3 Who should be eligible for long-term care in older age? Policy trade-offs and implications for coverage, equity and wellbeing

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3.1 Introduction

The demand for long-term care is expected to rise dramatically over the next decades due to rapid population ageing. While most high-income countries have developed a system of long-term care to respond to increased demand, there are important variations in their approach to defining eligibility, coverage and equity. In low and middle income countries (LMICs), on the other hand, long-term care continues to be a largely neglected or low priority policy issue (Lloyd-Sherlock, 2014). LMICs will experience fast population ageing and will face a steep increase in the demand for long-term care in the next decades, which will require effective policy responses (OECD, 2019). Establishing a long-term care system for older people should therefore be a major policy priority for countries across the globe. An important number of older people will not be able to perform basic ADLs and will need support with them, such as getting in and out of bed, getting dressed, going shopping, doing laundry, and going out to meet friends. They will also require support with more complex tasks including managing medical care for multiple, chronic conditions.

As explained elsewhere in this volume, the first and most common source of long-term care support for older people worldwide is commonly known as *informal care*, typically provided by a spouse or adult child, or in some cases, a friend or neighbour (Colombo & Mercier, 2012). However, informal care may not be always available or may not be the preferred option. This might happen, for example, when needs are – or have become – too severe and require more intensive long-term care; when informal carers are not willing and/or able to provide support, often due to work-related time or geographical constraints; or when the person in need simply does not have an adequate social network from which to seek support (Carrino et al., 2022). In these cases, *formal care* may be necessary, that is, care provided by professional carers such as nurses, personal carers and personal assistants. While in principle people seeking formal long-term care have the option to purchase services from private providers, the costs of private formal long-term care of an acceptable quality can prove unaffordable for people in high-income countries, and prohibitive for people in LMICs, especially if support is required for continued, recurrent or extended periods. An alternative strategy would be to purchase long-term care insurance earlier on in life but, for reasons explored in chapter 4, both demand and supply of private insurance is still very limited in most countries.

Due to the fact that most older individuals will not be able to cover the full costs of long-term care, or lack insurance for long-term care costs, many countries have established local public institutions and services that are in charge of financing, organising and/or providing, at least to some extent, long-term care services. However, people seeking public support for formal long-term care will often find the process more complex than for health care. While the exact procedures differ from country to country, most systems involve a set of needs assessment tools and eligibility rules for publicly financed and/or publicly provided long-term care services. As this chapter shows, procedures can be intricate, may differ from region to region within a country, and typically involve many stakeholders as well as numerous rules with sometimes complicated calculations. People in need of long-term care and their relatives and friends may find it difficult to predict what services they are eligible for and how much these services will cost them. Moreover, as with private provision, local supply of public formal long-term care may also be constrained, for example due to shortages in skilled workers and/or low public spending.

In this chapter, we focus on the challenges that arise with the measurement of long-term care needs to determine eligibility for long-term care, as well as on the outcomes of eligibility rules on access to care and wellbeing. We focus our analysis on the case of European countries with well-established long-term care systems as they have extensive experience with the use of eligibility rules, but our aim is to draw lessons from these countries for other countries around the globe in the process of setting up long-term care systems.

Eligibility rules impact how much and what type of care individuals receive. They are useful tools to identify persons with the greatest need for care, and to ensure resources are distributed in a way that best addresses equity. And yet, we document that defining eligibility for long-term care is fraught with challenges arising from the lack of a universally agreed approach to measuring the concepts that define health and social need for long-term care, and difficulties in linking different levels of need to the right amount and type of long-term care. As a result of the design of eligibility rules, some people with functional or cognitive limitations may either be ineligible for publicly financed and/or publicly provided long-term care, or, despite being eligible, receive an amount of support that is insufficient, and/or face additional unaffordable OOP costs of care. This may lead them to rely exclusively on informal care when this may not have been their preferred option, or go without care altogether. Living with unmet needs not only reduces their ability to live independently but may also put them at higher risk of avoidable and costly hospital care. Systems may therefore develop eligibility rules that are consistent with the objectives of the long-term care system to improve coverage and equity, while at the same time maintaining efficiency.

We argue that policy makers should consider expanding eligibility rules for long-term care. We show that existing eligibility rules are an effective policy tool to increase older people's access to care, although they are less effective for lower socioeconomic groups (e.g., lower educated groups). We also show that these rules reduce the risk of extreme poverty resulting from care costs and they improve wellbeing and quality of life.

Finally, we argue that governments around the world ought to reflect carefully about their criteria to define eligibility rules, as they are crucial to achieving key goals of the system such as universal long-term care coverage, effectiveness, people-centredness, accessibility and financial sustainability.

This chapter is organised as follows. In section 3.2 we introduce the policy challenge of defining need for long-term care. Section 3.3 then explores how countries in Europe undertake assessment of long-term care needs, how they differ and what the implications are for individuals in need of care. Section 3.4 then provides an examination of the complexities of measuring need for long-term care, introducing concepts of disability, dependency, frailty and independence, exploring how these concepts are operationalised in needs assessments. Section 3.5 goes on to look at the question of whether the availability of informal care should be taken into account in needs assessments. Section 3.6 examines the effects of different eligibility rules on rates of coverage in a population, while section 3.7 looks at their implications for the intensity of coverage. Section 3.8 explores the role of means testing in determining eligibility. Section 3.9 discusses the implications of eligibility rules for utilisation of long-term care and the wellbeing of older people. In concluding, section 3.10 draws the arguments together, highlighting key takeaways for policy makers based on our analysis.

3.2 Defining 'need for long-term care' is a policy challenge

A key step in determining eligibility for public formal long-term care is establishing the *need for care*. While health policy is often concerned with the question of how to deliver care based on need as determined by a medical diagnosis, the definition of need for long-term care rests on multiple contested concepts such as *frailty, disability, dependence* and *autonomy* (Brugiavini et al., 2017; Colombo & Mercier, 2012). The definition of these concepts is the subject of decades of debates in clinical gerontology, geriatrics, nursing, biodemography and sociology. Operationalising these concepts raises challenging questions for societies and governments: can populations agree on a list of tasks defined as basic or essential to maintain independent living and human dignity, and if so, how can these tasks be measured? Should an individual's self-reported ability to perform tasks be considered among the criteria, or should other external assessments (e.g., physical performance) be required to establish a person's ability to perform tasks? Should factors other than needs – such as financial means or availability of informal care – be considered when determining eligibility, especially in the context of tight fiscal conditions in most countries around the world? What other factors should be considered, given that governments have many competing objectives, including efficiency, equity and quality?

The question of who should be eligible for long-term care touches on critical questions about the role of the state when individuals need support with their functioning in daily life. For example, in Nordic European countries, advanced social insurance systems confer an important role on the state in financing, organising and/or providing long-term care. By contrast, in the United States, long-term care is often the responsibility of individuals and their families, except for cases of extreme poverty where Medicaid may step in to cover the costs of long-term care. When establishing the rules for eligibility, governments may have in mind specific objectives and values that respond to different concepts of the role of the state. The WHO health system framework states that a health policy should aim to ensure universal health coverage, access and financial protection (WHO, 2007a), while the OECD health framework highlights the importance of effectiveness, people-centredness, accessibility and financial sustainability of health systems (Carinci et al., 2015).

In achieving these objectives, countries designing long-term care systems may need to take into account three important dimensions: *efficiency* in the use of limited resources; distribution according to some principle of *equity* or *social justice*; and preservation of *individual freedom* (Barr, 2012). Although most countries may agree on the importance of all three aims, they differ in the definition and weight they assign to each of them, resulting in significant variations in long-term policy. Underlying these variations are deep political and ideological debates. From a utilitarian perspective, for example, the aim of long-term care policy may be to maximise total welfare (for older people, their carers and society as a whole). In contrast, it has been increasingly argued that freedom of choice is essential for any long-term care policy, and many countries have moved towards providing more choice in the type of care received, for example through the use of cash for care programmes (Gori, 2012). The definition and weight given to each of these aims imply a normative judgement, one that requires substantial political debate.

The definition and quantification of need ultimately have important implications for one of the key tasks of any long-term system: establishing *eligibility* for publicly funded long-term care services. Most social benefits are dependent on well-defined criteria to define eligibility, such as a specific age threshold (e.g., reaching the age of 65 for pensions), being below a certain level of income (e.g., for social assistance programmes), or having contributed to an insurance programme for a defined period and experienced a well-defined shock (e.g., unemployment insurance). On the one hand, eligibility criteria are a mechanism by which governments regulate the number of beneficiaries, control costs and plan for the resources required to run the system (Buscher et al., 2011). On the other hand, eligibility criteria are also deeply rooted in complex concepts that signal whether individuals need government intervention. In this chapter we will argue that eligibility criteria for long-term care have an impact on coverage and accessibility, but they are also inherently linked to concepts related to functional capacity, the ability to live independently, and the potential to prevent decline or compensate for the loss of function.

In the context of limited resources, several factors come into play to shape the way governments determine eligibility for publicly funded long-term care. First, the definition and quantification of need establishes whether and to what extent individuals face limitations in functioning. However, not all individuals in need will be automatically eligible for public support, and individuals with different levels of need may be assigned different levels and types of care. Typically, governments define thresholds based on some consensually agreed level of need above which individuals are considered to face difficulties in functioning independently.

Second, some governments may consider that need itself is not sufficient and incorporate some assessment of the ability to pay in the form of *means testing* based on income and/or wealth. By targeting those on the lowest incomes, governments may wish to address equity objectives under the assumption that those with enough resources will be able to purchase care in the market. Governments would therefore provide support for essential care tasks, leaving individuals to co-pay the costs of board and lodging.

Third, in defining eligibility for long-term care, a few countries consider whether individuals in need have a partner or adult child who can support them. The assumption is that family members will perform at least some of the care for their older relatives.

These differences result in varying models of long-term care provision and financing. Recent classifications (see, for example, Fernández et al., 2009; Gori and Fernández, 2015; and Barber et al., 2020) distinguish between countries that minimise state intervention and provide support only to the lowest-income subgroups in the population (*safety net* systems, such as in Australia, England and the United States); countries with a *universal* approach that aims to provide equitable access based on health needs (e.g., Denmark, Japan, the Netherlands), and *mixed systems* which combine universal entitlements with a means-tested approach (e.g., Austria, Belgium, France). As we shall see, eligibility rules and their outcomes are not necessarily homogeneous even within these typologies.

