. In 2016, there was a difference on average globally of 8.7 years between life expectancy and healthy life expectancy at birth, suggesting that people are spending a substantial number of their later years with varying degrees of disability (WHO 2020). This is important because it informs us whether the added years of life are in good health. Should the added years of life be spent with disability, the demand for LTC may increase in order to ensure functional ability. The difference between life expectancy and healthy life expectancy is greater in regions with higher life expectancy compared with countries where life expectancy is shorter. For example, in Europe, the difference between healthy life expectancy (68.4 years) and life expectancy at birth (77.5) is 9.1 years. In comparison, in the African region, the difference is 7.4 years, due in part to the persistently high levels of child and maternal mortality and health systems capacity to care for adults with chronic conditions (UNDESA 2019).

However, population ageing does not automatically imply higher levels of disability. Figure 2 graphs the difference between healthy life expectancy and life expectancy by the share of the population 60 years and older, for 182 countries

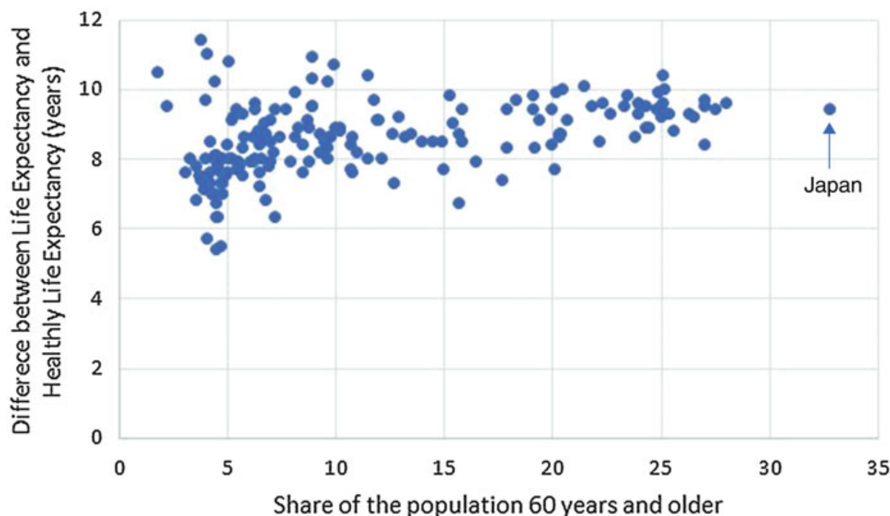

Fig. 2 Difference between life expectancy and healthy life expectancy by share of population 60 years and older, by country (WHO 2020)

(WHO 2020). This difference is one measure indicating whether the gap between life expectancy and healthy life expectancy is short or long. By this measure, the graph shows weak correlations between disability levels among older persons and the share of the population 60 years and older. This finding is similar to other studies (WHO 2015; UN DESA 2019). Therefore, having a large share of the population at older ages does not necessarily result in higher levels of disability. This can be illustrated in the case of Japan, where one-third of its population is 60 years or older and there are relatively low levels of disability (UNDESA 2020a).

This phenomenon could be explained in several ways. Population ageing has already occurred in countries that are more developed economically, and economic development is generally associated with better well-being and higher investments in health. Where health-care investments have been made in strong health systems, such countries are better able to provide care throughout the life course. Strong health systems and quality care can address conditions in early childhood and youth that result in reductions in disability in later life; it can also manage care for adults suffering from chronic diseases, thereby ensuring that they maintain functional abilities as they age. Another reason is that disability rates are measured differently in different countries, thereby preventing comparisons, and data are lacking in many low-income settings.

Given weak associations between the level of disability and population ageing in a given country, the effects of health status on the demand for LTC is unclear. If healthy life expectancy improves, for example, demand for LTC could decline. Should disabilities be mild rather than severe, this would determine the kinds of LTC services needed, and the categories of professional staff. Reduced demand could also occur by intervening early to reduce dependency in later life. Moreover,

there have been major investments in sophisticated technologies for older adults that can greatly improve their interactions with the health system (i.e., wearable devices) as well as cognitive ability, functioning, and mobility (World Economic Forum 2016). The acceptance and use of such technologies can also have a major impact on the demand for LTC services. Moreover, rapid urbanization has allowed communities to consider the design of neighborhoods and homes to enable greater mobility and interaction among older persons and community members.

While some people remain healthy and free from illnesses as they age, others may survive and thrive for years with chronic illnesses that were once untreatable. The trend is most pronounced in OECD countries facing increases in the share of the older population over 80 years of age; indeed, the growth in the group of people 80 years and older is driving an increased demand and supply of LTC in OECD countries (Colombo et al. 2011; Muir 2017). On average across the OECD, 52% of people 80 years and older require some kind of LTC support, and women over 80 years of age are the most frequent to use LTC services (Colombo et al. 2011). In this sense, age over 80 years may be a proxy for dependency levels as many may face physical limitations.

In most countries regardless of income – but particularly for low- and middle-income countries – LTC services are the responsibility of household members and the community. Older persons may reside with their families and children who provide care, and the government role is limited. One of the most common categories of long-term care includes assistance with routine activities for daily living (ADLs), such as cooking, cleaning, washing, and taking medications. Individuals informally supply much of this kind of LTC for older members of the household and people within their community, and this support enables individuals to live in their own communities and function well.

The share of older adults 65 years and older that use formal LTC services varies considerably. In OECD countries, Portugal reports the lowest use of LTC (1.9%) compared with 22.4% in Switzerland. On average among 25 OECD countries, 10.8% of the population 65 years and older uses formal LTC services, and this has increased by about 5% between 2007 and 2017. A substantial share of LTC is provided at home. For 11 OECD countries in which data are available, between 6% and 19% of all LTC services are provided at home (Fig. 3). Among these countries, the number of people needing LTC is similar, but formal LTC use is determined by how countries meet these needs and the extent to which they have established formal LTC systems or rely primarily on informal care (OECD 2019).

As the demand for LTC increases, the supply of health workers and caregivers as a share of the population is declining. Fertility declines among women are occurring in every region of the world (UN DESA 2020b). This implies fewer children to care for older members of their household. Moreover, as countries develop economically, women (who traditionally provide the bulk of LTC services for older members of the household) have more opportunities to enter the labor force. In can be noted that, in some settings, as people experience longer lives, they can also spend more time in retirement and are available to take care of their parents and grandchildren in

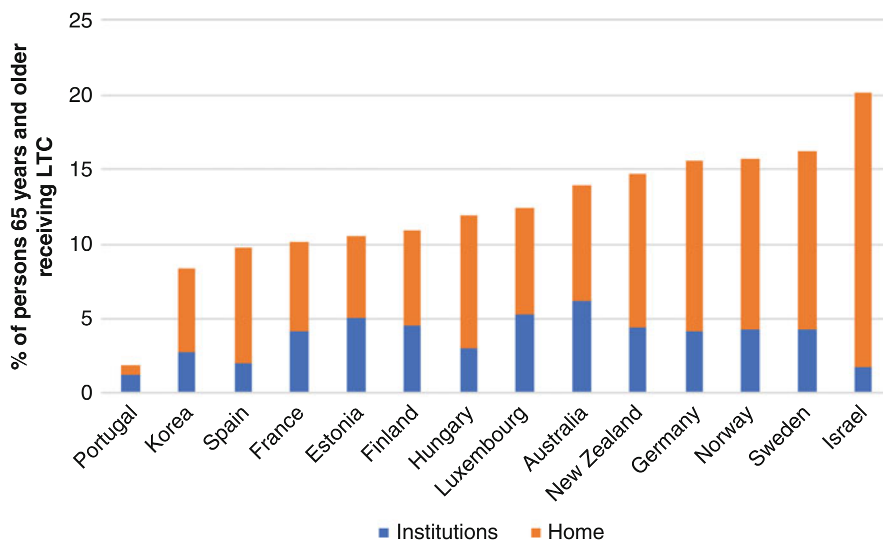

Fig. 3 Percentage of adults 65 years and older that receive long-term care in home and in institutions, selected OECD countries, 2017 or most recent year (OECD 2019)

parallel. Therefore, key factors in driving LTC may also include the age of retirement and the proximity to family members.

Generally, however, with economic and demographic changes, declines occur in the supply of informal caregivers; and the extended family, household, and community are no longer able to provide personal and nursing care. While informal caregivers remain integral to the LTC system, there is a shift toward informal caregiving acting as a complement to formal LTC systems rather than a substitute. As such, countries experience a shift in responsibility for LTC from solely informal caregivers to formal LTC systems financed in part or fully by the government.

