Chapter

# Universal Health Coverage, Long-Term Care, and Funding in an Aging Era

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## Abstract

Universal health coverage has been gaining a wider attention since the beginning of the 2000s, and it has become an ideological reference for health systems across the world. Funding universal health coverage has been a major challenge faced by governments. Not only funding has to be efficient to guarantee people's access to health services when they are needed, but also it has to ensure equity across people in the country. Aging implies a new constraint to funding as more people contribute less to the collection of financial revenues and more people are in need of healthcare, due to morbidity and end-of-life needs. This chapter aims to present the concept of universal health coverage and LTC and also to discuss how it may be financed under the current scenario of demographic aging and increasing demand for long-term care.

**Keywords:** universal health coverage, long-term care, funding, aging

## 1. Introduction

Universal health coverage (UHC) has been gaining a wider attention since the beginning of the 2000s, and it has become an ideological reference for health systems across the world. UHC stands for ensuring that health services, needed by people, are of sufficient quality, and that people may access them without exposing themselves to financial hardship.

The historical background of UHC goes back to the period immediately after World War II. In 1948, WHO's constitution considered health as a human right; in 1978, the Alma Ata declaration sustained the importance of primary healthcare to grant "Health for All"; in 2005, members of WHO signed a resolution aiming at the implementation of universal coverage [1]; recently, in 2018, in the Declaration of Astana governments recommitted to the importance of primary healthcare as a major pillar of UHC. Additionally, the UN has set UHC as a target for Sustainable Development Goal (SDG 3.8 [2]) to be achieved by 2030 [3].

Funding UHC has been one of the major challenges faced by governments. Not only funding has to be efficient to guarantee people's access to health services when they are needed but it also has to ensure equity across people in the country.

Today governments have to deal with the new reality of aging societies. This demographic phenomenon is taking place all over the world, although some countries are aging more rapidly than others. For instance, in EU, it is expected that

within five decades, the number of elderly aged over 80 will triple and there be only two active people (15–64 y.o.[1]) for each older person (+65 y.o.) [4].

Aging implies a new constraint to funding as more people contribute less to the collection of financial revenues and more people are in need of healthcare, due to morbidity and end-of-life needs.

In this chapter, we aim to present the concept of universal health coverage and LTC and also to discuss how it may be financed under the present scenario of demographic aging and increasing demand for long-term care.

## 2. Universal health coverage and aging

Universal healthcare coverage is the natural evolution of health systems since the World War II. UHC may be described as a general coverage framework where people receive health services needed with quality, without suffering financial hardship [5]. So, the two main objectives may be listed. First, all people should have access to a package of services in wide range of healthcare spectrum, including treatment, promotion, prevention, rehabilitation, long-term care, and palliative care. This objective guarantees that healthcare services may be available to everybody, with quality when they are needed. Therefore, quality and equity are core to this objective.

The second objective ensures that people do not get bankruptcy because of health-care expenditures. The best way to prevent this financial hardship on people is by compulsory prepayment to a fund. The payments done by people are according to their ability to pay, which implies that there are always some people in the population who need to be subsidized because they are poor or cannot contribute to the fund.

UHC requires efficient management and fairness-sustainability trade-offs because UHC does not mean unlimited resources nor services provided. The general long-lasting aim of UHC is to expand coverage on a three- dimensional cube (**Figure 1**): breadth, depth, and height. Breadth of coverage measures the