Finally, governments face a trade-off between the transparency of long-term care eligibility rules and their effectiveness in matching resources to needs, as thoroughly discussed by Fernández et al.

(2009). On the one hand, transparent and easily interpretable rules are desirable as they facilitate individuals' care allocation planning, as well as public auditing. Long-term care systems can be broadly split between those adopting algorithm-based eligibility rules, and those adopting a case-managed approach to determine eligibility. Algorithm-based systems are more transparent, as they include an explicit list of measurable tasks and thresholds that characterise the eligibility score (examples are France, Germany, Japan, Spain). Case-managed systems determine eligibility on a case-by-case basis: front-line workers (the case managers) exercise significant discretion in determining individuals' entitlement to long-term care, and the evaluation of need most often includes individual or contextual characteristics not easily measurable, such as the quality of the informal care support (examples are England, Denmark, Sweden). Case managers often follow an official guideline which does not include an explicit threshold or algorithm. Case-managed systems are therefore deemed less transparent and more complex. On the other hand, a long-term care system is more effective in matching care packages to individuals' needs if it allows for an assessment of needs that accounts for the complex interaction of the applicant's multiple circumstances, such as, for example, physical and mental wellbeing, attitudes, income, family context and support network. An algorithm-based system, although more transparent, is less effective in matching resources to needs than case-managed systems, which are more flexible and comprehensive in the evaluation of individual circumstances.

3.3 Assessment of needs and eligibility rules: how to do it and what are the consequences?

In most OECD and EU countries, a resident can apply for public long-term care services and support, but geographical coverage is not always comprehensive, coverage may not be ensured in all cases, and older people, their relatives and their advocates might find the application processes – with multiple eligibility criteria, numerous stakeholders and intricate rules – difficult to navigate.

In countries with well-established long-term care systems, eligibility is typically determined through so-called *long-term care needs assessments*, which are used to determine whether an older person is eligible for public support and services. This would ideally enhance governments' ability to maximise access, affordability, equity (i.e. the most vulnerable are adequately protected) and efficiency (i.e. the desired level of results is achieved at the lowest cost to the public purse). One way in which needs assessments do this is by determining eligibility based on a minimum level of needs, and by associating higher intensity of care with higher severity of needs. The exact procedures employed in different countries are very heterogeneous, as detailed in recent reviews such as Gori and Fernández (2015), Oliveira Hashiguchi and Llena-Nozal (2020) and Brugiavini et al. (2017). As already discussed, eligibility rules differ, for example, depending on who conducts the assessment, which types of limitations and needs are included, the way different limitations are scored to determine overall severity of needs, whether social structures (e.g., adult children) are considered, and finally how the results from needs assessments determine eligibility for specific levels of long-term care support and services (Table 3.5 in the chapter appendix provides an overview of needs assessments in different countries).

The types of limitations and difficulties that are considered relevant in needs assessments differ from country to country. In what follows, we will mostly concentrate on countries that adopt algorithm-based eligibility rules, where the process of assessment of need is explicitly defined in the legislation. A frequent element across countries' rules is the focus on ADLs, with many programmes also including IADLs (introduced in chapter 2). However, as shown in Brugiavini et al. (2017), the way in which such difficulties are operationalised may vary greatly: for example, several countries do not include all IADLs (such as in major programmes in Italy and France, whereas in Germany IADLs are included in the assessment but not in the eligibility algorithm), and others do not include all ADL tasks (e.g., in Italy and England). Moreover, many programmes give equal weight to each ADL and IADL limitation (e.g., in Belgium, Czech Republic, England and Poland). However, existing theories in gerontology suggest that IADLs and ADLs can be interpreted within a hierarchical structure (Njegovan et al., 2001). In general, programmes that give more weight to prevention typically give a relatively higher weight to limitations in IADLs and mobility (e.g., Austria), as opposed to being focused mainly on ADL limitations (e.g., Poland), because IADLs and mobility represent more complex tasks, which tend to emerge earlier than the more basic ADL tasks.

Some assessments also take into account social activities and factors such as loneliness, cognitive status and mental wellbeing. For example, needs assessments in Belgium incorporate awareness of dangers and the ability to have a social life, while in Denmark, assessments consider the scope for rehabilitative treatment to restore functional abilities. Several countries have updated needs assessments to include not only functional limitations, like walking, but also mental and cognitive impairments. In Germany, for example, needs assessments recognise that dementia requires a different kind of support. While dementia patients may not exhibit physical impairments, they may face difficulties performing ADLs autonomously.

There is significant heterogeneity between countries in the way needs assessments aggregate different limitations to produce a single measure of overall severity of long-term care needs, which is used as a benchmark for determining someone's eligibility status. The reasons for these differences are not well understood, but are likely to involve a combination of: differences in the relative weight each system gives to concepts such as frailty and dependency; the relationship between the ministries of health and social affairs; available budgets; the supply of informal care; cultural factors (e.g., family as first line of support instead of the state); and the infrastructure and built environment, among other factors. In some countries, scores are calculated using different weights for different limitations, and needs assessments may require that the older person suffer from specific limitations to be eligible for any kind of public support. In Germany, a category called 'self-sufficiency', which is composed of thirteen indicators including eating and drinking, has the highest weight, while 'mobility' has the lowest weights. In Austria, no government support is possible if care needs amount to fewer than 65 hours of care per month. Some countries group scores into categories, which are then associated with levels of support and specific services. Categories with fewer limitations may be ineligible for public support. Countries differ in how many categories they set, how they combine scores into categories, and how categories are associated with specific care services. While some countries have three to five categories, Luxembourg sets fifteen categories based on the amount of time allocated for care per week. Moreover, the weight assigned to each ADL or IADL difficulty is typically different across programmes: some rules treat each ADL or IADL equally (e.g., in the Czech Republic), while others postulate that the impact of a loss of autonomy differs depending on the specific limitations (e.g., in Austria). For example, difficulties in eating might be assumed to be more relevant than difficulties in dressing or in doing housework.

Not all countries have standardised long-term care needs assessments. Austria, Germany and Luxembourg have nationwide assessments using the same instruments, while Italy complements a national programme with regional ones whose criteria are different across territories. France uses a standardised assessment tool nationwide but there seems to be much variation across regions in the interpretation of the tool, generating differences in the number of beneficiaries. In Estonia, different agencies have different assessment scales and procedures. In Belgium, Canada and the United States, there are both federal and regional, state and municipal benefits and schemes, with their own specific rules and regulations. In Portugal, there is one needs assessment scale for cash benefits and another for in-kind care, the latter being left to the discretion of the private care provider. In Nordic countries (Denmark, Iceland, Finland, Norway, Sweden), municipalities are responsible for conducting needs assessments and setting eligibility criteria on a case-managed basis, although Finland is rolling out a nation-wide standardised needs assessment scale.

Countries and subnational areas differ as well in terms of the staff involved in long-term care needs assessments. A number of countries use multidisciplinary teams to perform assessments and the composition of the teams varies across countries. In Belgium and Finland, multidisciplinary teams conduct needs assessments. In Latvia, the teams include general practitioners (GPs) and social workers, while in Germany specialised doctors and nurses are involved. In Austria and England, assessments are based on a physician's evaluation. In California (United States), a social worker performs the assessment. In Japan, a computer-aided initial assessment (based on an 85-item questionnaire) is used to assign each applicant to one of seven levels of long-term care need. The Japanese Care Needs Certification Board, a committee composed of medical and other professionals, then reviews the results from the initial assessment.

In many countries, long-term care rules and benefits are decentralised. For example, the Austrian long-term care system consists of three pillars. The first pillar is a cash benefit, the second one consists of measures to support caregiving relatives, and the third pillar consists of in-kind benefits. The first two pillars are the responsibility of the federal government, while the federal states are responsible for providing the third pillar. In Belgium, competencies are shared between the federal government, the communities (the Dutch-speaking or Flemish community, the French-speaking or Walloon community and the German-speaking community) and the Brussels Capital region. The Belgian long-term care system consists of ‘a mix of different services and measures, funded through different sources and organised at different levels’ (Pacolet & De Wispelaere, 2018:5). In Estonia, social welfare services are organised at both the state and municipality level, and personal care services are mostly organised by the local government (Paat-Ahi & Masso, 2018). In Italy, the public long-term care system is organised around two pillars (Matteo et al., 2018): first, the companion allowance, which is a cash benefit run centrally by the National Institute of Social Security; and second, home and residential care services provided by municipalities (personal care) and regions (health and nursing care).

Finally, eligibility for public long-term care support may also depend on social networks and external factors, such as the availability of an informal carer (this is the case in Croatia, Italy, the Netherlands and Ireland). We will discuss this in section 3.5.

By the age of 65, most individuals will have accessed the health care system multiple times throughout their lives. They are likely to know enough about the health care system to be able to understand and anticipate what type of needs merits which type of care, where to access it, and whether they will be able to afford it. At the very least, they know where to find help navigating the system, typically through their local GP or family doctor. This is not necessarily true for the long-term care system, which most 65-year-olds may have never accessed before and, of which they may have a limited understanding (Bottery et al., 2018). Even identifying where to seek help may be challenging. Even more challenging is determining how much care will cost them out of pocket, given the very intricate rules and calculations that are used in many countries (see annex E in Hashiguchi & Llena-Nozal, 2020). While there is limited research into how well populations understand the eligibility requirements and OOP costs of long-term care, a cursory look at the rules in some countries suggests some older people might not be able to predict their eligibility and costs.

3.4 The challenge of defining and measuring long-term care need and eligibility for care

Measures of functioning are generally stronger predictors of outcomes in older age than single diseases. However, health surveillance systems are often developed around specific diseases such as cancer or cardiovascular disease, while there is no system focused on collecting information on functioning. This is partly due to disagreements on the definitions of long-term care need and instruments. Specific instruments do exist to measure specific dimensions of functioning, such as physical or cognitive function, but these instruments are often used for specific research or clinical purposes. Part of the challenge arises from the difficulty with defining key concepts, particularly *dependency* and *disability* in older age.

The International Classification of Functioning, Disability and Health (ICF) (WHO, 2007b) and the UN Convention on the Rights of Persons with Disabilities (UN, 2006) offer an 'individualistic' definition of dependency, ratified by the European Union (Becker, 2018). The UN definition states that 'persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others' (UN, 2006: Article 1). This definition emphasises impairments in individual function as the key element determining whether older individuals experience disability and dependency. In line with this concept, the assessment of dependency is often based on one of a number of scales that cover various dimensions of capacity or incapacity.