Organization and Financing of Long-Term Care

Definitions of Long-Term Care

The World Health Organization defines long-term care (LTC) for older people as *the activities undertaken by others to ensure that people with or at risk of a significant ongoing loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms, and human dignity* (WHO 2015). WHO defines "intrinsic capacity" as a *composite of all the physical and mental attributes on which an individual can draw, not only in older age but across their lives* (WHO 2017). The implications are that healthy ageing depends not only on physical health but also the interaction between people and their environment. As such, LTC services are broad and can include both health care, social welfare

services, and community support among others. LTC services may be provided over relatively short or extended periods of time.

In defining LTC expenditures, the OECD makes a distinction between *long-term health care* and *social services of LTC*. The former represents health-related LTC spending and includes palliative care, long-term nursing care, personal care services, and health and social services in support of care at home. The health component of LTC spending includes episodes of care where the main need is either medical or personal care services. In contrast, social services of LTC include home help, care assistance, residential care services, and other social services. The social component of LTC spending includes services whose dominant feature is assistance with activities of daily living and is classified as social rather than health services (Colombo et al. 2011).

Long-Term Care Components and Institutions

Declines in functional ability could be due to physical disabilities, mental or cognitive conditions, or chronic diseases and multi-morbidities. Depending on the condition, support could be given by health-care providers, social workers, or families and communities. As such the settings in which services are provided vary according to individual needs, resource, and country context. They may include services provided in institutional settings, in the community, and at home.

Institutional Settings

Hospitals

Hospitals provide inpatient health services that form a significant and integral part of LTC, and such services can be delivered using specialized facilities and advanced medical technology and equipment. Hospitals provide inpatient long-term nursing and rehabilitative services to persons requiring convalescence as well as to facilities specializing in the LTC of persons diagnosed with learning difficulties, physical disabilities, chronic illnesses, cognitive impairment, or mental health problems. Subacute care facilities may also be established as step-down facilities after hospital discharge.

Skilled Nursing Facilities

LTC facilities can be tailored to the needs of older persons in some settings. This may include skilled nursing facilities for people who may require intensive nursing care, assisted living facilities for individuals who are no longer able to live or function on their own optimally or safely, but who do not require a high level of medical care and supervision. These facilities also seek to sustain and foster residents' independence for as long as possible. There are also specialized care units in nursing homes to meet specific patient needs, such as care for people with cognitive decline. Within skilled nursing facilities, care is generally provided for an extended period of time to individuals requiring ongoing nursing care by permanent core staff of licensed

nurses that provide nursing and personal care. Depending on the facility, they may also provide other types of social support, such as assistance with day-to-day living tasks and assistance toward independent living.

In OECD countries, nursing homes have traditionally been the central focus of formal LTC systems. However, given the high cost, problems with maintaining quality, and increased demand to stay at home, families and government and private health-care purchasers are seeking alternatives to nursing home facilities that meet the specific health or social needs of older persons at reasonable cost and quality.

Rehabilitation Facilities

Acute hospitals play a role in inpatient rehabilitation; however, most rehabilitation services are provided outside hospital settings for older persons and others. Most dedicated rehabilitation facilities provide step-down services, in which older persons can regain strength following a hospital stay and before they return home. Some facilities also offer step-up services which aim to provide services that prevent hospital admissions. Typically staffed by skilled professionals, including medical professionals, nurses, and mental health and social workers, rehabilitation facilities offer physical and occupational therapy, with the aim to prevent admission or re-admission to acute care hospitals. Home- and community-based rehabilitation services are also offered in some settings. The care model can include health issues; but rehabilitation facilities primarily focus on promoting independent functioning rather than addressing health problems.

Ambulatory Care Clinics

Many older people experience minor health needs that can affect health, well-being, and independence. Such conditions may include hearing and visual impairments, foot problems, chronic pain, incontinence, nutrition, and oral health. Medical or nursing care aims to proactively address such conditions on a routine basis and involves medical and nursing care services, administering medication, performing medical diagnoses and minor surgery, and health counseling. Such care aims to maintain functionality and ensure access to supportive care when functionality can no longer be fully maintained or rehabilitated. Services can be provided by medical professionals with health clinics and hospitals.

At Home and in the Community

Home Health Care

There have been efforts in developed nations to shift care from institutions toward providing older persons care at home (OECD 2013). This trend has been driven by both patient demand and the high cost of LTC institutional care that can fall on both older persons and government. Home health care involves specific agencies that provide medical and non-medical services to patients in their own home. Such care

substitutes for hospital and nursing home care and can also enable quicker discharge for hospital inpatients. Skilled medical providers provide services at home. Questions remain about the cost-effectiveness of home care for people who may need high-tech care or a high level of medical supervision, particularly in rural or remote regions without easy access to referral systems.

Personal Care Services

Personal care services provide help with activities of daily living (ADL) such as eating, dressing, getting in and out of bed, bathing, and toileting. Such care aims to promote functioning at home or during hospital stays. As such personal care services can be conducted at home by family members, friends, or social workers. Most inpatient and day care also includes personal care services. Some communities have established residential or personal care homes, which provide support to personal care services and medical management as well as meals, housekeeping, and social services.

In-Home Assistance Services

Assistance services are those that assist to carry out household management, such as shopping, laundry, vacuuming, cooking and performing housework, managing finances, or using the telephone. Such activities are called instrumental activities of daily living or IADLs. The aim of in-home assistance services is to enable a person to live independently in a house or apartment. These services are typically provided by household members, friends, community members, and home help services or under assisted living arrangements. Some communities have established independent or retirement housing, which generally have a physically supportive environment for persons with reduced mobility.

Community-Based Social Care Services

Other social care services involve individual and community activities. The objective of such activities is to reduce social isolation and promote mental health and welfare. In some settings, community-based organizations also support individuals in household adaptation to increase mobility. These services are typically provided by household members, friends, community members, or social welfare and community service organizations.

This diverse array of LTC facilities and health- and social care providers has been developed in response to people's demand for different kinds of care, and varying levels of resources both public and private. The design of the benefits for all LTC beneficiaries can vary by countries. In some settings, home care and IADLs such as cleaning are not included in the benefits package. However, it is difficult to draw a line between assistance at home and personal assistance. In addition, some countries cover the cost of IADLs with the objective of helping people remain independent and stay in their homes if they so choose (e.g., Sweden, Denmark, Germany, and Luxembourg) (Colombo et al. 2011).

Long-Term Care Workforce

Formal Workforce

LTC is labor-intensive and comprised both of formal and informal caregivers. Formal LTC workers are paid skilled health-care and social care workers, including, nurses and personal caregivers. A comparison of LTC workforce is challenging because of the lack of standardization in qualifications and educational requirements for LTC workers globally. The hours, settings, training modules, and final certification process vary from around 75 h in the United States to 430 h in Australia and from 75 weeks of total training in Denmark to 3 years training for certified care workers in Japan (OECD 2013).

In the OECD, large variations can be seen in the availability of formal LTC caregivers (Fig. 4). There are, on average, 5 LTC workers per 100 people 65 years and older across 28 OECD countries (OECD 2019). Frontline formal workers are made up of certified nurses' aides, home health-care aides, and home and personal care workers who help with personal care attending to ADLs, such as eating, bathing, dressing, and using the toilet. In many countries, this work is undertaken by lower-skilled workers often also with minimum training requirements (Colombo et al. 2011). LTC workers also include licensed health professionals, such as registered medical professionals, nurses, social workers, physical therapists,

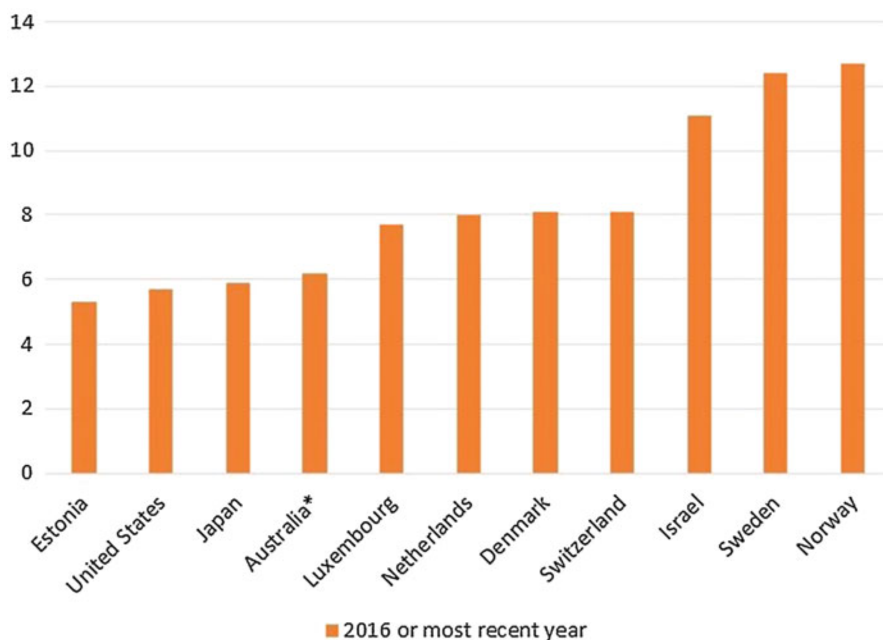

Fig. 4 Long-term care workers per 100 people 65 and over in OECD countries, 2016 or most recent year (OECD 2019)

occupational therapists, physician assistants, as well as LTC facility administrators who have supervisory or managerial responsibilities.