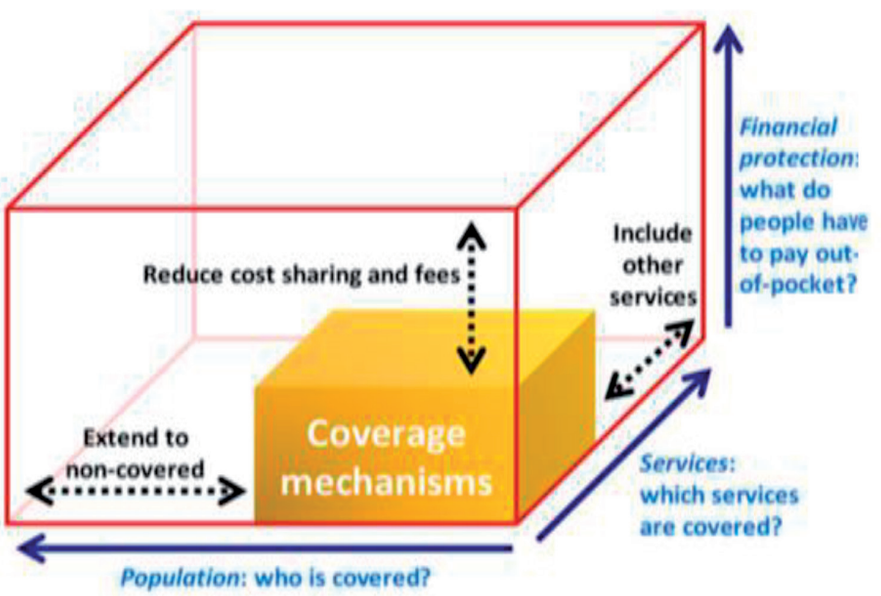


**Figure 1.**
*UHC cube. Source: Based on WHO [6].*

[1] y. o.—years old.

proportion of people who are covered or entitled; depth reflects the healthcare services that are included in the package of UHC; and finally, height shows the proportion of costs that are shared between people and the health system.

## 3. Aging effect

Nowadays aging is a major demographic phenomenon taking placing. People are getting older, and so there is change in the age distribution pictures from a pyramidal shape to inverted pyramidal shape. The fast growing percentage of elderly in the population is expected to take place in the next decades, as shown in **Figure 2,** which displays the projected evolution of older age groups for Europe.

There are three trends that may explain the current aging phenomenon [8]. They include (i) the increased longevity of people as people they live longer, (ii) the declined fertility as women have less children, and (iii) the aging of "baby boom" generations.

This demographic scenario raises the concern of how living longer is related to people's health, in particular, in later stages in life. In fact, the relationship between aging and health has been described from three different perspectives:

i. a compression of morbidity, proposed by Fries [9], where morbidity is condensed in the last part of the life cycle;

ii. an expansion of morbidity, proposed by Gruenber [10] and Kramer [11], where the increased life years are unhealthy and spent with morbidity; and

iii. a dynamic equilibrium, proposed by Manton [12], which is something in between the two previous proposals, meaning that, there is a constant proportion of healthy life in the overall life cycle of people. According to this proposal, the gains obtained of life span without disability are balanced by losses in healthy life span. The dynamic equilibrium may also be described by the balance between the decreasing/constant proportion of life span with serious illness or disability, and the increasing proportion of life span with moderate disability or illness severity.

Depending on the country or the region, these three perspectives may be found. However, in all of them, the increasing need of long-term care (LCT) is inevitable. What may differ across each of them is the kind of LCT needed and provided.

LTC may be defined as the range of services and assistance for people who, as a result of mental and/or physical frailty and/or disability over an extended period of

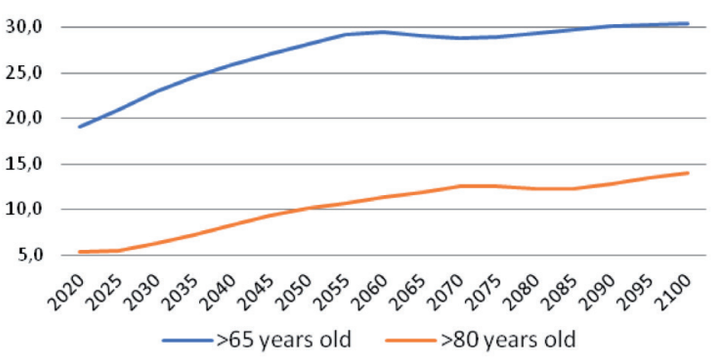


**Figure 2.**
*Projections of percentage of age group in population in Europe. Source: Based on UN data [7]—Based on medium variant projections of age groups for Europe.*

time, depend on help with daily living activities and/or are in need of some permanent nursing care" [4]. The living activities for which people may need help include both activities of daily living (ADL) and instrumental activities of daily living (IADL). The ADL include basic self-care tasks such as healthcare and personal care (e.g., help with hygiene) and also household help (e.g., shopping). IADL include activities related to independent living and include preparing meals, managing money, shopping for groceries or personal items, performing light or heavy housework, doing laundry, and using a telephone.