Many instruments are based on ADL scales. The rationale is that individuals unable to perform key everyday activities on their own(e.g., walking, getting out of bed, bathing) are considered to be dependent. These scales identify both whether individuals may be in need of care and the degree of dependency, by measuring and weighting the number of activities with which individuals experience difficulties, as well as the level of difficultly experienced. The expectation is that these scales provide a systematic assessment that allows comparisons across individuals and over time. Disability is primarily diagnosed based on self-reports of difficulties with tasks, but performance-based tests to measure function are increasingly available in clinical and research settings. The most common scales include assessment of disability in self-care tasks (ADLs), household management (IADLs) and risk of mobility limitations (Chaves et al., 2000; Fried et al., 2004).

Although each country's framework applies a somewhat different definition (e.g., some systems emphasise deficiencies in performing common household chores, while other systems emphasise limitations with physical or psychological functioning), all systems imply a definition of dependency that hinges on the loss of *autonomy* to perform certain activities of daily life. The assessment of whether a person is dependent on long-term care is typically made by trained personnel, and it is used for decisions regarding the provision of long-term care and other social benefits. In some countries, such as the Nordic European countries, the assessment is made to measure the level of dependency and to establish the amount and specific type of care that individuals may require (Becker, 2018). In other countries, the assessment of dependency may be also be used for classifications of individuals based on a detailed point system, on the basis of which eligibility for cash benefits is established.

A critique of the focus of long-term systems on disability and dependency is that these concepts do not reflect the full spectrum and trajectories that characterise the process of ageing. In response, frailty is also often evoked as an important and distinct concept in understanding ageing and resilience in older age.

WHO defines frailty as ‘a clinically recognisable state in older people who have increased vulnerability, resulting from age-associated declines in physiological reserve and function across multiple organ systems, such that the ability to cope with everyday or acute stressors is compromised’ (WHO, 2017:VII). Ageing individuals move along a continuum that stretches from robustness to pre-frailty, frailty and care dependence. Frailty is thus a different concept than disability and may be critical to identifying opportunities for prevention and care.

Two major models to define frailty exist: the frailty phenotype, also referred to as Fried et al. (Fried et al., 2021; Fried et al., 2004), and the frailty index (WHO, 2017). The frailty phenotype is defined as a clinical syndrome and pathophysiology with validated clinical presentation (Bandeen-Roche et al., 2006; Fried et al., 2001), often referred to as *physical frailty* (Fried et al., 2021). Based on a *deficit accumulation model*, the frailty index model emphasises the presence of multiple clinically identified diseases, their clinical manifestations and consequences, as well as various risk factors (Mitnitski et al., 2001; Rockwood &

Mitnitski, 2007). Both measures are strong predictors of mortality and institutionalisation, but they are based on different theories on underlying aetiologies, and use different measures to capture different processes. Other definitions integrate cognitive function and emotional or psycho-social dimensions, although a common critique is that these constructs are distinct from phenotypic frailty (Fried et al., 2021).

Physical frailty is a distinctive high-risk clinical state that signals a decrease in reserve and high vulnerability to stressors. Underlying the concept of frailty is the notion that a healthy organism is composed of systems with independent functions, each of which deteriorates with age (Fried et al., 2021). Physical frailty is typically diagnosed based on three or more of five key clinical signs and symptoms: physical weakness, slow walking speed, low physical activity, fatigue or exhaustion, and unintentional weight loss (Bandeen-Roche et al., 2006; Fried et al., 2021; Fried et al., 2001). Physical frailty emerges as a vulnerable state of dysregulation of a complex dynamic system. An important feature is that this is a non-linear process whereby a threshold of aggregate psychological dysfunction is reached, beyond which a state of lower functions of the entire organism occurs.

Implications for the assessment of need for long-term care

The above discussion aims to illustrate that disability, dependency, autonomy and frailty are distinct concepts that respond to different theoretical and clinical approaches to the process of ageing. However, these concepts are strongly interrelated; in particular, frailty predicts future disability and dependency (Bandeen-Roche et al., 2006; Fried et al., 2021; Fried et al., 2001). As a result, frailty and disability often co-exist, for instance, the prevalence of frailty is higher among persons with disability than among persons without disability (Bandeen-Roche et al., 2020; Fried et al., 2004; Walston et al., 2019).

In order to assess need for long-term care, is it important to distinguish frailty from disability? We argue that an appropriate identification of the type and level of need, as well as the type of care required, may be better achieved by distinguishing between these two states. Care for disability entails interventions to compensate for the loss of function, or rehabilitation to regain function or prevent further loss of function. By contrast, frail individuals may require care that focuses on increasing the ability to tolerate stressors, including medical procedures or hospitalisations, and reducing the risk of future disability or dependency. Given that frailty is progressive and has a preclinical stage, early identification offers unique opportunities for prevention (Fried et al., 2004; Fried et al., 2001). Screening for frailty may thus be useful to identify early interventions to minimise risk from stressors and prevent a spiral of functional and physiological decline (Fried et al., 2004).

A second critique to current approaches to measuring need is that disability and dependency typically emphasise the negative dimensions of ageing. The concept of *independence* has therefore been increasingly emphasised, particularly in the context of an increasing role for home-based care. Independence has been the subject of academic debates across various disciplines from nursing and medicine to social work, social policy and sociology (Plath, 2007). Critics argue that disability assessments based on functional ability to perform tasks entail an individualistic interpretation of independence that does not consider social, emotional and practical functions (Plath, 2009). An alternative notion of independence therefore incorporates the concept of *social inclusion*. The argument is that exchanges with family, friends, communities, social institutions and government services may all contribute to meet the needs of older people and achieve social inclusion. This perspective advocates a broader focus of assessing need for long-term care beyond individualistic assessments of physical disability and dependency, to focus on social inclusion as a key element in the definition of independence in older age (Plath, 2007). Implicit in these concepts is the notion that dependency is multidimensional, incorporating economic, social and emotional dimensions (de Vries et al., 2011).

In conclusion, many countries use relatively narrow definitions of need for long-term care based primarily on the concepts of physical disability and dependency but a number have moved towards including assessment with a social dimension. A more multidimensional approach that considers independence and frailty is not yet available except in a few countries. A reason for this is that long-term care systems are often conceived with the key goal of compensating for the loss of function in an advanced stage of dependency. Yet this narrow approach does not capitalise on the opportunities to prevent further loss of function and future disability. In addition, narrow definitions of eligibility based on disability and dependence do not fully consider other dimensions of function and social inclusion that may also be important to the welfare of older people. Current approaches may thus represent an efficiency loss, if interventions to compensate for the loss of function are less effective than interventions to prevent future decline; and if the focus is only on physical disability. In the context of an increasing focus on ageing in place and home-based care, a broader scope of assessments, that address frailty and independence and consider multiple dimensions of functioning beyond physical disability, may prove more effective in achieving overall welfare.

3.5 Should informal care matter for needs assessment?

In addition to functional impairments, several long-term care systems also consider the amount of informal care (e.g., from partner, adult children or other family members) which is available to the applicant. A general distinction is made between 'carer-blind' eligibility rules, where the availability of informal care does not affect eligibility for formal care, and 'carer-sighted' rules, where the availability of informal care plays a role (Eleftheriades & Wittenberg, 2013; Pickard, 2001). Furthermore, carer-sighted approaches can be 'negative' or 'positive': in a negative carer-sighted system an individual is less likely to be eligible for formal long-term care if informal care is available; in a positive carer-sighted system, the likelihood of being eligible is higher if the claimant receives informal care. The implications and justifications of these approaches are rarely discussed in the literature.

Carer-blind approaches are somewhat more frequent in systems adopting algorithm-based rules with clear-cut rules for eligibility determination, such as in France, Austria, Germany, Belgium and Japan. Conversely, carer-sighted approaches are more frequent in countries where the eligibility rules are more subjective, that is, they are determined under a case-managed approach (Brugiavini et al., 2017; Fernandez et al., 2011). However, carer-sighted rules are sometimes applied in countries with algorithm-based rules, such as in Italy. Although the Netherlands largely adopts a case-managed system, eligibility for intensive nursing care (the Wlz programme) is 'carer-blind', as it depends on the functioning level of the claimant, independent of the informal care they receive.[1] However, the Netherlands applies negative carer-sighted rules for some types of home-based formal care: individuals are eligible to receive home-based

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[1] See the eligibility criteria listed by the CIZ, the institutional body which performs the eligibility tests: https://ciz.nl/wlz-check

formal care only when their social network is not capable of arranging sufficient support to fulfil their needs (Alders et al., 2015). England was traditionally classified as a case-managed system with a minimum safety net and a negative carer-sighted approach. However, since the Care Act 2014, the system is carer-blind (Brugiavini et al., 2017). Finally, some countries combine elements of a carer-blind and a carer-sighted approach. In France, for example, the availability of informal care does not influence whether someone is eligible for long-term care, but it does affect the amount and content of the care plan. In Italy on the other hand, either negative or positive carer-sighted approaches are employed, depending on the region.

Rationale

What is the rationale behind blind or sighted systems? The main difference between the two approaches lies in how they conceptualise needs. Building on the discussion in section 2.1, we can refer to a well-known challenge in the health care literature (Asada, 2007): how to monitor a person's level of functionality (such as a person with paralysed legs and poor eyesight). Functionality could be measured as 'bare' functionality (mobility without wheelchair, eyesight without glasses), or it could take into account medical technologies (e.g., surgery or medication), non-human aids (e.g., wheelchair, glasses), human assistance (attendant), or environmental interventions (e.g., barrier-free physical environment, newspaper with large font). Carer-blind systems in long-term care define need as a level of vulnerability, determined by multiple dimensions and concepts of functioning such as frailty, disability, comorbidity or cognitive capacity. Conversely, carer-sighted systems define needs in terms of the level of care support required in order to achieve a certain level of welfare given existing informal support. This approach therefore includes a wider range of factors than health, such as the size of the informal network of support. *Negative* carer-sighted systems embed a perspective where informal carers are considered as *substitutes* for formal carers, so that government support is reduced or denied when informal support is available. In *positive* carer-sighted systems, informal carers are seen as *complements* to formal carers, so that the rule incentivises informal carers to provide support too. For example, some legislation in Italy prioritises older people who already benefit from informal care or who co-reside with their family carers by giving them higher eligibility scores (Fernandez et al., 2011).