According to the OECD, in more than half of OECD countries, population ageing has outpaced the supply of the formal LTC workforce. The LTC workforce has remained at the same levels or declined even in countries where formal LTC utilization is higher than the OECD average (such as Denmark, the Netherlands, Norway, and Sweden). Moreover, the average number of formal LTC workers per 100 people 65 years and over has decreased from 5.3 in 2011 to 4.9 in 2016 (OECD 2019).

Countries have faced challenges in attracting young and skilled workers into the LTC system. In some settings, the formal LTC workforce faces relatively lower pay and working conditions, which implies that the sector may not generally be viewed as an attractive area of work. Therefore, recruiting and retaining LTC workers is particularly challenging, with high turnover rates in many countries. All these factors also tend to affect women disproportionately as, on average, women hold about 90% of the jobs in the LTC sector in OECD countries (OECD 2019). Personal care workers with less formal education represent 70% of the LTC workforce on average in OECD countries and up to 90% in a few countries such as Estonia, Switzerland, Republic of Korea, Israel, and Sweden (OECD 2019).

Informal Care

Informal care is typically unpaid personal and nursing care given by household members, family, and the community to older persons. The extent and scope of informal care impacts the formal LTC system and its financing. The effects of informal care extend to the number of hours spend in the formal labor market, or even the decision to participate in or drop out of the labor force.

Informal care is the most common kind of LTC (Fig. 5). Surveys about the extent of informal caregiving indicate that it is widespread in both developed and less developed settings. OECD reports that the size of informal caregivers is at least

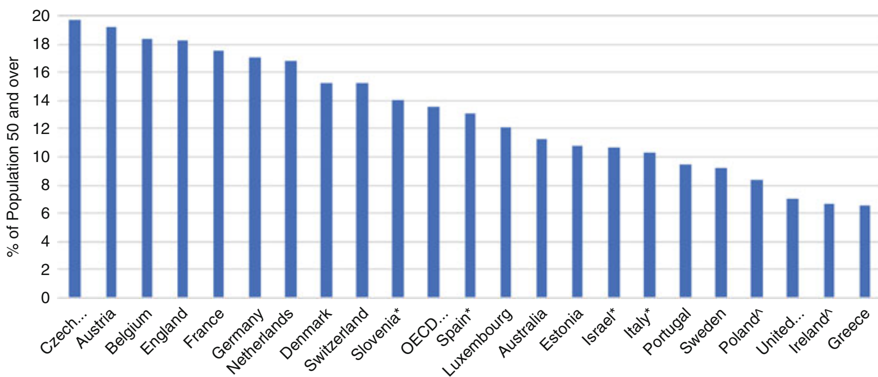

Fig. 5 Percentage of the population 50 years and older reporting to be informal caregivers at least weekly, 2017 (or nearest year) (OECD 2019)

double and as much as ten times the size of the formal care workforce in some countries (e.g., Canada, New Zealand, United States, the Netherlands). In Japan, older persons continue to rely on informal caregivers despite a comprehensive public LTC insurance system (Norton 2016). Estimates of the economic value of informal care suggests that the time and value spent on informal care is large and includes opportunity costs, market value of services provided, well-being of patients, and others.

Informal care can either substitute or complement formal LTC. Where there is a higher supply of informal care, the demand for formal LTC is likely to be lower. At the same time, informal care complements formal care where the informal caregiver could assist with medication compliance, transportation, or managing appointments. Some studies find that informal care can substitute for personal and unskilled home care but complements care provided by skilled medical providers and hospitals.

Across OECD countries, about three in five caregivers over 50 years of age are women (OECD 2019). Studies have also reported that informal care can reduce health-care expenditures, but the effect varies based on the caregivers' relationship with the recipient. In OECD countries, the availability of a spouse that provides informal care reduces national LTC expenditures, and this effect is larger than the effect for children (Yoo et al. 2004). However, the impact on informal caregivers' health and employment through such means as foregone wages and opportunity costs can be significant.

The health of the caregiver is also a factor in driving formal LTC use given that the stress of providing informal care can have an impact on mental and physical health. The tasks required of informal caregivers are complex and include many of those performed by formal workers with the same attendant risks, such as medication errors, dealing with physical or mental health challenges. Many of these informal caregivers provide support without any formal training and without professional guidance.

Financing of Long-Term Care

With the increasing number of older persons that are dependent on some level of care, developed countries have established policies and institutions to help older persons access LTC. Government intervention in LTC markets is important for several reasons. LTC health markets, like all health markets, face the problems of adverse selection and moral hazard, which leaves a role for the government. In addition, the LTC market faces the problem that people must buy LTC insurance to insure against risk for many years in the future long before they need it. Moreover, contrary to the evidence, many people do not believe that they will actually need LTC services in the future. While indeed some people never need LTC, others may require intensive support or institutional care, which may exceed their available income or wealth. Using data from the United States, it was estimated that men and women 50 years of age have a 50% and 65% chance, respectively, of ever needing LTC (Hurd et al. 2014). However, they also estimate that the duration of need can be

relatively short with a high probability of returning to the community. Given the potentially very large and uncertain costs, pooling risks make the costs more predictable.

In terms of publicly financed LTC, countries have set up systems such as in Japan, where working adults pay for services used by older adults. Alternatively, countries have set up systems by which people pay into a fund over a lifetime, and the fund pays for their LTC as needed later in life. Other countries use tax-based systems to pay for LTC. In addition, governments typically target vulnerable populations in terms of the allocation of resources; where older persons have specific LTC needs that are unmet, they are considered vulnerable and targeted for public benefits. With demographic changes also comes reduced ability to provide support to members of the household and a shift from informal care by household members to formal care provided by the government. This is evidenced in all developed countries that now provide financing for some form of LTC (Colombo et al. 2011; OECD 2013).

Public Spending on Long-Term Care

Public spending on LTC varies widely among countries, even for the same services. This spending may be related to variations in qualifications of staff and their payment levels, other input costs, and the structure of the formal LTC system. Variations across countries are also driven by differences in how they perceive LTC and primarily whether it is perceived as a family responsibility. Other factors include social and cultural norms of providing support for family members and friends and whether the care for older people is viewed as a priority for a healthy and vibrant society.

Generally, public LTC spending is a relatively small share of public budgets, even in countries with established formal LTC systems. On average, public spending on LTC health and social services in OECD countries amounts to approximately 1.7% of gross domestic product (GDP) (OECD 2019) (Fig. 6). The reliance on formal LTC

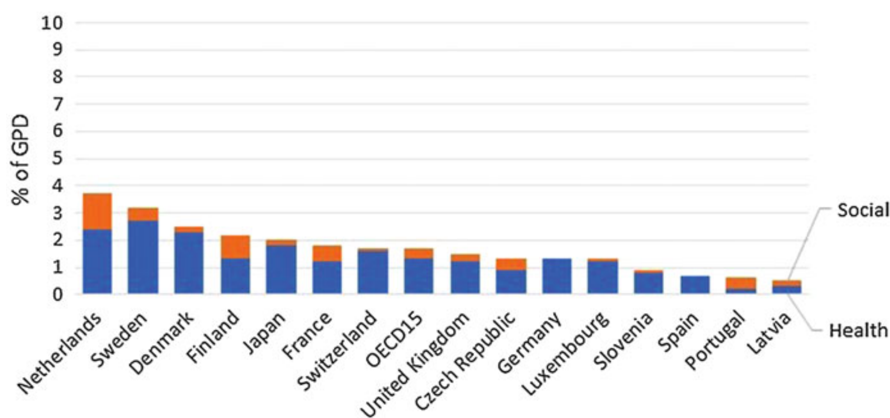

Fig. 6 Public spending on long-term care in health and social sectors as a share of GDP (OECD 2019)

in institutions or at home is an important determinant of the level of public expenditures on LTC. Countries that spend more than 2% of their GDP on LTC include those that have systems categorized as universal in coverage (e.g., the Netherlands); in comparison, those countries that rely on private resources have lower levels of public spending.

In all OECD countries, formal LTC systems are a highly visible but only a part of the care picture. Even where formal LTC institutions exist, much care is actually provided at home by mostly unpaid informal caregivers (illustrated in Fig. 3). Private LTC spending averages about 15% of total LTC spending in OECD countries but is higher in the United States, Germany, and Spain (Colombo et al. 2011). Average per capita LTC expenditure across OECD countries is US$ 543, ranging from US$ 42 in the Slovak Republic to USD 1431 in the Netherlands. As expected, institutional care accounted for approximately two-thirds of total LTC costs across OECD countries, while on average only a third of LTC users received care in institutions (Colombo et al. 2011).