Long-term care is often under looked in the package of UHC, even though its provision has been increasing in several countries, in particular, in Northern Europe. The provision of LTC can take different forms: health or social nature, cash or in-kind benefits, and institutional/formal or home/informal care.

The variability of long-term care systems across countries is so large that comparisons are difficult to perform. For instance, when comparing the long-term care expenditures (both social and health) as a share of current health expenditures across EU countries, it becomes clear that all LTC systems tend to be different (**Figure 3**).

Comparing different forms of LTC provided across countries becomes even harder as shown in **Figure 4**, when comparing expenditures in LTC per capita and the structure of expenditures in type of LTC.

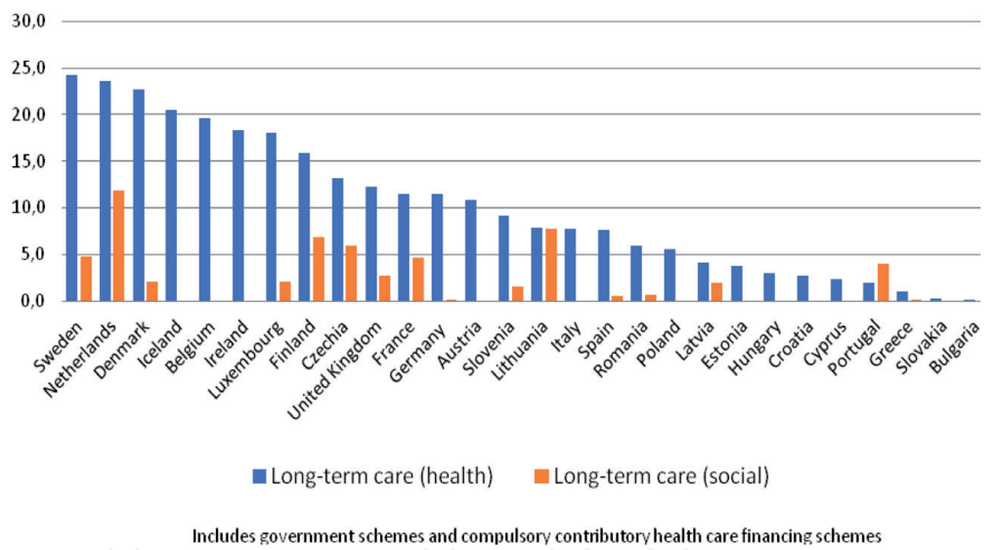


**Figure 3.**
*Share of total current health expenditure (%CHE), 2016. Source: Based on Eurostat data [13].*

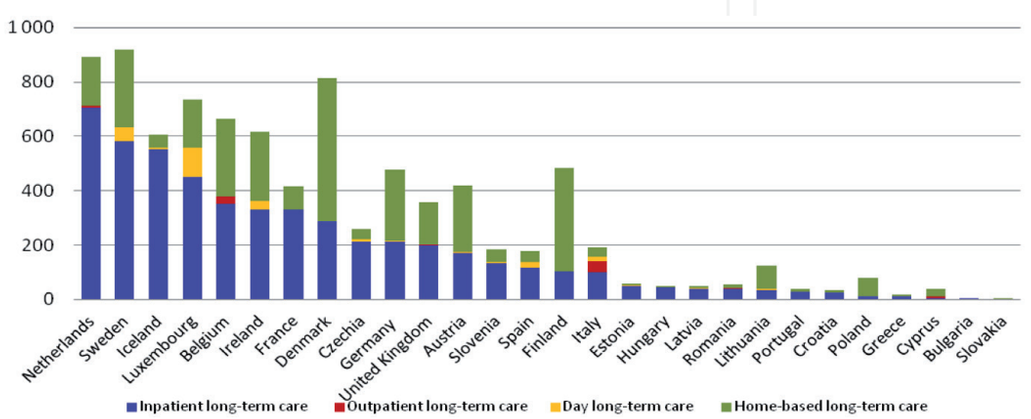


**Figure 4.**
*Expenditures on different types of long-term care, 2016. Note: Includes government schemes and compulsory contributory health-care financing schemes; monetary unit: Purchasing power standard (PPS) per inhabitant. Source: Based on Eurostat data [13].*

To overcome comparisons across countries, OECD [14] has proposed one classification of LTC systems. Two criteria are used to classify LTC coverage: one is the depth of the benefits and the other is the organization.