Equity considerations

Whether informal carers are considered in the evaluation of need is particularly important for equity objectives. Typically, the policy goal is to achieve equal access to publicly provided long-term care for individuals with the same level of need. This is called *horizontal equity*. A carer-blind system would maximise horizontal equity because it would provide equal access to public long-term care to individuals with the same level of need. By contrast, a carer-sighted (negative) system would prioritise access to public long-term care for people with lower informal support, and as such is less effective in ensuring equity in access to long-term care across the distribution of need: some individuals in need will not be eligible for long-term care because they have informal support available.

Another argument in favour of carer-blind eligibility rules is that they reduce the burden on informal carers (Twigg and Atkin, 1994; Pickard, 2001; Vellenoweth, 1999; Hu and Ma, 2018). The underlying idea is that better provision of formal care will replace support from informal carers (rather than simply adding to the total amount of care available). This means that provision of formal care will help alleviate the potential negative effects on informal carers' health, employment or quality of life, thus increasing total societal welfare (Hu & Ma, 2018; Rocard & Llena-Nozal, 2022). Given that women are more involved in providing informal care than men, carer-blind eligibility rules may also address gender equity concerns in informal care provision (Rocard & Llena-Nozal, 2022; Rodrigues, 2013). In terms of efficiency, a carer-blind system is likely to be easier to administer, as it is difficult to systematically establish the availability of informal support, as it is influenced by more intractable factors such as attitudes towards formal or informal care and willingness of family members to help members of their family network (Fernández et al., 2009).

On the other hand, a policy could prioritise maximising equity of welfare outcomes, rather than of access to care. From this perspective, a carer-sighted system would be more effective than a carer-blind system. In a carer-blind system, individuals with available informal support will ultimately receive more care in total than individuals receiving only formal care. This would translate into unequal welfare outcomes, if we hypothesise that individuals with stronger informal care networks would receive more care overall, likely leading to higher welfare. Conversely, a carer-sighted approach would allocate relatively less public support to those with higher informal support than to those with little or no support, leading to a more equal distribution of total (formal + informal) care, and possibly welfare outcomes.

A carer-sighted (negative) system might be a tempting solution for countries which are at an early stage of public long-term care system development and funding. This is, for example, the suggestion of Hu and Ma (2018) in the context of China. They suggest that the long-term care system should be carer-sighted in the early development stage, and should only move to a carer-blind system once the backbone of formal long-term care provision has been established. The rationale is that those who do not have access to informal care will gain the most from formal care. There is early tentative evidence supporting this assumption (Forder et al., 2018), but overall this question is still debated. Moreover, the carer-sighted approach also assumes that informal care is comparable in its effectiveness and quality to formal care provision. While this might be true for low-skilled tasks, it might be a problematic assumption for more complex tasks such as nursing care support.

A rationale for a carer-sighted positive approach stems often from cost control considerations. Within some regional long-term care frameworks in Italy, it is specifically stated that the regulation acts as an incentive to the informal support network to provide care, so that the care receiver is eligible to receive formal care: ‘This modification has been added to incentivise good practices and higher intensity by the informal caregivers, given that an adequate social networking has been introduced as a requisite for eligibility.’ (Brugiavini et al., 2017: 75) Thus a key rationale seems to be to incentivise the provision of informal care (to meet needs as much as possible through informal care – if needs are still present, then top up with formal care), thereby potentially reducing total costs for formal care. Moreover, it is often argued that receiving informal care may enhance the *marginal utility* of an added unit of formal care,. That is, formal care is more effective in improving outcomes if informal care is already available because, for example, formal carers can take advantage of existing care to do more or better with the time available. However, existing evidence does not support this claim (Forder et al., 2018).

Ultimately, the difference between carer-blind and carer-sighted approaches brings us back to the core motivation of this chapter, that is, the challenge of defining *need*: should two individuals with the same level of loss of autonomy, but different levels of access to informal care, be considered as having an equal need for care? In other words, should ‘need’ be conceived either in terms of functional shortfall, or in terms of the amount of formal support required in order to achieve a certain level of welfare? Defining this is at the core of considering factors other than functioning as part of eligibility for long-term care.

3.6 How eligibility rules affect care coverage

Previous sections in this chapter have shown how the definition of eligibility for public long-term care differs between countries. We now ask a pragmatic question: how do these conceptual differences in needs assessment and eligibility rules affect the potential coverage of long-term care systems? Do different systems target different people, or does legislation mostly differ in language with little effect on the breadth of the different systems? We will show that different definitions of eligibility rules result in very different target populations, that is, the population with a potential access to long-term care support. In section 3.9, we examine how eligibility rules affect long-term care coverage, public budgets and the wellbeing of older people.

Effect of eligibility rules on potential long-term care coverage: the case of European countries

The size and characteristics of the population potentially covered by at least the minimum public long-term care support depends on the definition of ‘need of care’ in the eligibility rules

We will use the term ‘potential coverage rate’ to refer to the share of the population aged 65 and older which fulfils the requirements defined by the rules for accessing public long-term care support. However, due to the complexity of long-term care rules, it is challenging to infer the potential coverage of different long-term care systems through a qualitative comparison of the rules described in section 3.3. Nor would it be useful for our specific aim to compare the rate of actual long-term care utilisation across countries (e.g., the percentage of long-term care users in Germany vs Spain), as countries differ not only in their eligibility rules, but most importantly also in the need for care in their population – a population in poor functional health will report higher rates of long-term care utilisation than a country whose population is in good functional health, even if their systems have the same eligibility rules. To understand potential coverage, therefore, we used individual-level data from the Survey of Health Ageing and Retirement in Europe (SHARE), a large survey conducted among people aged 50 years and over in Europe since 2004 (Börsch-Supan et al., 2013). SHARE includes detailed self-reported information on sociodemographic, income and health characteristics. We focused on a representative samples of individuals aged 65 and older in eight European countries, namely, Austria, Belgium, the Czech Republic, France, Germany, Italy (national programme), Poland and Spain. While our findings are informative for countries around the globe, we chose these countries because they have well-developed long-term care systems and they apply clear-cut long-term care eligibility rules (Brugiavini et al., 2017).

We estimated the potential coverage of long-term care rules through the method of direct adjustment standardisation (Brugiavini et al., 2017; Schokkaert & Van de Voorde, 2009), which enables us to compare the rate of coverage of long-term care for individuals while holding their demographic and health characteristics constant. Following Brugiavini et al. (2017) and Carrino et al. (2018), we built a binary index of long-term care eligibility for each person using information from both SHARE and the long-term care legislation. For example, an individual in SHARE (regardless of the country they lived in) would be classified as eligible for the long-term care rules of country A if their socio-medical profile fulfilled the requirements to obtain publicly funded long-term care in country A.

A qualitative analysis of the eligibility rules in the selected countries, briefly summarised in Table 3.5 in the appendix, and in more depth in Brugiavini et al. (2017), would highlight, for example, how some rules embed a stronger focus on prevention of the loss of autonomy, while others focus more on a cure (to support the individual after a major loss of autonomy occurred). Rules more focused on prevention typically give more weight to limitations in IADLs and/or mobility (e.g., the Austrian and German rules), as opposed to being focused mainly on ADLs limitations (e.g., Italy and Poland), because IADLs and mobility represent more complex tasks, which tend to need help with earlier than ADL tasks. All the laws are carer-blind (as explained in section 3.5, they do not consider whether informal care is already available). However, it is not fully clear whether some rules will lead to higher coverage than others. Our modelling below will help us to evaluate this.

We have computed the potential coverage rates through direct adjustment standardisation for the selected long-term care programmes and show the results in Figure 3.1. This analysis addresses the following question: if we applied the eligibility rules of each country to all the SHARE respondents aged 65 and over living in the eight countries mentioned above, what proportion of them would be covered by long-term care services according to their different eligibility rules? A higher percentage tells us that a system is more comprehensive in its coverage by virtue of its eligibility rules, as we kept health constant by focusing on the sample underlying population. Coverage is expressed as a percentage of the sample aged 65 and over in the eight European countries. Notice that the denominator for these rates is the average European population, which includes many individuals who do not need care. However, the graph enables us to compare potential coverage rates across countries in a hypothetical scenario in which they would have the same level of health.

The results in Figure 3.1 show that potential coverage for long-term care is highly heterogeneous between countries. Our estimates suggest that German rules (as reformed in 2017) cover around 20 per cent of the sample and are more inclusive than the rules in any other country, and more than the older German rules. The 2017 German reform lowered the minimum level of vulnerability that would give access to benefits, which explains why the potential coverage rate increased after 2017. The Austrian government has also reformed their eligibility rules in recent years. Unlike Germany, Austrian reforms aimed at tightening access to long-term care benefits by increasing the minimum number of hours of need required to become eligible. The results are visible in our analysis, which shows that the more recent definition of long-term care need in Austria would cover around 12 per cent of older Europeans, compared to 16 per cent under the old rules. The long-term care coverage rates in the European population would also be significantly lower under the rules in Belgium (Wallonia and Flanders), Spain, Italy and Poland.

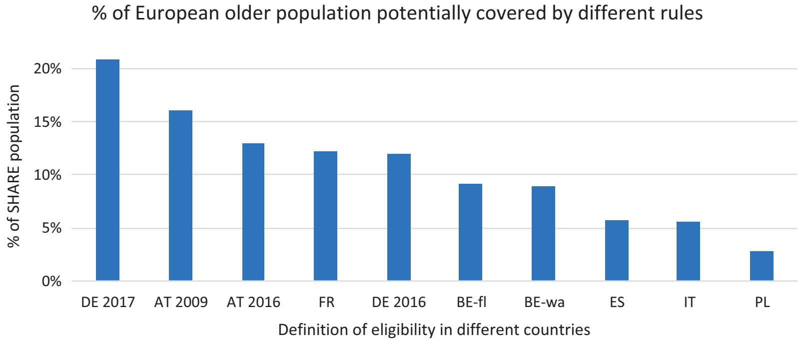

Figure 3.1. Potential coverage rate for an average of the European population aged 65+

Notes: We estimate the potential coverage embedded in different long-term care rules, defined as the percentage of older Europeans who would be eligible for long-term care benefits according to the definitions of need of various European countries. Each bar therefore does not represent the actual use of care in each specific country, but rather the share of older Europeans who would be eligible for long-term care according to the rules in each specific country. The European population consists of a sample of 19,880 respondents aged 65+, interviewed in the 6th wave of SHARE (2016) in Austria (AT), Belgium-Flanders (BE-fl), Belgium-Wallonia (BE-wa), Czech Republic (CZ), France (FR), Germany (DE), Italy (IT), Poland (PL) and Spain (ES). The graph reports more than one time point for the eligibility rules in Austria and Germany, to capture recent changes in legislation.