Even though LTC spending accounts for a relatively small share of GDP compared with health spending, it is projected to increase over time. According to projections for countries in the European Union, public LTC spending is anticipated to double by 2050 to between 2.2% and 2.9% of GPD (European Commission 2009). This increase is expected because of a decline in informal family caregivers, increased costs of formal LTC, and growing household wealth. This growth is also attributable to more rapid population ageing than in the past, particularly for the age group of adults 80 years and older. However, there is some uncertainty as to whether this population will be healthy as they age or face higher levels of disability over time that would require more complex services. The question of future costs also hinges on the policy options for funding future need, whether through the formal sector, hospitals, primary care, or informal caregivers, and the relationships and synergies among informal and formal care providers, empowering households and individuals. Technological developments are promising but also uncertain as to their levels of acceptability and use in countries, whether countries will be able to pay for such technologies, and how care can support the use of such technologies used at home and outside of the formal LTC system (World Economic Forum 2016).

Many countries manage LTC funds separately from general health funding by, for example, creating separate funding streams for LTC (e.g., Germany, Japan, Israel, the Netherlands) (Wong 2013). This may help ensure that LTC funding is not diverted to other purposes, promotes transparency in management, and enables policies specific to the LTC sector to be implemented when they may not be applied to health services (e.g., eligibility testing). However, the separation of funding for LTC and health care poses problems in promoting risk pooling and coordination of health and social care. In the United Kingdom, social care is being integrated into the National Health Service (NHS 2020). In Denmark, LTC falls under social care and is the responsibility of the local councils with regard to both provision and financing (Mot et al. 2012).

The private LTC insurance market remains relatively small (Fang 2016). Private LTC insurance markets face the market failures of adverse selection and moral

hazard. Adverse selection occurs when only people who may have some certainty of using private LTC insurance buy it. In turn, private LTC insurers limit eligibility to those who are healthy, for example, by excluding those with pre-existing conditions. In addition, where strong public LTC programs exist, there is less of a demand for private coverage.

Because of these factors, there are concerns that private LTC insurance may present a challenge in equitable coverage particularly for those that face the highest needs.

Classification of Long-Term Care Systems

LTC systems can be classified into several approaches and by the level of public and private funding, benefits packages, institutional mechanisms, and scope of entitlements (Applebaum et al. 2013; Colombo et al. 2011; Wong 2013). Referring as a starting point to Colombo et al. (2011) for developed settings, this paper describes roughly five categories of LTC systems. Some countries treat LTC as a part of universal coverage; benefits are universal and public funding is high. In other settings, public funding is means-tested and granted as a safety net to access public resources. In others, the public sector plays a more limited role, and there is a reliance on private financing. In middle-income countries that are undergoing rapid population ageing, the private sector is starting to respond to the demand for LTC among older adults. In many low- and middle-income settings, no formal LTC systems are yet available, and care for older adults that need LTC is provided informally by household members, friends, community members, local religious organizations, or other community organizations.

Single Universal Coverage LTC Systems

Single universal coverage LTC systems provide public funding for nursing and personal care to eligible beneficiaries. Eligibility may be determined by age and cover older population groups (e.g., Japan and the Republic of Korea) or classify people by whether they need care (e.g., the Netherlands). A single system is established to provide care and determine benefits. These countries provide for their citizens the right to access a LTC benefits package covering institutional services as well as in-home care. Common to this approach is the underlying principle of equitable access based on health needs, determined through personal evaluations of the level of functional ability by which eligibility for the different benefits is determined. Also common is the use of both formal and informal care providers.

Such systems tend to be funded through reliable sources of mixed dedicated revenues (e.g., payroll tax or general revenues). Nordic countries (e.g., Sweden, Finland, Norway) are examples of tax-funded long-term care services (Colombo et al. 2011). In most cases, local governments organize, provide, and finance care, and the national government subsidizes this care. Service packages tend to be comprehensive, including a range of home-based and institutional care and home

and personal assistance. As such, public expenditures on LTC in these countries tend to be relatively high and patient contributions modest.

Japan and the Republic of Korea are examples of funding through dedicated public LTC insurance, in which dedicated social insurance arrangements for long-term care services separate from health insurance. Sources of funding tend to be labor based. Both LTC benefits and population coverage are comprehensive, with mandatory coverage for all or most of the population. Cost sharing may be expected, particularly for board and accommodation in institutional care. As a result of this comprehensive approach, public LTC spending tends to be higher among countries in this category.

In contrast, Belgium integrated LTC into the health system (Colombo et al. 2011). In this model, LTC services are carried out by health professionals, in homes and institutions. It can be noted that LTC systems under the universal coverage approach differ from universal health coverage (UHC) schemes (Wong 2013), particularly related to financial protection. For example, countries that have implemented UHC put into place financing systems that ensure access to medical care and avoid catastrophic health spending. However, even under LTC universal coverage approach, social care services may not be fully covered or adjusted by income whereby recipient pays a share of the cost through co-payments, savings, or private insurance.

Box 1 Working Adults Pay for Services Used by Older Adults in Japan

In the 1970s, the demand for formal LTC services was initiated by a government policy of eliminating co-payments for people 70 years and older. As a result, large numbers of older persons began to seek care in hospitals for non-acute conditions including social care. Even today, the pattern of demand remains for chronic care and rehabilitation in hospitals.

In 2000, the Japanese LTC insurance system began, which is compulsory for everyone 40 years of age and older. This pooling across generations reflects the willingness of younger people to finance care for older adults and a strong sense of intergenerational solidarity. Benefits are restricted to services, and the maximum cash equivalent is determined by seven eligibility levels. The levels are based on functional capacity and range from about US$50 to $350 per month. Beneficiaries must pay coinsurance, ranging from 10% to 30% based on household income level. The fee schedule has the same structure as the health insurance system. The fees and conditions of billing have been revised to align with policy goals. For example, bonus payments for home care agencies are given to employ more experienced workers. The fee schedule is revised every 3 years, and the base rates differ according to geographic adjustments (with Tokyo as the highest at 11.4% above the base rate).

In 2006, the government introduced a community-based, prevention-oriented LTC benefit targeted at low-care-need seniors. The objective of the

(continued)

Box 1 (continued)
program was to prevent active older persons from becoming dependent, through the provision of services such as exercise, mental health, and nutrition offered at day-care facilities. These health promotion benefits are managed by centers at the municipal level, where the planning and needs assessments are conducted.

Challenges that remain include evaluating diverse needs for health and social care and promoting quality of services. Evaluations have yet to be conducted to determine whether good quality has had an impact on better functional status or reduced hospital emergency visits.

Source: Ikegami (2019).

Mixed Systems

Among OECD countries, there is a category of mixed LTC systems, whereby no single program exists but a mix among different universal coverage programs and benefits, or a mix of universal and means-tested approaches (Colombo et al. 2011). OECD categorizes these systems as parallel universal schemes; income-related universal benefits or subsidy; and mix of universal and means-tested (or no) benefits.

Parallel universal systems imply that different schemes exist, in which each offers universal coverage for a different type of care such as nursing care or personal care. Parallel universal LTC systems schemes exist in Scotland and the Czech Republic. Income-related universal coverage schemes imply that everyone who is eligible receives universal public benefits, whereby the benefit may be adjusted to income. These schemes exist in Ireland, Australia, Austria, and France. Under a mix of universal and means-tested scheme, universal entitlement tends to apply to health-related care in home or institutions (e.g., Switzerland) and/or home nursing and personal care (e.g., New Zealand). In some settings with fewer resource for LTC, universal coverage is provided only for institutional care (e.g., Greece). Under this system, social services are provided through health insurance funds, but no support is given for home care.

Box 2 Australia Offers Universal LTC Coverage for Eligible Persons
Under Australia's Medicare, all citizens have access to free public hospital care. No distinction is made in terms of access or entitlements to hospital care based on age. The federal government subsidizes non-medical care and support for older persons. The subsidies are held by consumers (for home care) or providers (for long-term residential care). Older persons contribute to the cost of their care and accommodation based on means testing, and government subsidies are available for those with low incomes and assets.

(continued)

Box 2 (continued)

Individuals eligible for long-term care services are identified through a process of needs assessment to determine their entitlements to public subsidies. The level of funding is determined by the Aged Care Financing Instrument, which consists of 12 sets of questions about care needs and 2 diagnosis sections.

Recipients of residential and community care services usually make a financial contribution to the cost of their personal care, and the contribution is adjusted to the person's income. For institutional care, the government subsidy accounts for about 70% of total expenditures. Annual and lifetime caps are in place to limit the level of means-tested care fees that residents pay.