The depth of the benefits measures the scope of the entitlement of the LTC benefits, i.e., either universal or means-tested; the organization criterion assesses how the LCT is covered, either by a single system or by a multiple benefits, services, and programs.

Based on these two criteria, three groups of countries are identified. The first group includes countries with a universal coverage based on a single program (e.g., Nordic countries, Belgium, and Japan). This system may be separate from the health system, or be part it, and LTC is provided to everyone eligible. This does not mean free provision because there may be means of payment such as co-payments or user charges subject to income thresholds.

The second group considers mixed systems (e.g., Italy, Czech Republic, Ireland, Australia, France, Greece, Spain, and Switzerland), meaning a mixture of universal with means-tested LTC programs and benefits. In these countries, there is no single LTC system but rather multiple benefits and entitlements.

Finally, the third group includes countries with means-tested safety net schemes (e.g., USA). Under this type of LTC coverage organization, income and/or assets are used to assess the eligibility to publicly funded care. People with means lower than some established threshold are entitled to receive such coverage.

The allocation of LTC benefits varies across countries, and all countries end up facing the same trade-off between fair protection and fiscal sustainability. The allocation of resources to LTC usually does not provide full costs of LTC to all older people. Benefits are to be distributed according to the three vectors of UHC: eligibility or entitlement rules (breadth), depth of services covered, and the height of cost sharing.

## 4. UHC, funding, and LTC

Health systems are expected to perform several functions, and funding is one of them. This function financially supports three aims of any health system: improving population health, responding to people expectations, and providing financial protection against the costs of ill health, including health decline due to age [15].

Funding health systems aims to "provide people with access to needed health services, including prevention, promotion, treatment, and rehabilitation, of sufficient quality to be effective and to ensure that the use of those services do not expose people to financial hardship" [15]. According to this definition, there are three roles that funding has to perform: (i) collecting funds, (ii) pooling funds and risk, and (iii) purchasing healthcare services.

Collecting funds means raising revenues, using several sources and contribution mechanisms; pooling funds and risk translates the arrangements to gather the prepaid funds and diversify the individual risk across the pool of participants; purchasing healthcare services comprises the way that the funds are transferred to providers, either by provider payment mechanisms (PPM) or by institutional structure of purchasers [16].

A more in-depth explanation is next presented for each of these roles of funding.

### 4.1 Collecting funds

Today, it is widely accepted that the best way to fund healthcare systems is based on prepaid mechanism gathered from a large pool of contributing individuals. Funding mechanisms include the voluntary and the mandatory mechanisms (and some low- and medium-income countries (LMIC) may also find external sources of financing obtained from international donors).

Voluntary financing mechanisms account for the out-of-pocket payments and voluntary insurance. Out-of-pocket payments are the most regressive form of funding the health system, and they may contribute to catastrophic expenditures and poverty. Voluntary insurance may be a secondary layer of health insurance but it is inequitable as it does not extend to all people.

Mandatory funding mechanisms are the most efficient mechanism to guarantee a prepaid healthcare expenditure and to finance UHC. There are, however, two basic forms of these mechanisms: social insurance and taxation, each rooted in its historical proponent. The former funding system was proposed by Otto von Bismark, who implemented the sickness funds system financed by payroll taxes in 1883, in Germany. The later funding proposal was given by William Beveridge, who suggested the national health system financed by taxes in 1948, in UK.

These two approaches to finance health systems, either social insurance or tax based, are also the same financing mechanism of long-term healthcare. While the advantages of the tax-based system are the broader base of funding and greater flexibility and adaptability in providing benefits, the social insurance-based system ensures higher transparency and predictable revenues. On the other hand, the tax-based system has no link between the revenues and the provided benefits while the social insurance-based system is inflexible in the benefits awarded and ends up requiring public budget contribution for those who are not able to pay the for the social insurance contribution [17].