A possible interpretation, as suggested by Colombo and Mercier (2012), is that countries with a higher rate of potential coverage (e.g., Germany, Austria) have a more pronounced focus on prevention or at least early intervention, while countries with lower potential coverage place a stronger focus on those with already significant limitations (e.g., Italy, Poland, Belgium). However, not all countries with higher potential coverage necessarily focus on prevention. For example, France's system is primarily focused on acute ADL difficulties and cognitive impairment, while Spain's long-term care rules assess needs through a more encompassing approach which combines information on difficulties with IADLs, ADLs and cognitive impairment. Yet the French definition of need has a higher coverage than the Spanish one, which shows that the French system compensates its narrower assessment of need with a much looser threshold of minimum dependence; the Spanish system has a broader assessment of need but stricter eligibility criteria, ultimately leading to lower potential coverage.

Effect of eligibility rules on unmet need for people with disabilities

We now show how the differences in the legislative definition of need translate into different coverage rates for older Europeans in poor functional health. We do this by estimating the probability of not being eligible for public support while having a functional health problem, which we will refer to as 'unmet need' risk. We considered five different hypothetical functional health profiles, from less to more severe limitations:

1. people with limitations in at least one IADL but no limitation in ADLs or cognition;
2. individuals with at least one limitation in ADLs;
3. individuals with at least 3 ADLs lost; and
4. those with severe cognitive impairment.

In Figure 3.2, we computed the percentage of individuals in each of those groups who would be eligible to receive public long-term care support according to the definitions of needs in Germany (after 2017), France, Italy (national programme) and Poland. Unsurprisingly, the proportion eligible among the groups with only IADL limitations is much lower than that for the group with ADL limitations, illustrating the focus of current programmes on those with severe limitations. Among those with IADL limitations, around 15 per cent would be eligible to receive support in Germany, compared to only around 5 per cent in France or Italy, and none in Poland. This confirms that the German system is more inclusive of people with less severe limitations – potentially prioritising prevention – than the French, Italian or Polish systems. But even in Germany, the risk of unmet needs is very high among those with IADLs.

Unmet needs are also high for those with ADL limitations, despite their higher level of dependency. The German eligibility rules would cover 85 per cent of people with any ADL limitations, whereas the French rules would cover 57 per cent. In contrast, the Italian and Polish systems would cover 21 per cent and 14 per cent respectively, leaving the majority of people with ADLs without coverage. Among individuals with severe activity restrictions (3+ ADLs lost), both the French

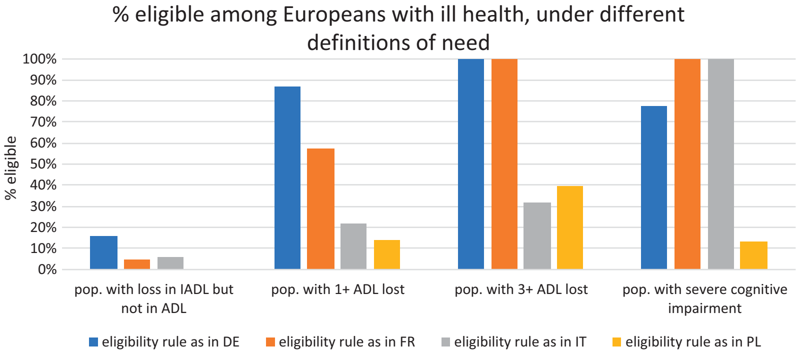

Figure 3.2. How alternative long-term care rules would cover older Europeans with ill health

Notes: Sample of 19,880 respondents aged 65+, interviewed in the 6th wave of SHARE (2016) in Austria, Belgium-Flanders, Belgium-Wallonia, Czech Republic, France, Germany, Italy, Poland and Spain.

and the German system would provide almost certain coverage (100 per cent). Conversely, the Italian and Polish system would provide coverage to less than 40 per cent of affected individuals. This again highlights how, except for Germany, these systems are focused on helping only those with very high levels of limitation.

Among individuals with severe cognitive impairment, coverage with the Italian definition reaches 100 per cent, as it does with the French definition. This is because both systems include cognition as a sufficient condition for obtaining eligibility status. The German system rules would cover 80 per cent of people with cognitive limitations, while the Polish system would only cover 10 per cent of this population.

In conclusion, our analysis suggests that eligibility rules have enormous implications for the level of coverage of long-term care systems. By targeting populations with different levels of need, eligibility rules are also a strategy through which countries operationalise a policy focus on early stages of limitations – potentially conferring importance to interventions in the early stages of functional decline, with the intention of preventing further decline or reversing limitations – as opposed to a policy focus on very advanced levels of functional decline, at which point prevention or reversal of functioning may no longer be possible (Colombo & Mercier, 2012).

3.7 How eligibility rules affect the intensity of potential coverage

In the previous section we examined how eligibility rules affect whether individuals are covered for public long-term care, but we ignored the fact that the amount of care for which individuals are eligible may also differ across countries. We will now consider the extent to which different systems vary in the intensity or amount of long-term care they provide. To address this question, we capture differences in the intensity of long-term care for which individuals are eligible, using information on the monetary costs of long-term care between countries. This gives us an indication not only of whether individuals receive care, but also how much they receive.

We have computed the share of total costs of long-term care for different severities and care settings that would be covered by public social protection systems in OECD and EU countries, depending on the claimant's level of need. As income and wealth can play a role in determining the intensity of government support, we have focused on individuals with a median income (among the income of people aged 65 or over) and no net wealth. Because of the level of detail required to perform this analysis, which includes legislation at the local level, it was not possible to include some countries, and only specific regions or cities where rich information was available were included in the analysis. Further details on the methodology are reported in Oliveira Hashiguchi and Llena-Nozal (2020).

The results are shown in Figure 3.3. Panel A refers to the costs of home care for someone with low, moderate or severe needs. Panel B refers to the costs of home and institutional care for people with severe needs. Government support tends to be greater for older people with more severe needs. However, systems vary widely in their coverage of total long-term care costs, even for individuals with comparable levels of need. This is in line with the heterogeneous picture that emerged from the previous section: most systems cover a greater share of total costs of home-based long-term care for severe needs than for moderate and low needs. On the other hand, older people with lower levels of need in some countries (for example, France, Italian South Tyrol and Latvia) receive more support than those with moderate needs, and those with moderate needs receive more support than those with severe needs. This is due to limits set on the number of

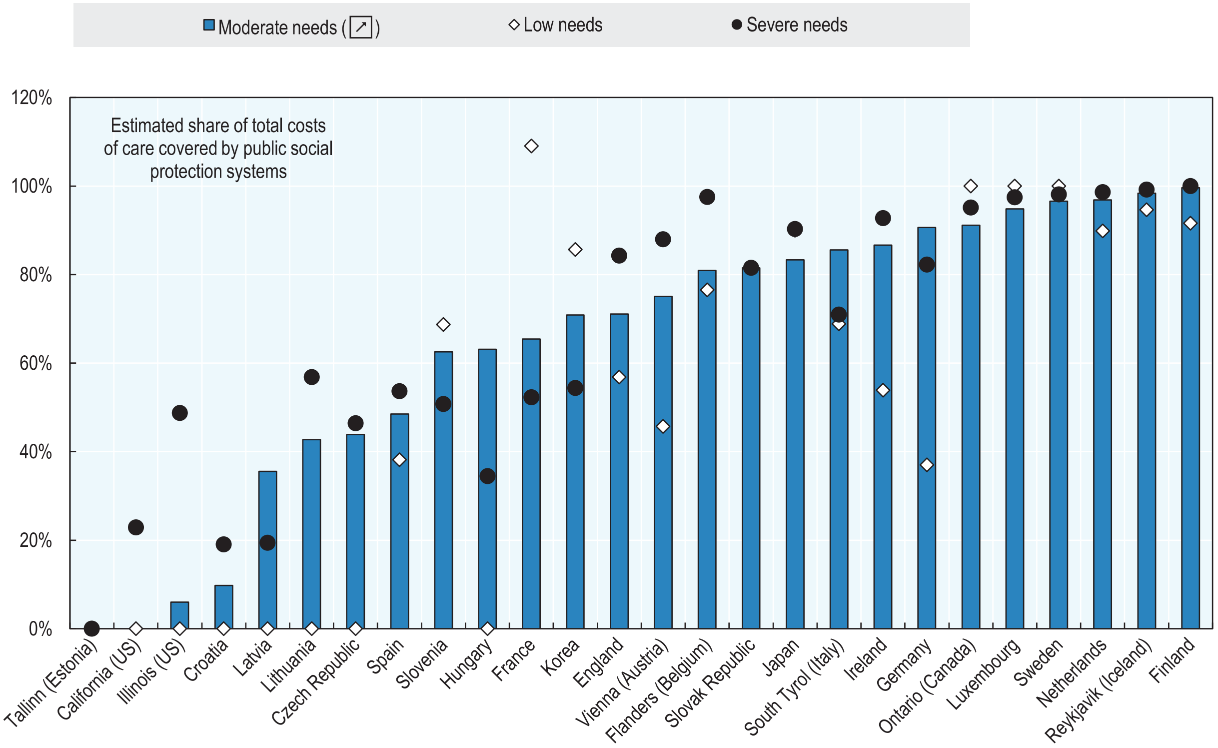

Figure 3.3. Share of total long-term care costs that would be covered by public social protection for care recipients earning a median income for older people and holding no net wealth, by severity and care setting.

Notes: Low, moderate and severe needs correspond to 6.5, 22.5 and 41.25 hours of care per week respectively. See methodological details in Oliveira Hashiguchi and Llena-Nozal (2020). Country abbreviations: Korea: Republic of Korea; Netherlands: Netherlands.