Institutional residents are asked to pay a basic daily fee toward accommodation costs and living expenses (e.g., meals or heating and cooling). Maximum charges are regulated and set using a percentage of the basic single age pension (about 85% and equivalent to about AUD 14 000 a year). In addition, residents pay an additional fee for the care they receive, of up to about AUD 22 700 a year. The fee is income-tested such that residents with income less than about AUD 21 500 a year and assets less than AUD 37 500 do not have to pay it.

Sources: Colombo et al. (2011), Barber et al. (2019).

Means-Tested Safety Net LTC Systems

Under means-tested schemes, LTC is provided as a safety net, and eligibility for benefits is based on income or wealth and the availability of informal caregivers. Different countries apply different assessments for means testing; however, the principle is that the government covers the payment of LTC for those unable to pay. In practice, this implies that older persons become eligible when they are impoverished. Generally, means-tested LTC does not have a dedicated revenue source. Examples of public benefits for eligible individuals may include nursing home care, assisted living, or in-home services. These countries typically have a range of LTC facilities and community support services. Informal care by household members and the community is an integral part of the LTC system. However, eligibility for public funding is only granted after a person depletes his/her own financial resources and has a high level of disability. Informal care is a critical part of the LTC system, and household members and the community typically provide assistance in the absence of poverty and disability. Examples of these approaches are in the United States and England.

Box 3 The US Medicaid Program Determines Eligibility After Resources Are Depleted

Older adults in the United States have universal access to health care through federally funded Medicare program. While it covers the costs of acute medical care and outpatient visits, Medicare primarily finances skilled nursing

(continued)

Box 3 (continued)
facilities. The Medicaid program established in 1965 is the main funder of LTC services in the United States designed to cover health and LTC for the indigent, as well as post-acute care stays in skilled nursing facilities for all Medicare beneficiaries. People are eligible because they have low incomes and assets, have become impoverished because of LTC or health care expenditures, and meet specific thresholds for functional impairment.

Administration of Medicaid is at state level, whereby states set up their own LTC systems, benefits, and eligibility requirements under broad federal guidelines. In 42 states and the District of Colombia, individuals receiving Supplemental Security Income benefits because of low income are automatically eligible to receive Medicaid if they meet specific functional eligibility criteria. Nursing and home health-care services are mandatory benefits; however, the majority of LTC services are determined at state level. States can also establish limits on the total number of persons enrolled and target specific geographic regions or population groups. They also control access through the supply of beds and the prices paid. Because of differences in implementation at state level, the prices for similar services can vary widely by state. For example, for assisted living facilities, the per diem price paid by Medicaid ranges from US$ 94 to US$ 305.

The second largest public payer of LTC services is the Medicare program. In 1997, the Program of All-Inclusive Care for the Elderly (PACE) was established as a permanent Medicare and Medicaid benefit to help nursing home eligible seniors avoid institutional care by providing them with a mix of coordinated acute and long-term care services in the community. Eligible individuals are 55 years or older and live in the service area of a PACE program (operating in 31 states). Participants receive medical and social services in an adult day health center by an interdisciplinary medical and social care team. states.

PACE is a Medicare-managed care program and a Medicaid state plan option. Participating organizations receive two capitation payments per month per enrollee. The Medicare capitated payment is based on the frailty level; the Medicaid payment is negotiated between the participating organization and the state Medicaid agency. Some evidence suggests that PACE is associated with reduced risk of hospitalization.

Sources: Barber et al. (2019), MACPAC (2019).

Emerging Private Sector in Middle-Income Settings

In middle-income countries, there has been rapid population ageing with increasing numbers of older persons. This is occurring in every region of the world, in countries such as Argentina, Brazil, China, Egypt, India, Mexico, South Africa, and Thailand, among others. While public funding to LTC systems has been limited in these settings, the growing numbers of older people in need of support have created a market for the private health care sector, particularly in terms of nursing home

facilities and home-based personal services. As such the private sector has stepped in to offer LTC services for families that can afford to pay for them. At the same time, household members, friends, and the community are critical for support of older persons in these settings for most types of non-health assistance.

Box 4 Thailand Has an Emerging Private Sector for LTC

Thailand is rapidly ageing. Thailand established the Elderly People Act (2003) and the 2nd National Plan for the Elderly People (2002–2021), which emphasize programs for people 65 years and older. However, LTC is not covered by government funding and services are often provided by private organizations. The capacity of formal LTC institutions is limited; in 2013, there were 138 LTC facilities in Thailand, nearly half of which were in Bangkok and the remaining in other large cities. LTC services are thus largely provided informally by family members, particularly in rural areas. Among a survey of 21 private LTC facilities, the findings included no clear criteria for admission, wide scope of services provided with few boundaries, lack of appropriately trained professional staff, and no formal registration system or regulatory standards of quality. In response to the growing need, the government has established certified training courses for professional and paid caregivers working in the LTC sector.

Source: Sasat et al. (2013), ILO (2015).

Informal Care in Low-Income Settings

Countries such as Bangladesh, Ghana, Kenya, and Nepal have limited health and social services for older adults and are, for the most part, adapting their health systems to care for increasing numbers of adults with chronic diseases. Public funding is limited or not available. Household members, friends, and the community are the backbone of the support provided to older persons. Where older people's LTC needs are not met, they may seek care within the existing system of health resources or acute care hospitals, even though they may require social or home care.

Box 5 Older Persons in Ghana Rely on Family Caregivers

The numbers of older persons 65 years and older are expected to increase to 7% of the population by 2050. It is estimated that most older persons have at least one disability, including problems with mobility and cognition. It is expected that the need for LTC service will grow significantly. The extended family in Ghana provides most of the support to older persons, and children are thus a source of security for older family members. With increasing economic development and opportunities for young people to migrate to urban areas, increasing numbers of older persons are living alone.

(continued)

Box 5 (continued)

No public LTC system or funding is in place, nor do formal systems of training LTC workers. The increasing numbers of older persons with disabilities will place pressure on the health system in Ghana. Without formal LTC systems, older persons may present in public health facilities and hospitals with needs for chronic care, rehabilitation, and social care. Some private sector providers have emerged but formal LTC services are unavailable for most families.

Source: ILO (2015).

Criteria That Trigger Government Entitlements

Within each of the three categories that involve public funding of LTC, there are different ways of determining eligibility of public benefits. In recognition that there is heterogeneity in needs across the spectrum of older persons, targeting those with the highest need for benefits is one means to control costs. Such targeting may be done through cost-sharing policies and defining the needs that trigger government entitlements and services. Such targeting is done regardless of whether the LTC approach is universal or means-tested. While targeting identifies those with the greatest needs, people with low incomes may have to pay out of pocket for care, and this has implications for financial protection and unmet need.

A separate study in eight OECD settings and Thailand (Barber et al. 2019) documented the assessments applied to evaluate access to government benefits and determine the financial amount for which beneficiaries are eligible (Fig. 7). In each of these settings, adjustments were made based on level of the complexity of the health condition, functioning, and medical needs. A few of the cases are highlighted in this section or other sections of the chapter.

In England, all costs are covered for those with long-term conditions assessed as eligible based on a continuing health-care assessment measuring basic physical and cognitive functioning, whether at home or in long-term residential care facility. A weekly contribution is made for those who don't meet these requirements in residential care but who require some nursing care. All nursing home costs are means-tested. Non-medical care costs for low-income patients are covered by the local authority.

In France, nursing home facilities, whether private or public, are funded by case-based payments. There is a three-part tariff comprised of a care package paid by social health insurance, a long-term care (or dependency) bundle paid by the local authorities, and an accommodation fee paid by the patient. The care package for each patient is calculated based on the iso-weighted care group (GPMS) scores, which generate 238 condition profiles corresponding with the average care needs and dependency level of people living in the facility. The average level of resources required for the 238 profiles was defined by specialists and reported as points per cost item. The dependency level is determined by the gerontology autonomy