The large majority of health systems nowadays is mainly or partially financed by taxes, either because the major financing source is taxes or because insurance funds do not cover the whole population and so complementary financial source is needed.

Low- and middle-income countries with high unequal income distribution face a taxing challenge: to tax the wealthy and powerful country elites to finance in an equitable way the health system of the country. Because in most cases these elites are also the political and governing ones, it ends up that equitable collecting funds for the health system do not occur.

User fees are one source of funding which raise some controversy. While some argue that user fees reduce utilization by poorer people, others consider that user fees cannot be ignored as an important funding source in some countries. In particular, in countries where resources are limited and institutions are weak, as happens in several LMIC. It is argued that if there is a well-designed user's fee policy, which includes waiver mechanisms and compensating procedures to providers, and as long as those public fees are lower than private fees, then user fees may be an efficient and less inequitable source of funding.

Funding LTC either by taxes or by social contribution may not be enough to accommodate all the people in need of care. So other funding alternatives, which may complement taxes or social contributions, are required to be collected.

Wouterse and Smid [18] have proposed four LTC funding mechanisms: (i) pay-as-you-go system, (ii) collective saving funds, (iii) pensioner tax, and (iv) cohort-specific savings. The differences across these alternatives are the distribution of costs along time and across age groups.

i. The pay-as-you-go system is described as a financing system where contributions come from actual workers to pay the current retirement benefits. So the additional spending available for LTC in some year is matched by the additional premium payments collected in that year.

ii. The second funding mechanism is saving fund which is created by the contribution of people. Collective saving funds are a form of pooled funds

which aim to generate a steady level of income without threatening the initial value. This idea is basically creating a pre-funding mechanism to be used in the future [19]. Pre-funding may be full or partial. By partial it is meant that LTC contributions are expected to cover only part of the LTC costs of the individual. This partial contribution seems to ensure some intergenerational fairness because the younger generation does not assume the complete burden of LTC costs of an older generation.

iii. The third proposal is the pensioner tax which is a specific tax on pension incomes. This is a premium rate levied on pension income and it provides an increasing source of LTC funding as the group of pensioners is increasing. This works like tax broadening strategy for an intra-generational pooling of funds.

iv. Finally, the idea supporting the cohort-specific savings is that each birth cohort funds its own additional LTC expenditures. This is like tying pre-funding to specific age-related costs as suggested by OECD [19].

### 4.2 Pooling funds and risk

Pooling funds are a key factor in well-functioning healthcare systems aiming to UHC. Accumulating and managing financial resources from a large pool of individuals ensures that the individual risk of paying for healthcare expenditures is in fact dispersed by all the individuals in the pool. The channel through which such dispersion happens is called cross-subsidization. This takes place by having higher income people paying for lower income people, lower risk people paying for higher illness-risk people, and active people paying for inactive people, such as children and elderly. The second advantage of large pools is the potential to obtain economies of scale and market power. Large funding pools work more efficiently with less administrative costs and with lower negotiated prices.

Countries with fragmented insurance system do not have pools of individuals large enough to ensure that an individual unpredictable financial risk becomes predicted and distributed among all the individuals contributing to the insurance funding pool. This is the case in several LMIC where there may coexist different health insurance. These multiple insurance pools result in increasing administrative costs, individual's selection risk, and individual's segmentation according to income and wealth.

However, the fragmentation of the funding pools is not bad *per se*. Countries may choose to have one pool organized under a single organization or allow the co-existence of several insurances (or pools), which may (or not) compete among themselves. The government decision about the organization and the structure of the pool of individuals has to guarantee that it is equitable and there is no risk selection. So the two necessary conditions to finance a UHC are "compulsion" of a contributions and "subsidization" across individuals, as explained by Fuchs [20]. How these conditions are met depends on the government choice. Pooling against LTC risk is a basic social concern since potentially all citizens are in risk of needing LTC and the poorer ones are at risk of financial hardship.