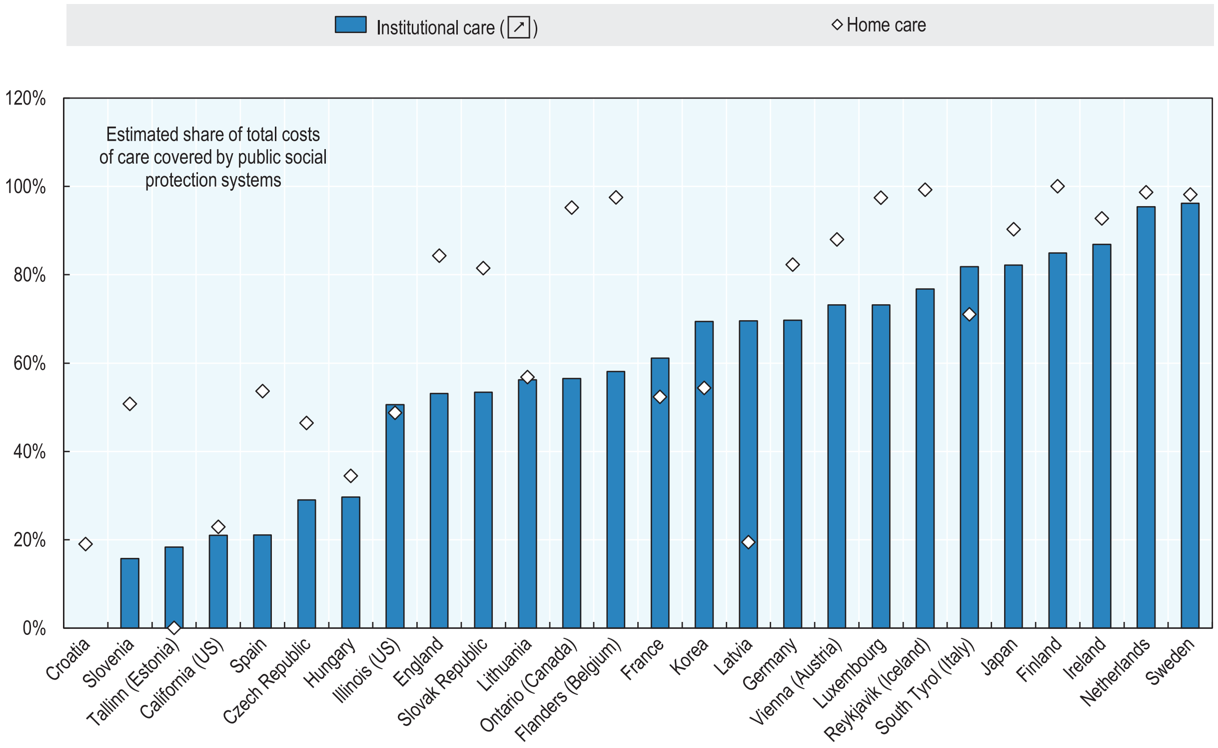

Figure 3.3. (cont.)

hours of care that can be covered through public long-term care benefits and schemes. Indeed, in some countries and subnational areas, there is no coverage for the costs of home care for older people with median income, nor for those with no net wealth and low care needs.

It is interesting to note that substantial differences in coverage appear even between countries which share similar stages of economic development and similar geographical locations, such as the Netherlands and Germany, or Ireland and England. Moreover, it is interesting to compare this ranking of countries against the widely used classification of welfare states by Esping-Andersen (1990), where countries' welfare systems are classified as liberal, social democratic or conservative-corporatist. We can broadly note that social democratic countries (Northern Europe) show the highest intensity of long-term care coverage, and that France, Germany and Austria (which are typically grouped together in the conservative group) show similar levels of coverage. However, many other countries which are typically grouped together in standard welfare classifications differ largely in this ranking, as shown, for example, by England, Ireland and California (liberal systems), the Netherlands and Belgium (conservative), Spain and Italy (conservative). This result is in line with emerging evidence that public policies in long-term care (and in social care more generally) tend not to follow the policy design of the broader welfare state in many countries (Bertin et al., 2021).

Our analysis suggests that the proportion of total costs of long-term care that public systems cover varies both between and within countries and subnational areas, and across levels of care recipient need. Overall, individuals with higher levels of need tend to receive higher coverage from the public long-term care system, yet there are several countries in which intensity does not increase with need of care. Moreover, international differences in long-term care coverage often do not match the general assumptions of welfare states classifications.

Finally, as we shall see in section 3.9, the differences in eligibility rules we just outlined do not only impact coverage for long-term care, but they also have significant implications for the quality of life and wellbeing of older people with limitations and are therefore critical in achieving the goals of long-term care systems.

3.8 Consequences of means testing and eligibility rules

So far we have focused on analysing the impact of eligibility rules on coverage of long-term care. But a separate objective of long-term care systems is to achieve equity, which might potentially be more efficiently achieved by focusing on individuals with lower income or wealth who are unable to purchase long-term care in the market. In addition, while there may be good reasons to invest in more accessible and affordable long-term care, all countries and subnational areas have limited fiscal space. In order to protect older people from the risk of poverty and hardship associated with having long-term care needs, governments often target long-term care support to individuals with limited economic resources. As a result, many countries make eligibility for long-term care dependent not only on functional health needs but also on means testing, targeting government support to applicants with lower incomes and net wealth, while limiting – or even withholding – support from care recipients who can afford to pay more. Means tests can be used to determine both eligibility for long-term care and the level of support for those who are eligible. Different types and combinations of means – income, assets of various types – can be used. Put simply, if a long-term care benefit or scheme is means-tested, then the level of government support and thus the OOP user contributions are dependent on the means of the older person applying to receive care. Means tests can promote equity at the same time that they promote allocative efficiency. In some systems, means-tested benefits and schemes can be combined with non means-tested benefits and schemes (as seen in Table 3.1). However, it is known that this approach can also generate inefficiencies and drawbacks such as limited take-up, poverty traps (caused by high effective marginal tax rates), and stigmatisation (Cremer & Pestieau, 2018).

In England, Germany, South Tyrol (Italy), the Netherlands, Spain and Slovenia, public home care benefits and schemes mix both income and assets testing with non means-tested support. Vienna (Austria), Finland, Reykjavik (Iceland), Latvia and Lithuania combine non means-tested and income-tested only (not assets-tested) benefits and schemes. Ontario (Canada), the Czech Republic, Ireland,

Table 3.1. *The use of means testing to determine level of government support for long-term care*

	Assets-tested	**Not assets-tested**
Income-tested	Flanders (Belgium), Croatia, England, Tallinn (Estonia), France, Germany, Hungary, Ireland, South Tyrol (Italy), Japan, Lithuania, Netherlands, Slovenia, Spain, California (United States), Illinois (United States)	Vienna (Austria), Flanders (Belgium), Ontario (Canada), Tallinn (Estonia), Finland, France, Hungary, Reykjavik (Iceland), Republic of Korea, Latvia, Lithuania, Luxembourg, Slovak Republic, Sweden
Not income-tested	Croatia	Vienna (Austria), Flanders (Belgium), Ontario (Canada), Czech Republic, England, Finland, Germany, Reykjavik (Iceland), Ireland, South Tyrol (Italy), Latvia, Lithuania, Luxembourg, Slovak Republic, Slovenia, Spain

Note: Countries and subnational areas can belong to more than one category if they have more than one type of long-term care benefits and schemes

Source: Oliveira Hashiguchi and Llena-Nozal (2020)

Luxembourg and the Slovak Republic have only non means-tested benefits and schemes for home care, while Tallinn (Estonia), Hungary, Japan, the Rep. of Korea and Sweden provide only income-tested (not assets-tested) benefits and schemes. No system combines all four categories of means testing and non-means testing, either for home or institutional care. The most frequent combination in institutional care is both income and assets-tested benefits and schemes, as in Hungary, Ireland, Japan, the Netherlands, Spain, and California and Illinois in the United States. Income testing is the most widely used option, often combined with assets tests, for institutional care in twenty-four countries and subnational areas, and in-home care in twenty-one countries and subnational areas.

The case of assets testing is particularly relevant from a life-course economics perspective. As with other types of means tests, the underlying assumption is that older people with higher net wealth are better able to afford the OOP costs of care; even if they might not be able to afford costs from their incomes alone, they are likely to be able to cover the shortfall from their assets. However, in order to qualify for greater government support, older people with care needs in countries and subnational areas with means tests may need or decide to deplete their assets to reach a threshold that qualifies them for increased public support (a process sometimes referred to as 'strategic impoverishment', see Cremer & Pestieau, 2018).

Assets-tested long-term care benefits and schemes are common in both home care and institutional care in OECD and EU countries and subnational areas. Assets tests tend to share certain features (see Table 3.2). Certain countries and subnational areas set wealth thresholds for greater government support, but these tend to be low compared to national mean net wealth among older people. Above these thresholds, some benefits and schemes take into account only a share of total assets when determining the level of government support. Different types of assets may be treated differently depending on the country, subnational area and even specific long-term care benefit or scheme. The primary residence is frequently excluded from assets tests, especially in the case of home care as it is expected that the person receiving care is still living in their home. Deferred payment agreements may be used, in which case older people receiving home care agree to use their assets (including their primary residence) to repay the public social protection system for OOP costs incurred while living in their home if they sell their house (e.g., when moving to institutional care) or when they die.

Assets testing might however incentivise distortionary behaviours in terms of saving decisions that people take. We discuss this in Box 3.1.

Box 3.1. The potential distortionary impact of assets tests on saving behaviour

A downside of assets tests is that they are a form of taxation on the wealth and savings of older people receiving care and, as such, have the potential to distort saving behaviour (OECD, 2018), influencing the allocation of savings across different types of assets and the allocation of savings over the lifecycle. In principle, assets tests can influence decisions to allocate savings both before and after retirement age. However, most people do not save for the possibility that they will have to pay for long-term care services, and so the distortionary potential in terms of allocation across different types of assets is likely to be more important than in terms of allocation over the lifecycle, although both are likely to be relevant. In other words, assets tests are more likely to lead people to distribute their wealth across different assets, rather than across time.

Assets tests may set certain conditions on asset transfers. For example, in Croatia, to qualify for greater public support, older people with care needs must not have sold any property in the year before they apply for public long-term care support. Those older people in England who have assets under GBP 23,250 are eligible for greater support from local authorities. However, if local authorities suspect that older people who apply for support have transferred or otherwise reduced their assets in order to be eligible for increased support (what is referred to as 'deprivation of assets'), then they may charge the older person receiving care as if they still possessed the deprived assets, or even seek charges from the new asset holder. In Ireland, the nursing home support scheme also prohibits the deprivation of assets after applying for support or in the previous five years. All these conditions may impact the allocation of savings across different assets (i.e. portfolio composition).