Setting	Facility type	Payment method	Basis of adjustment for health need
Australia	Nursing home	A means tested medical care fee is applied based on the Aged Care Financing Instrument (ACFI) to determine need. Payments are covered by residents with government subsidies, including a basic daily fee for residential services (covered by residents), accomodation fees (paid by residents and government), and fees for any additional services (paid by residents).	The ACFI consists of 12 sets of questions and two diagnostics sections to determine the overall care profiles and the average cost per stay per person.
England	Nursing home	All costs are covered for those with long term conditions determined as eligible for National Health Service (NHS) Continuing Health Care. A weekly contribution is made for those who don't meet these requirements but require some nursing care (£158.16 per week). Other nursing home costs are means tested. For those on very low incomes, the local authority pays.	The NHS Continuing Health Care assessment measures breathing, nutrition, continence, skin, mobility, communication, cognition, behaviour and other dimensions.
France	Long term residential care	All facilities (private or public) are paid for under the care package, including long-term care. The case-based payment is adjusted for patient need based on scores using the iso-weighted care group (GPMS). Accomodation is paid by the patients.	GMPS measures 238 condition-profiles by evaluating 50 clinical conditions and 12 profiles of care. For each condition-profile, eight resource groups are delineated. These groups define the social care plan, based on an assessment of the dependency calculated using the
	Home care	Health care prices are fixed by the social health insurance fund with fees for services. Prices for social care services are unregulated. Reference prices are used to calculate subsidies (based on the level of autonomy).	
Germany	Outpatient and home care	Care is covered by compulsory long-term care (LTC) insurance. All outpatients receive a monthly lump sum for short-term inpatient care, semi-inpatient services at night, or services to support relatives. Additional monthly contributions are provided if all services are done at home, for professional outpatient services, and for inpatient services.	Financial contributions by LTC insurance depends on the enrollee's need for nursing care. Patient needs are evaluated based on an assessment of physical, medical, cognitive and psychological needs, and the person's ability to live independently and social interactions. Patients are graded on a scale from 0 to 100 and allocated to one of five stages.
	Nursing home	Nursing care charges are negotiated individually between a nursing home, welfare organisations and the LTC funds, whose enrollees contribute at least 5% of the nursing home's days. Patients in nursing homes contribute to nursing home costs in five different ways: fixed co-payment, payment for housing, utilities, and meals; investment costs; training levy set by the state; and other additional services.	
Japan	Health facility for elders	Case based payments are adjusted for patient needs, and financed from compulsory LTC insurance. The maximum cash entitlement is determined by functional capacity, and ranges from \$50 to \$350 per month. Beneficiaries must pay coinsurance ranging from 10% to 30% based on household income. Compulsory LTC insurance covers home helper visits and visiting nurse services; day care; loan of wheelchairs; care provided prior to going to health facilities; and LTC medical facilities.	Seven eligibility levels are based on functional capacity.
Republic of Korea	Long term care hospitals	A per-diem case-based payment is determined by medical need. Public LTC insurance is provided. The benefits package includes home and institutional care; home-visit care; nursing; bathing; and assistive devices such as wheelchair, walker, and bath chair, etc. for home care services; aged care facilities; and housing for institutional services. The benefits ceiling per month for residential care depends on five different functional levels determined by a health needs assessment.	Five different functional levels.
USA (Medicare)	Skilled nursing facilities	A predetermined per diem payment is paid based on patient needs. The payment is expected to cover all operating and capital costs, with high-cost, low-probability ancillary services (i.e., magnetic resonance imaging and radiation therapy) paid separately. Adjustments are made for geographic differences in labor costs and case mix. In 2019, the Patient Drive Payment Model (PDPM) will be used that classifies residents into a separate group for each case-mix adjusted component and each has their own case-mix indexes and per diem rates.	The PDPM uses five case-mix adjusted components: physical therapy, occupational therapy, speech-language pathology, non-therapy ancillary, and nursing. Each resident is classified into one group for each component.

Fig. 7 Adjusting payment methods for LTC on the basis of health need, selected countries. (Barber et al. 2019)

and iso-resource groups. This instrument uses ten variables measuring physical and mental capacities and seven variables for domestic and social activities (i.e., cooking, household tasks, mobility). For people living at home, medical and social care services are provided and paid for separately. Health care is financed under regulated health insurance prices. Social care services are provided by other public and private entities, and prices are not regulated. However, reference prices are used by the government to calculate the amount of the subsidies, and these reference rates vary by local authority (from 13 EUR to 24 EUR per hour).

In Germany, LTC insurance is compulsory, and financial contributions vary based on the need for nursing care. Evaluations of patient need are based on physical, medical, cognitive, and psychological assessments and the ability to live independently. These assessments are graded on a scale from 0 to 100, which is divided into 5 stages of need. All people who receive care in an outpatient setting receive a monthly lump-sum contribution for short-term inpatient care, semi-inpatient services at night or for services that support relatives. In addition, they receive a monthly contribution of between EUR 316 to 901, if services are entirely provided by the family and relatives at home; EUR 689 to EUR 1995 for professional outpatient services; and EUR 700 to EUR 2005 for inpatient services.

For nursing homes, prices are calculated on a per diem basis. If the monthly sum of nursing care charges is higher than the monthly lump-sum payment, residents pay the difference irrespective of their level of need. Nursing care charges are negotiated individually between a nursing home, welfare organizations, and LTC funds, whose enrollees contribute at least 5% of the nursing home’s nursing days. During these negotiations, nursing homes explain any increase in fees. Nursing home cost data are benchmarked based on size, and those with costs in the lower one-third are deemed cost-efficient. Patients contribute to nursing care charges by paying a fixed co-payment based on the monthly average of nursing care charges, after deducting monthly LTC contributions and dividing the number of residents. Patients also cover costs for housing, utilities, and meals; investment costs of nursing homes (i.e., building, equipment, and maintenance); a training levy; and additional costs, such as wellness services, superior housing, and individual meal plans.

The Republic of Korea introduced public insurance for LTC, managed by the National Health Insurance Service. The benefits package includes home and institutional care; home visits for activities in daily living; assistive devices; aged care facilities; and institutional services. The benefits ceiling for residential care depends on the need assessment. The payment for residential LTC facilities is per diem adjusted for case mix using a health assessment of five functional levels of the beneficiary. The fee is determined by the insurance service, with no negotiation of fees with providers, based on an analysis of provider activity and cost data.

Means Testing and Financial Protection

Many OECD countries apply means testing to identify low-income people as eligible for benefits, which may result in higher health spending for older individuals. Home care may in particular be out of reach for many with the exception of those countries with universal coverage (e.g., Iceland, the Netherlands, and

Sweden). There is, therefore, a disconnect between the stated LTC policies in most developed settings and the lack of financing for home care that may allow people to remain in their homes for as long as possible (OECD 2011). Where home care is an alternative to hospital care for more serious conditions, home care options may be more limited to encourage the most economical option (e.g., Slovenia and the Republic of Korea). Individual choice therefore may be secondary for those who rely on government benefits (Muir 2017).

Some countries also consider people's assets when determining eligibility, particularly for institutional care, and in many cases, people still receive support regardless of asset levels. The exceptions are the United States, England, and institutional care in Israel where individuals with high assets are expected to use their personal resources to pay for care until their savings are depleted, after which they become eligible for benefits (OECD 2011).

OECD countries tend to cover the cost of accommodation in residential facilities, where people cannot afford to pay for themselves. However, eligibility is often limited to the poorest segments of the population with serious health needs. In some countries, people are permitted to keep a small percentage of their income for living expenses, which could be as little as 1% in some states in the United States to 40% in the Netherlands (Muir 2017); a balance is needed between enabling individuals to live independently while not placing a huge pressure on public finances. In recognition that accommodation costs can far exceed nursing and personal care in some cases, OECD countries are exploring innovative instruments to enable people to cover accommodation and board in LTC institutions (Muir 2017).

Technology for Older Adults

Technology can play a role in supporting older adults in prevention and throughout their lives in promoting good health and independence. Clearly, innovations in medicines, medical products and biotechnology, and policy efforts to ensure that these innovations are affordable and disseminated globally have enabled effective coverage of medical interventions to prevent disease and extend life expectancy in many countries.

The landscape of technologies to promote healthy ageing among older adults is broad. It includes technologies that promote functioning, medication adherence, and remote patient monitoring, as well as those that enable social and emotional health and promote cognitive health (World Economic Forum 2016). Among technologies that promote functioning include commonly used assistive technologies including glasses, walkers, and wheelchairs. Technologies that promote medication adherence are also widely in use and may include reminder systems, adherence mobile devices, refill reminders, and packaging.

Medical technologies are promising in supporting LTC services at home but require a supportive backup and referral system and acceptance by the LTC and health systems workforce. Remote patient monitoring may include wearable technologies to monitor vital signs, balance, and falls, for example. Such technology

enables early warnings about problems to avoid admissions and enable early access to needed care. Telehealth services for older people with specific conditions, such as diabetes, have shown to be cost-effective in some cases; telehealth can support care delivery in remote areas closely linked with the service delivery and LTC systems.

Technologies that promote social and emotional health include information, education, and cultural services online, video conferencing, and telecommunications to enable social participation. Examples may include computer screen enlargements to address visual challenges; hearing aids; voice recognitions software; and software that provides prompts and reminders. Other categories of technologies can help older persons be more secure such as emergency call buttons and pagers. Key to the use of these technologies is acceptance and use by older persons and recognizing the need for adaptation based on wide variations in abilities and limitations. Health and LTC systems need to ensure coverage as a part of basic benefits packages where the technology is deemed cost-effective and promote the use of such technologies and the information generated as a part of the care process. In addition, regulatory frameworks are needed where personal data are stored and shared.

Rapid Population Ageing and Health Spending

Governments are frequently concerned that ageing will inevitably increase health-care expenditures. While older people do tend to have higher demand and utilization for health services, evidence from high-income settings suggests that ageing is not the primary driver of increases in health costs (Reinhardt 2003; Evans et al. 2001).