In aging societies such as in Europe, the group of elderly who are at risk of becoming frail and developing multi-morbidity conditions is large and increasing. So, the risk of being in need of LTC is rising and it requires large pool of funding in order to disperse this risk by all contributors.

### 4.3 Purchasing healthcare services

Purchasing healthcare services comprises three areas of concern. The first one addresses the decision of which services are included in the package of UHC and which services are to be bought; the second concern is the choice of providers; and the third concern relates on the form to purchasing and provision the healthcare services.

The decision on which services are included is not identical across countries. High-income countries may include services which in LMIC may not be in the UHC package because of strong funding restrictions. These countries may be more interested in including services more suitable for their reality such as malaria-related services, HIV antiretroviral therapy, diphtheria-tetanus-pertussis vaccine, or they may be more interested in improving the quality of the services already provided [21].

Considering that the provided care must be fair and efficient, the decision on the services included in a LTC package may be difficult to decide. OECD [14] has proposed the idea of targeted universalism of LTC, that is, the target of care covered is where the need is highest. This idea grounded on the fact that universal LTC may not be attainable for all, but it should be for those in greatest need [22].

The choice of providers may be passive by just assigning a predetermined budget or paying bills or it may be done strategically, meaning that it is a process that aims to maximize performance [15]. Concerning this choice of providers in LTC care, it is diverse, including health or social sector and from institutional/formal care or home/informal care. Informal care may be funded by public subsidization since this form of care has been accepted as cost-effectiveness [23].

The decision concerning the form of purchasing is highly dominated by the choice of the provider payment mechanisms (PPM) and contractual arrangements (discussed in more detail in Chapter 3 of this book). This choice is fundamental to ensure efficiency and transparency of the system. Provider payment mechanisms have a particular role in providing the correct incentives to providers to guarantee access, quality, and efficiency. The PPM comprises several possible arrangements such as global budget, fee for service, capitation, *per diem*, case based, and pay-for-performance [24].

The organization of the purchasers in the health system depends on the competition established among them. There are different forms of organization of the providers purchasing market as described by Kutzin [16]. The simplest form is the single payer system, where there is only one national institution which is responsible for the payments to providers (e.g., in Japan). When there are multiple payers, meaning multiples insurers, there is a distinction between the case when the population covered is in one area, or in different geographical areas. When it covers different geographical areas, more than one regional body is responsible for purchasing and it is a subset of the simple payer system (e.g., in Canada). If the population covered is in the same geographical area, then there may be, or not, competition for the people covered by the insurers. In this way, there are multiple noncompeting insurers (e.g., in France) or there are multiple competing insurers (e.g., in Germany) [16].

## 5. Classification of LTC systems in the European Union

Universal long-term healthcare is a difficult concept to achieve and to compare internationally. Several difficulties arise related to the decisions over the three dimensions of UHC: (i) eligibility, (ii) package of services, and (iii) cost sharing.