The treatment of the primary residence in some forms of assets testing, a common practice as shown in Table 3.2, may also have a distortionary effect on the allocation of savings across different types of assets. Excluding the primary residence from assets tests introduces an incentive for older people with care needs to divert financial wealth into primary residence. This incentive is however weakened in most countries and subnational areas by the inclusion of primary residence in assets tests for institutional care.

There is limited real-world evidence or empirical analyses of the distortionary impact of assets tests on saving behaviour, even though theincentives are implicit in many types of assets tests. To prevent this, the English Institute and Faculty of Actuaries (IFoA) proposes changing the thresholds used in assets tests to incentivise savings among less wealthy older people, as well as introducing new financial products that allow savings to be exempt from assets tests, within certain limits.

Table 3.2. *Treatment of assets in long-term care benefits and schemes that apply assets tests (selected countries and/or regions with available information)*

Countries and subnational areas	Name of benefits and schemes	Setting (institution vs home)	Simplified description of rules	Types of assets	Deferred payment?
Flanders (Belgium)	Allowance for the assistance of older people	Both	6% of assets	Primary residence excluded	No
Croatia	Allowance for assistance and care	Institution	None	All	Yes
		Home	Not given out if care recipient has assets	All	No
England	Social care	Institution	No user contribution for assets below GBP 14,250, full contribution for assets above GBP 23,250	All	Yes
		Home		Primary residence excluded	Yes
Tallinn (Estonia)	Institutional care	Institution	Full user contribution if care recipient has assets	All	No
France	Allocation personnalisée d'autonomie	Both	100% of assets can be used for contributions	Primary residence excluded	No
	Aide sociale à l'hébergement	Institution	None	All	Yes

Germany	Assistance for care (Hilfe zur Pflege)	Both	EUR 5,000 excluded	All	No
Hungary	Older people	Institution	Full user contribution if care recipient has assets; higher income allowance for care recipients with assets	All	No
Japan	Long-term care insurance	Institution	To qualify for reduced board and lodging fees, care recipients must have assets worth below JPY 10,000,000	Excludes life insurance, cars, watches	No
Lithuania	Institutional care	Institution	1% of assets over EUR 4,260[1]	All	No
Luxembourg	Complément accueil gérontologique	Institution	None	All	Yes
Netherlands	Wet langdurige zorg (Wlz)	Both	8% of assets over EUR 21,330	All	No
	Wet Maatschappelijke Ondersteuning (Wmo)				
Slovenia	Municipality-subsidised care	Institution	100% of assets over EUR 2,500	All	No
		Home		Primary residence excluded	No

Table 3.2. (*cont.*)

Countries and subnational areas	Name of benefits and schemes	Setting (institution vs home)	Simplified description of rules	Types of assets	Deferred payment?
Spain	Ayuda al domicilio	Home	5% of assets	Primary residence excluded	No
	Prestación económica vinculada al servicio	Home		All	No
	Antención Residencial	Institution		All	No
California (United States)	In-home support services	Home	Full user contribution if care recipient has assets worth over USD 2,000	Primary residence excluded	No
	Medi-Cal institutional care	Institution		Primary residence excluded only if worth less than USD 585,000	No
Illinois (United States)	Home and Community-Based Services	Home	Full user contribution if care recipient has assets worth over USD 2,000	Primary residence excluded	No
	Medicaid institutional care	Institution		Primary residence excluded only if worth less than USD 585,000	No

Notes: [1] Based on a value of EUR 355 per square meter for a property with 12 square meters. Countries and subnational areas are sorted top to bottom alphabetically by the name of the country.

Source: Oliveira Hashiguchi & Llena-Nozal, 2020

3.9 Do differences in eligibility rules affect care utilisation and wellbeing of older people?

Eligibility rules increase access to care, but their effect is unequal

Our discussion so far has highlighted that different eligibility rules can strongly affect the target population to whom public long-term care support is made accessible and the intensity of its potential coverage. We will now go a step further and ask: to what extent do policy decisions over eligibility rules impact actual long-term care coverage, that is, the actual access to long-term care services? Unlike potential coverage, the actual utilisation of care (sometimes referred to as *realised access*) is the result of an interaction between the supply and demand sides of the market for long-term care. In fact, use of care is determined by structural features of the long-term care system (e.g., availability of programmes, eligibility rules), features of individuals (predisposing and enabling factors) and process factors (the administrative process through which access is realised) (Andersen & Newman, 2005; Levesque et al., 2013). It is generally believed that care use is mostly driven by population needs; indeed, large microsimulation exercises predict the future utilisation of long-term care through careful estimations of trends in functional health (European Commission, 2021). We will show that such reasoning overlooks the role of institutions: through changes in the eligibility rules, long-term care legislation can incentivise or disincentivise access to care, with important consequences for realised access to long-term care.

The eligibility rules that we will consider are valid for both home care and institutional care. However, in what follows, we will focus on home-based care use only, as this focus allows us to use the SHARE dataset (introduced in an earlier section). This enables us to draw more robust and representative conclusions with respect to single-country analysis. Home-based care has become a very relevant dimension of long-term care systems in recent decades: the rising demand for long-term care has been met with an increasingly common policy response to encourage ageing in place, defined as ‘remaining living in the community with some level of independence’ (Davey et al., 2004: 133). In line with this approach, most European countries increasingly prioritise the provision of formal home-based care (WHO, 2015), with a focus on subsidised services for vulnerable older people. However, the implications we draw from our analysis are also valid for institutional care, as has been shown by country-specific studies (see, for example, the study by Bakx et al., 2020).

Among older people aged 65 and over in the eight European countries we considered (respondents from Austria, Belgium, the Czech Republic, France, Germany, Italy, Poland and Spain, interviewed in SHARE between 2004 and 2018), around 7 per cent reported using some kind of formal home-based long-term care, defined as nursing or personal care, or meals on wheels, from either public or private providers. In Table 3.3, we split our sample based on their eligibility status according to the long-term care rules implemented in their region of residence and the year of interview. As expected, the eligible population is older (80.5 vs 74.2) and with worse functional health (ADL and IADL functioning, cognitive status, depression) than the non-eligible population. They are also much more likely to use formal home-based care (47 per cent vs 4 per cent). However, because eligible individuals have on average worse health than non-eligible people, we cannot infer that they use more care because of eligibility rules: it could be that they use more care because they have more functional problems. Hence we need to compare individuals with similar functional health but different eligibility status (Carrino et al., 2018). We can do this because, as discussed in section 3.3, long-term care rules differ greatly between countries (so that individuals with the same functional health living in different countries could have different eligibility status) and are operationalised through complex algorithms based on combinations of functional (including cognitive) health. As a result, individuals with similar functional health in the same country could have different eligibility status due to the specific combinations of their functional limitations). In Table 3.6 in the appendix we show how similar clinical profiles would result in different eligibility status in different countries, as a result of their different eligibility rules.

Eligibility for long-term care increases the probability of receiving care among older people

Figure 3.4 shows that, as we would expect, the probability of receiving home-based care increases as the number of functional limitations with ADLs increases. Most importantly, it shows that the probability of

Table 3.3. *Characteristics of populations eligible and non-eligible for home-based formal long-term care*

	TOTAL POPULATION	NON-ELIGIBLE for formal home-based long-term care	ELIGIBLE for formal home-based long-term care
Using formal home-based care	7%	4%	47%
Age (years)	74.6	74.2	80.5
Female	57%	57%	66%
Living with a spouse or partner	61%	62%	42%
Low wealth[a]	26%	25%	43%
Education levels			
Low (up to lower secondary)	51%	50%	61%
Intermediate (upper secondary)	32%	32%	30%
High (tertiary)	17%	17%	9%
At risk of clinical depression	34%	32%	62%
Low cognitive status	5%	3%	25%
Number of ADL difficulties	0.3	0.2	2.6
Number of IADL difficulties	0.6	0.4	4.1
With 2+ chronic diseases	60%	59%	84%
N	61,714	56237 (90.1%)	5477 (8.9%)

Notes: Sample of 61,714 respondents aged 65+, interviewed by the SHARE survey (2004-2018), in Austria, Belgium, Czech Republic, France, Germany, Italy, Poland and Spain. Risk of clinical depression corresponds to a score of 4 or higher on the EURO-D scale. Low cognitive status is proxied with inability to answer correctly at least two questions including current year, month, day and day of the week.

[a] Low wealth corresponds to being in the first quartile (0-25%) of the country-specific wealth distribution.

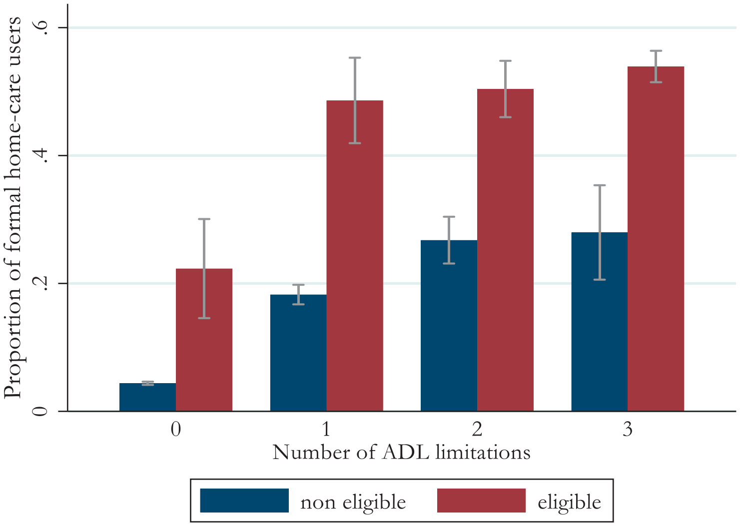

Figure 3.4. Proportion of respondents receiving formal home care, by number of ADL/IADL limitations and by long-term care eligibility status

Note: Sample consists of 19,880 respondents aged 65+, interviewed in the 6th wave of SHARE (2016) in Austria (AT), Belgium-Flanders (BE-fl), Belgium-Wallonia (BE-wa), Czech Republic (CZ), France (FR), Germany (DE), Italy (IT), Poland (PL) and Spain (ES). The graph reports more than one time point for the eligibility rules in Austria and Germany, to capture recent changes in legislation.

receiving home-based care is higher for individuals who are eligible for public long-term care support (the red bar) than for individuals who are not eligible (the blue bar). It is very important to stress that this is true even for individuals who have the same number of ADL limitations, e.g., among those with only one ADL limitation, the probability of receiving home-based care is just below 50 per cent for the eligible group, compared to less than 20 per cent for the non-eligible group.