This concern is primarily driven by the differences in per capita health-care expenditures by age. Indeed Fig. 8 illustrates this in the United States. Total personal

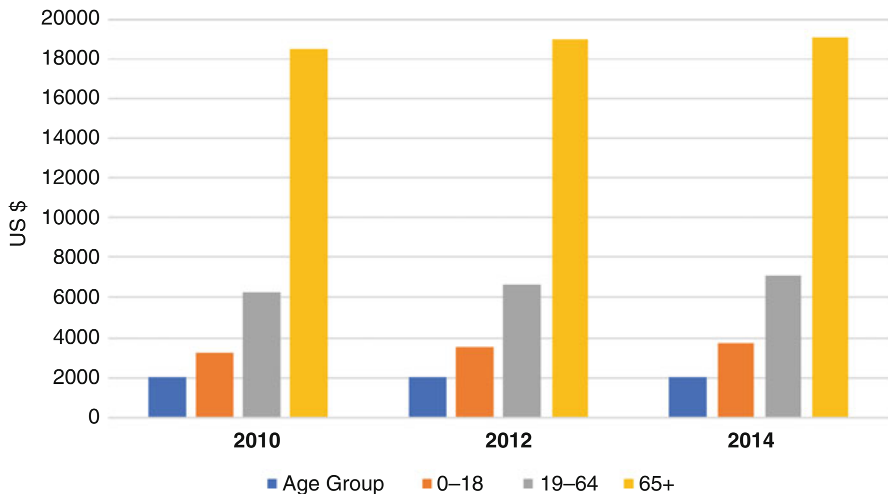

Fig. 8 US per capita health-care expenditures by age groups, 2010–2014 (CMS 2020)

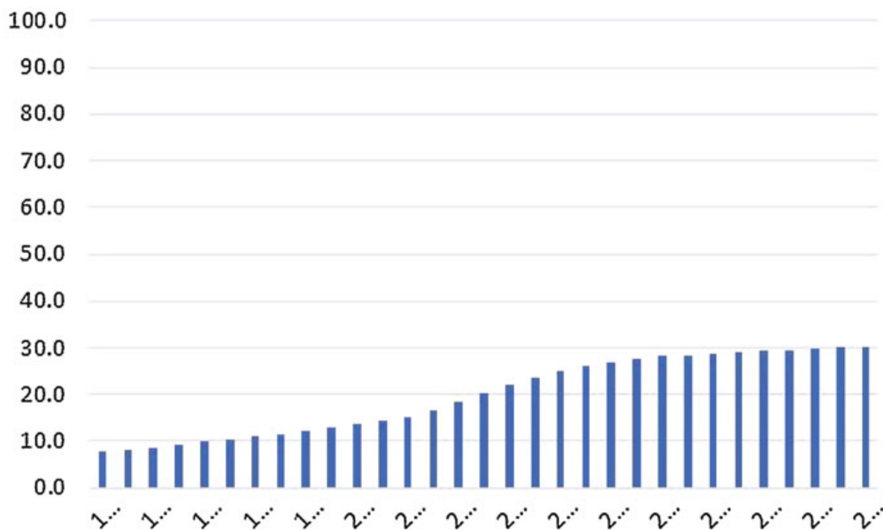

Fig. 9 Share of the population in high-income countries 65 years and older, 2015–2100

health spending among people 65 years and older is more than five times the spending for the age group 0 to 18 years (CMS 2020). This trend can be seen in many developed health-care settings (Lorenzoni et al. 2019). However, it can be noted that the spending levels tend to be similar across the years, suggesting that expenditures may not be increasing; in some cases, spending has declined among older age groups suggesting that their care may be better managed (Williams et al. 2019).

In addition, the absolute numbers of people 65 years and older remain a relatively small share of the total population – even in high-income countries. Figure 9 illustrates that the share of the population in high-income countries will reach 30% by 2100 (UNDESA 2020a). While the share does indeed increase across countries as populations age, this increase is gradual, and change is manageable.

Some studies assume that per person health-care spending will increase among older persons over time. Several studies in developed settings have found, however, that per person health spending among older persons is stable over time or even decreasing possible due to better management of care for older adults or the way in which care was financed (Meara et al. 2004). For less developed settings, Williams et al. (2019) apply the European Union public health expenditure to population projections for Indonesia and estimate the costs of "scaling up" a health system to meet the care needs of an ageing population. They conclude that contribution of ageing to health spending is modest, especially if investments are made before a large share of the population is at older ages and if scaling up is spread out over time.

Specifically, the authors estimated a scenario in which all spending on LTC (including health and social care) is absorbed into health budgets, and a comprehensive level of public LTC coverage is offered comparable to 3.7% of GDP. This figure

represents actual spending in the Netherlands, where spending on LTC is the highest in the European Union. Between 2020 and 2060, the average increase in the share of the economy spent on health as a result of the expansion of LTC would be between 0.05 and 0.07 percentage points per year. While there is indeed an increase, these projections suggest a manageable, gradual, and moderate increase in expenditures if comprehensive LTC were implemented (Williams et al. 2019).

These findings emphasize the importance of policy choices in LTC. While population ageing is not the major driver of spending growth, policy choices are critical in determining spending trends. In this context, the choices include how health and social services for older people are delivered, how prices are set or negotiated for services for older adults, and the choices in including medicines and technologies as a part of the benefits packages.

Policy Initiatives

Formal LTC systems were developed in high-income countries as a result of the demand for health and social services, as well as to reduce inappropriate use of acute care hospital services and avoid catastrophic expenditures among older persons. They were also developed because the availability of informal caregivers declined, particularly with reductions in fertility and greater opportunities for women in the labor market. Based on equity and efficiency reasons, many governments have shifted toward public funding to LTC systems. However, challenges remain in setting up formal systems and ensuring that appropriate funding, staffing, and quality assurance mechanisms are in place to provide quality care that meets the needs of older adults.

Raising Revenues for LTC

OECD countries have demonstrated their experiences in how they have raised revenues to pay for LTC systems (Colombo et al. 2011). These countries vary by their approaches to LTC – whether universal, means-tested, or privately financed. In some countries such as Japan, there has been pooling across generations in which all persons 40 years and older contribute to LTC insurance and thus cover costs for the older generations. In Germany, there are element of pre-funding, in which funds are generated now to pay for future obligations and benefits. Lessons learned include taking a long-term approach while considering population ageing, changes in fertility that may affect the availability of caregivers in the household, current and future sources of revenues, burden of disease, and the preferred approach about the level of government and private responsibilities.

Cost sharing has been a key feature of LTC systems in developed settings. All OECD countries with publicly financed LTC systems have elements of cost sharing for personal support services, board and lodging of residential care home, and other services (Colombo et al. 2011). The approaches that have been used include means testing where eligibility is triggered only after income levels are low (e.g., the US Medicaid program), defined public contributions with

additional fees and services paid by users (e.g., Australia), flat-rate cost sharing (e.g., Japan), and universal coverage based on income (e.g., Czech Republic) (Colombo et al. 2011).

Preventing Catastrophic Spending

The costs of accessing LTC can be catastrophic for older adults, and, in some cases, older adults can only access benefits after they are poor or become poor by catastrophic health or LTC spending. At the same time, some adults have relatively low needs. This implies that taking a universal approach to benefits can also incorporate a system to identify those with health and social needs that should be met through a formal LTC system. Countries have addressed this issue through setting a level of health needs that trigger eligibility for government entitlements, identifying the benefits packages, and determining the level of public funding (Colombo et al. 2011). As such the universal approach implies some identification of needs and also cost sharing.

Balancing In-Home and Institutional Care

The LTC continuum ranges from care at home to institutional care. As the number of people 80 years and older increases, there is an increased demand for institutional care even as people wish to receive medical and personal care at home. Nursing homes, which were once the mainstay of LTC facilities in developed settings, are now being phased out with alternatives based on more specific needs (OECD 2013). In some OECD settings, they have expanded on the supply of social and health services provided at home (e.g., Japan, Sweden). Regulatory measures that have been implemented include legislative frameworks to encouraging care at home care (e.g., Australia); imposing stricter criteria for admission to institutional care (i.e., Hungary); and establishing regulatory guidelines for home care (e.g., Austria). In addition, some countries offer financial incentives to encourage home care (e.g., Austria, Germany, Japan, the Netherlands, Sweden, the United Kingdom, and the United States). Finland and the Czech Republic now regulate admissions to LTC institutions based on need.

Despite this wide range of initiatives, there has been no significant change in utilization of LTC institutions in OECD countries (OECD 2013). This may be related to supply-side factors. To ensure adequate in home care, the prerequisites remain an adequate supply of locations and caregivers; information generated to enable user choice; systems to monitor and ensure quality of care for adults with high medical needs at home; determining the point at which adults need to be shifted from home to a facility that can provide a higher level of medical supervision; and how to manage in remote regions where medical referrals may be difficult or referral facilities insufficient. Whether home care achieves any cost savings is unclear. In addition, in the case whether there is a mismatch – and older people receive home care when the services they need are only available in institutions – higher expenditures for LTC may occur over the long term (OECD 2013).