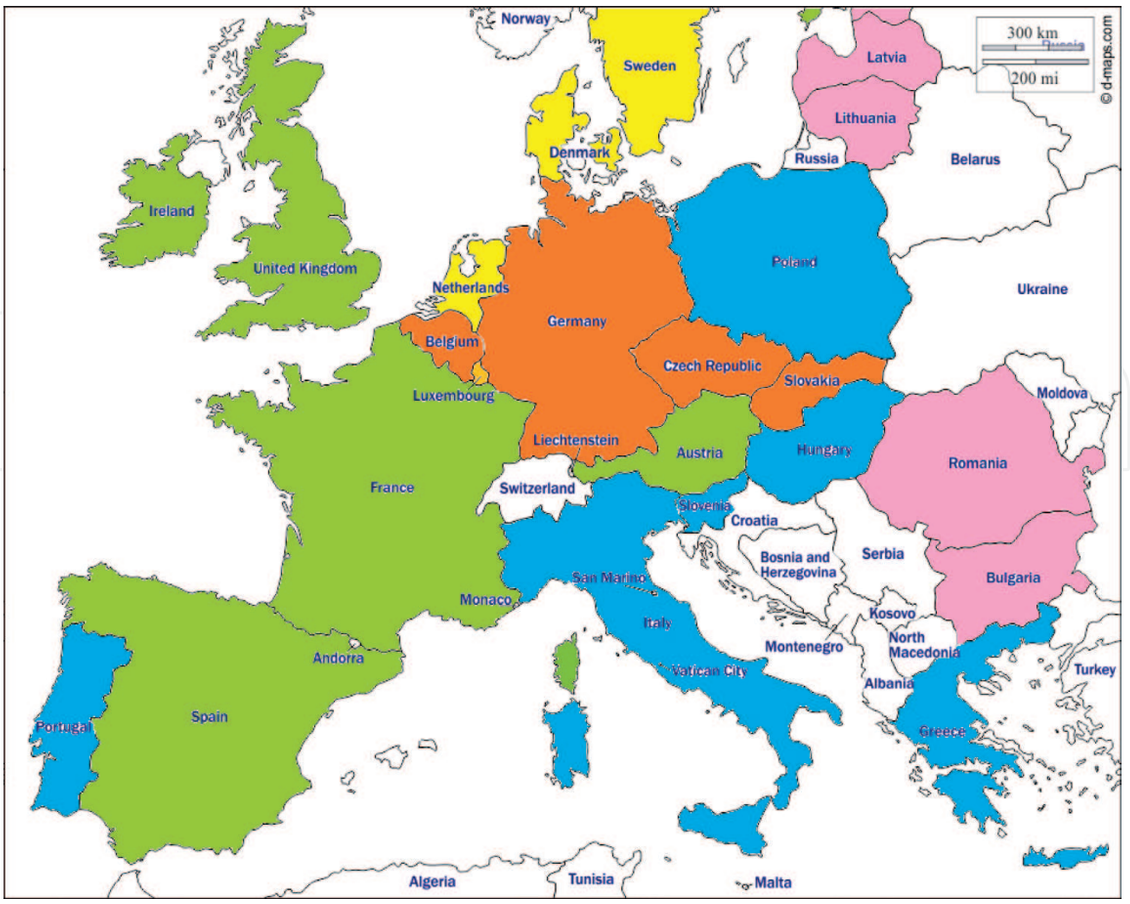


**Figure 5.**
*Classification of LTC provision in EU. Legend: Yellow—Cluster A; Orange—Cluster B; Green—Cluster C; Blue—Cluster D; Pink—Cluster E.*

Eligibility is defined by the high-care needs felt among the oldest cohort. This group of people not only has severe functional limitations but also has run-down most of their savings and assets. The package of services included in LTC needs to balance the cost and effectiveness of different modes of providing services. This may not be easy to assess. Some questions may then be raised, e.g., "how to decide what support is given to IADL?" or "how to decide to support in cash or in services?" Cost sharing is supposed to be based on the ability to pay; however, it may not be easy to define the fair share between public and individual responsibilities of pay. On the other hand, using saving and assets may be unfair as those individuals did not spend their money in past while others did.

The EU Commission [25] has suggested a typology of LTC provision for the EU members, enabling some international comparisons. This typology is built based on three criteria concerning the features of formal care. The first criterion is the organization of LTC which can be public, private, or non-for-profit. The second criterion corresponds to funding classified in general taxation, compulsory social insurance, voluntary private insurance, or out-of-pocket. Finally, the third criterion is provision which may take place at home or in an institution. Applying these criteria, it is possible to group the EU countries into five clusters, also presented in **Figure 5**.

- Cluster A (in yellow) includes countries with public provision of LTC financed by general taxes, low informal care, high informal care support, and modest cash-for-care benefits (Denmark, Netherlands, and Sweden).

- Cluster B (in orange) includes countries with medium public (mainly financed by compulsory social insurance) and low private formal care, high informal

care and high informal care support, and modest cash-for-care benefits (Belgium, Czech Republic, Germany, Slovakia, and Luxembourg).

- Cluster C (in green) accounts for countries with medium public and private formal care (financed social insurance and general revenue), high informal care use and high informal care support, and high cash-for-care benefits (Austria, England, Finland, France, Spain, and Ireland).

- Cluster D (in blue) includes countries with modest social insurance against LTC risks; low public and high private LTC funding, high use of informal care but low informal care support, and low cash-for-care benefits (Hungary, Italy, Greece, Poland, Portugal, and Slovenia).

- Cluster E (in pink) group includes countries with little social insurance against LTC risks; very low public spending, very high informal care use but no support of it, and no or very low cash-for-care benefits (Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Malta, and Romania).

Despite the funding criterion, clusters of countries include different mechanisms of funding LTC, both tax and social contribution based. So, clustering of LTC provision across countries in Europe may contribute to meaningful international comparisons of LTC policies, as well as the efficiency and fairness of funding strategies.

## 6. Sustainability challenges

Aging is expected to double public spending in LTC in the period 2010–2060. The current scenario of aging population and increasing of the LTC costs raises several challenges, including the question, "how to finance equitable and high quality LTC in fair manner?"

To assess this question, two overall challenges appear related to the sustainability of LTC under the UHC umbrella: first the financial sustainability and second the political and social sustainability.

The financial sustainability implies that there is some resource collection mechanism allowing a balance between the decreasing number of active people and the increasing number of elderly. Some countries have an underdeveloped LTC provision which makes financial sustainability a major concern given the increasing demand for LTC.

On the other hand, funding needs to be economic sustainable so that the share of GDP resources is collected and applied on LTC do not risk the country in a debt crisis. The funding mechanisms of health systems adapting to an aging society need to be carefully thought, in particular in countries where public debt is already a problem [18].

Second, political and social sustainability means that people in a country have decided and support how much they are willing to pay to finance LTC within UHC, in particular, to finance healthcare to those who are in need and cannot afford to pay for it [26]. Since complete universalism of LTC may not be feasible and trade-offs must be done, target universalism may be the most fair and efficient path to be chosen. The fairness of funding has to be not only intra-generational but also inter-generational. For target universalism to be successful, it has to be socially accepted and supported. This implies that the relative importance of social values is not dominated by economic values.

Informal care is a cornerstone of sustainable LTC provision, and it contributes to the financial sustainability. But informal care itself faces challenges related to care and attendance allowances, as well as opportunity costs for predominantly female informal care workers. These women need to be carefully considered in the system in order to make informal care possible to families [27]. On the other hand, informal care contributes to the closing gap between the fast increasing demand of LTC and the slow increase of its supply. The political support and the social sustainability of informal care are steps toward the implementation of the (target) universal LTC.

## 7. Conclusion

The aim of this chapter was to present the concept of universal health coverage and of long-term care and to discuss how it may be financed under the current scenario of demographic aging and increasing demand for long-term care.

Universal health coverage is the main aim of health systems all over the world. The achieved universalism is measured along three dimensions—breath, depth, and height of a UHC cube. Long-term care is one of the services provided by UHC, which needs rules of eligibility, of services provided, and of cost- sharing.

In a fast aging society, the importance of LTC is increasing. This means that funding should register a corresponding increasing funds collection. The difficult of LTC funding emerges because there are less and less people active contributing to the collective funds and more and more older people in need of LTC. This implies, first, the use of alternative forms of funding, which should be based on a large pool of individuals, and, second, the use of strategic purchasing and provider payment mechanisms.

The variety of LTC systems across countries makes comparisons difficult, so a possible classification proposed by the EU Commission is described in the chapter. Funding criterion does not dominate the clustering of countries. There are equally important features (organization and provision), which contribute to the characteristics of the LTC system.

UHC and LTC are expected to be sustainable and fair, and target universalism is a possible answer. The implementation of the desired health system needs to respond to sustainability challenges, either financial or socio-political. The response to these challenges will guarantee people access to LTC when needed in an equitable way, without suffering hardship late in their life years. So, not only a more active and socially focused leadership is needed across countries but also better governance is expected so that social values are considered with comparable weight as economic values.

Health systems being very complex in terms of demographic, economic, legal and regulatory, epidemiological, socio-cultural and political, and technological aspects, an improvement in one of these areas necessarily has an impact on a global improvement of the universality of coverage. Therefore, it is expected that governments strengthen these components of the health system to make it possible to achieve its goals and provide a high-quality healthcare. In economic terms, not to defend the universality of access, more than an ideological act, would be a serious economic error.

## Conflict of interest

The authors declare no conflict of interest.

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