Integration in Long-Term Care

LTC is a part of a care continuum from health promotion to palliative care. As such LTC needs to be linked to other components within the care continuum. For example, key prevention efforts could include falls prevention, medication adherence, and health promotion throughout the life course. Integrated care can prevent avoidable hospital admissions and reduce emergency department use, among other outcomes (OECD 2013).

Given that these activities imply coordination both within the health sector and with social care services, fragmentation is a challenge. Older persons face challenges in trying to coordinate the various kinds of services that they need that are frequently offered by different agencies or programs. Service integration is frequently cited as an important activity, but there is more rhetoric than actual initiatives to address this problem. Systems integration can be promoted through single-entry systems that integrate health and social care under single managerial systems, management of transitions and of discharges from hospital to LTC, and arranging for an adequate supply of services outside hospitals (Colombo et al. 2011).

To encourage care coordination and integration, some countries have initiated efforts toward improved information sharing and communication through such means as electronic records which enable transfer of LTC users' information into interoperable formats that can be shared across settings. Evidence suggests that implementation of electronic health records across LTC settings can lead to better clinical decision-making (Kruse et al. 2017). Clinical integration can be promoted through standardized diagnostic and comprehensive needs assessments and setting up coordination tasks to guide users through the care process (WHO 2016).

Even under the approach of universal coverage for LTC, there may be a separation of financing between social and medical care or nursing care services. This disrupts continuity of care and introduces complexity in care management given that many older people require both types of care. Separation of financing and benefits may also increase cost shifting across medical, nursing, and social benefits. Innovations in financing such as bundled payments have been used to align payment systems with care pathways to encourage people to use the most appropriate care settings (Wong 2013).

Improving Quality of Care

LTC quality measurement lags behind the developments in health care (OECD 2013). Quality in LTC is very important, given the range of LTC facilities, institutions, and caregivers and the general lack of attention given to quality in LTC systems. Many LTC systems monitor input requirements such as staffing and beds, which are used as a standard for payment. Assuring quality of services provided at home has been particularly difficult due to the site of care; the vulnerability of persons receiving care; the range of services, persons, and their qualifications providing care; and the absence of information about what care is being provided and by who. Additional challenges include the involvement of multiple sectors,

declining health trajectories of many LTC users, and lack of agreed-upon outcomes or benchmarks for improvement.

Few settings have comprehensive quality assurance systems, collect data to monitor quality of care, and enforce quality standards and implement sanctions where quality has been found to be poor. Among OECD countries that have set up formal systems of quality assurance, these include accreditation, quality assurance committees, quality supervision, collection and publication of quality measures, and regulatory standards to protect older persons (OECD 2013). Underlying the challenges of implementing quality assurance programs are the fundamentals in terms of determining what to measure to capture quality of care among populations with multiple chronic problems, identifying the appropriate outcomes including quality of life, determining how to measure quality of life and other concepts applicable to older populations, and defining effectiveness and efficiency where coordination and integration is critical. Some OECD countries have carried out surveys that attempt to measure patient experience with care coordination and integrated care (OECD 2013).

Supporting Formal and Informal Caregivers

Specific policies have been used to improve formal LTC worker recruitment and retention. To improve the recruitment of people in LTC sector and increase the pool of qualified workers, some countries have increased their use of migrant labor (i.e., Australia, Austria, Italy, Japan, and Singapore) although these policies may not target the needs of the formal LTC sector (Colombo et al. 2011). Other efforts to expand the recruitment pool include comprehensive systems of training in social care in Austria; new job categories for people working in nursing homes and residential care in Germany (Colombo et al. 2011). Other countries (United States, Germany, Netherlands, Sweden, Norway) have aimed to improve pay and working conditions (Colombo et al. 2011). Another option could be to improve the productivity of LTC workers, although evidence is lacking about the impact of efforts to improve productivity.

In recognition of their importance, there are innovative experiences in supporting informal caregivers. These include providing subsidies to the caregiver to adequately reward their time, flexible working arrangements to enable caregivers to continue caregiving, and conciliation measures to help people combine formal work with informal caregiving (Le Bihan et al. 2019). Flexible working arrangements and leave allowances can help caregivers balance their work and caring obligations. In two-thirds of OECD countries, people have the right to take leave from formal employment to care for people with chronic conditions or provide LTC (Colombo et al. 2011). Such experiences may need to be further evaluated as to their impact on the formal LTC system and caregiver welfare.

An initiative that has received a lot of attention is cash payment schemes or other non-financial subsidies to pay for LTC services, including informal care. Cash subsidy schemes have been implemented in more than 20 OECD countries (Colombo et al. 2011). Cash transfers have been provided to older persons to purchase nursing and personal care services while enabling people to stay at home

(Norton 2016). Wide variations exist in the level of cash benefits, uptake, eligibility requirements, restrictions on expenditures, and recipients, and few have been formally evaluated. Several that have been evaluated suggest that cash subsidies increased the demand for in-home assistance and caregiving choice while also reducing the incidence of hospitalization (Costa-Font 2018).

Conclusion

As people live longer and healthier lives, there is a need to consider how the demand for health care and LTC will adapt to meet global health needs. In many developed settings, LTC systems were developed in a fragmented way. Low- and middle-income countries can learn from these experiences to establish LTC systems that better respond to older person's needs. Early adoption of a LTC approach would be prudent. Ultimately, there are many decisions that determine the roles and responsibilities between family and government, health and social care, and individual responsibility and public benefits. With the increasing number of older persons and reduced role of families in caregiving, we can see major changes in the resources and organization dedicated to LTC and a stronger shift toward government responsibility. For LTC in developed settings, there is a shift away from nursing home provision toward home-based care. While informal care providers remain critical to systems in both less developed and developed settings, there remain important needs for skilled care providers to meet the needs of people as they age regardless of the care setting. More research is needed to understand how to expand coverage, pay for LTC services, determine the benefits packages, strengthen formal LTC workforce, support informal caregivers, and establish systems for quality of care. Underlying these issues is the role of government to ensure access to needed care for the whole population without financial hardship for older persons and their families.

Glossary

Activities of daily living (ADL) include bathing, dressing, eating, getting in and out of bed or chair, moving around, and using the bathroom. ADLs can be referred to as "personal care."

Adverse selection occurs when people at low risk drop out of an insurance pool, leaving only high-risk individuals that tend to have higher care costs. Adverse selection can make it difficult to sustain private insurance markets.

Cash benefits include cash transfers to the care recipient, the household or the family caregiver, to obtain LTC services.

Formal care includes all care services that are provided in the context of formal employment regulations, such as through contracted services, by contracted paid care workers, declared to social security systems.

Functional ability attributes that enable people to function and determined by the combination of their physical and mental capacities, their environments, and the interaction between individuals and these environments.

Informal caregivers individuals (frequently spouses, family members, and friends) that provide LTC services on a regular basis and are usually unpaid.

In-home LTC provided to people with functional restrictions who mainly reside in their own home. It also applies to the use of institutions on a temporary basis to support continued living at home – such as in the case of community care and day-care centers and in the case of respite care. Home care also includes specially designed, "assisted or adapted living arrangements" for persons who require help on a regular basis while guaranteeing a high degree of autonomy and self-control.

Instrumental activities of daily living (IADL) include help with housework, meals, shopping, and transportation. IADLs may be referred to as domestic or home care assistance.

Long-term care (LTC) a range of services required by persons with reduced physical or cognitive functional capacity and who are consequently dependent for an extended period of time on help from others with basic ADLs. Support for ADLs is frequently provided alongside help with basic health or nursing care, prevention, rehabilitation, or palliative care. LTC services can also be combined help with IADLs.

LTC institutions nursing and residential care facilities (other than hospitals) which provide accommodation and LTC as a package to people requiring ongoing health and nursing care due to chronic impairments and a reduced degree of independence in activities of daily living (ADL). These establishments provide residential care combined with either nursing, supervision, or other types of personal care as required by the residents. LTC institutions include specially designed institutions where the predominant service component is LTC and the services are provided for people with moderate to severe functional restrictions.

LTC workforce nurses, personal care workers, or people providing routine personal care, such as bathing, dressing, or grooming, to elderly, convalescent, or disabled persons in their own homes or in institutions (other than hospitals).

Market failure occurs in health care when a person has insufficient information about quality, efficiency, or other aspects of care, or when health care is not paid for even though it would be society's interest to provide it.

Moral hazard occurs when individuals use more health-care services when they are not insured or not paying for the care themselves. This may result in overconsumption or inappropriate consumption of health care that is not medically necessary.

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