We performed a full statistical exercise to estimate the effect of being eligible on the probability of receiving home-based long-term care, where we controlled for such confounding variables as socio-demographics, health and functioning status. Our results suggest that being eligible for public long-term care support increases the probability of receiving home-based care by twelve percentage points (baseline level, 7 per cent): for an individual of average health, the probability of accessing long-term care is 19.7% if they are eligible, compared to 7.4% if they are not. This implies that a change to eligibility rules can substantially increase – or decrease – the likelihood that people will be covered for long-term care. This is particularly relevant for policy makers, as it shows that eligibility rules play an important role in reducing the risk of unmet needs among older people, above and beyond individual characteristics such as education, income wealth and health.

Are some groups more likely to gain access due to their eligibility status?

Eligibility for long-term care seems to act as a strong incentive to access formal long-term care. However, there might be some groups of individuals for whom the incentive is stronger. We are particularly concerned about individuals who might fail to access formal care despite being eligible for it (and therefore face a higher risk of unmet needs). Our analysis identified two groups at higher risk of unmet needs, who would particularly benefit from policy support:

1. Our evidence suggests that people with lower levels of education are less likely to access formal care even after they become eligible for it, and hence face a higher risk of unmet needs. In Figure 3.5 (first panel) we show that, comparing people with similar health status, those with lower levels of education (up to lower secondary degree) have roughly the same probability of using care as higher educated groups, if they are not eligible for long-term care programmes. While all groups are more likely to use care if they are eligible for public long-term care, the increase in care use induced by eligibility status is significantly higher for those with higher education. This may suggest that people with higher education have a stronger preference for the use of formal care than their less educated counterparts. However, the fact that people with lower levels of education are less likely to take up formal care even when they become eligible for it, compared to people of higher education and with similar health, suggests that policy makers should be very conscious of differences in long-term care literacy, economic endowments, and individuals' ability to navigate the complex mechanisms or

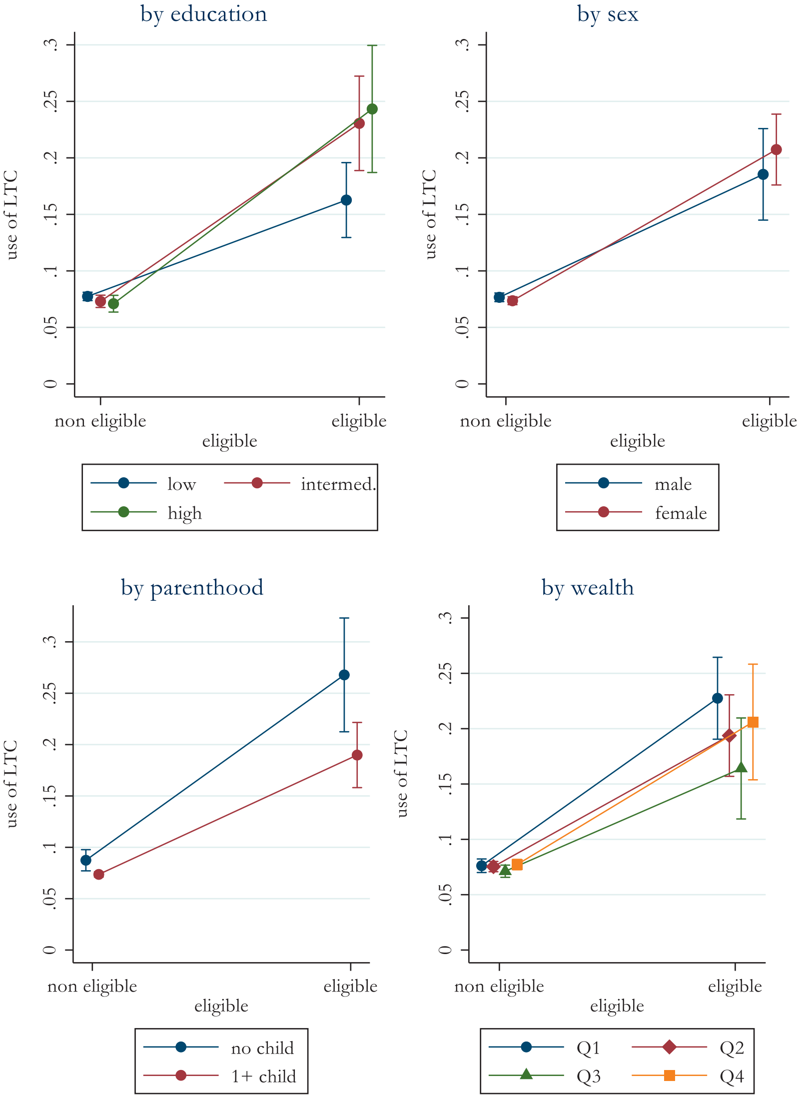

Figure 3.5. Differential impact of eligibility for long-term care on care use, by sociodemographic characteristics

Note: Sample consists of 19,880 respondents aged 65+, interviewed in the 6th wave of SHARE (2016) in Austria (AT), Belgium-Flanders (BE-fl), Belgium-Wallonia (BE-wa), Czech Republic (CZ), France (FR), Germany (DE), Italy (IT), Poland (PL) and Spain (ES). The graph reports more than one time point for the eligibility rules in Austria and Germany, to capture recent changes in legislation.

rules and points of access (García-Gómez et al, 2015; Rodrigues et al., 2017).

2. Our evidence also suggests that, among older people eligible for formal home-based care, those living alone are more likely to receive it than people living with their relatives. The impact of long-term care eligibility on care utilisation varies by parenthood status: compared to non-eligible respondents, people eligible for long-term care but with no children increase their likelihood of accessing care much more than people with children (Figure 3.5, third panel). This suggests that the availability of a family network, which is the main source of long-term care support worldwide, might constitute a partial disincentive to seek formal support, due to the preference of many older people to be cared for by family members rather than external professionals (Kalwij et al., 2014). While this could reflect the preference of older people, it might also highlight that such individuals are missing out on potential help from the state. There are at least two reasons why governments should be concerned by this result. First, the absence of formal support may deprive older people of access to higher-skilled care, often provided by formally trained caregivers in comparison to informal ones. Second, it highlights the risk of increasing the psychological and physical burden on caregivers (including work/family conflicts), who could have been partially relieved or helped by publicly subsidised care.

Finally, we show that eligibility for long-term care increases care use in a similar way for both sexes and for people with different levels of wealth (Figure 3.5, second and fourth panels).

3.10 Policy experiment: how would care utilisation among older populations change if governments adopted different eligibility rules?

How can policy changes in eligibility rules affect the demand for domiciliary long-term care? In Figure 3.6 we show how the current percentage of long-term care users in eight European countries would change if governments reformed their long-term care eligibility rules for home care support by shifting the focus from providing assistance

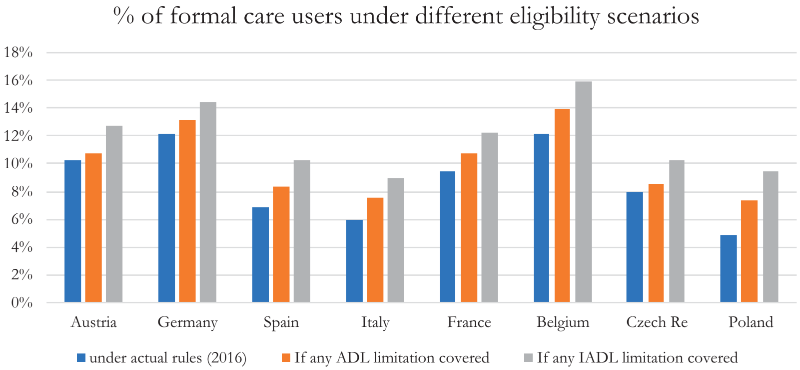

Figure 3.6. Eligibility rules more focused on prevention (IADL limitations) compared to current rules would expand population of care users

Note: Sample consists of 19,880 respondents aged 65+, interviewed in the 6th wave of SHARE (2016) in Austria (AT), Belgium-Flanders (BE-fl), Belgium-Wallonia (BE-wa), Czech Republic (CZ), France (FR), Germany (DE), Italy (IT), Poland (PL) and Spain (ES). The graph reports more than one time point for the eligibility rules in Austria and Germany, to capture recent changes in legislation.

for severely impaired people to prevention of loss of autonomy. We evaluated the impact on care utilisation of two scenarios in particular: (i) governments reform eligibility rules so that anyone with an ADL limitation is eligible; or (ii) governments reform eligibility rules so that anyone with limitations in either ADL or IADL tasks is eligible. These scenarios are compared to the current status quo, i.e. the share of older adults currently using formal home care under the current rules. Results show that, in general, such changes would significantly expand the population of formal home care users. The effects vary between countries, due to the different prevalence of functional limitations and the different extent to which current eligibility rules already cover ADL and IADL limitations. Allowing the eligibility rules to cover all ADL limitations would lead to an increase in actual access to care by around 2 percentage points in Italy, Spain, France, Belgium and Poland, whereas extending the eligibility rules to all IADL limitations (i.e. an approach more focused on prevention) would increase access to care by a minimum of 2.5 points and a maximum of 4.6 points.

The wellbeing implications of eligibility rules for home care

In this section, we explore a critical question: does access to public long-term care actually improve the wellbeing of older people? At first, the answer to this question may seem obvious – if people receive the care they need, they should be able to perform the activities that are important to them, and this should lead to an improvement in their wellbeing. Another common argument, particularly important for policies that promote long-term care at home, is that home-based care enables people to age in place – that is, to remain living at home and in their community, which should also improve their wellbeing (Hashiguchi & Llena-Nozal, 2020). The implication is that long-term care systems that have more inclusive coverage of care should in principle also be more successful in maintaining or preventing decline in overall wellbeing among older people. And yet, so far there is limited empirical evidence showing how home-based care influences the wellbeing of older people.

In this section, we study home-based long-term care is effective in helping maintain wellbeing among older people, by examining how eligibility for home-based long-term care across Europe impacts wellbeing. To illustrate this, we choose to focus on the case of mental health, and in particular on the case of depressive symptoms and psychological wellbeing, two key indicators of wellbeing in older age. Depression affects around 6 per cent of adults aged 65-74 years and 12 per cent of those aged ≥75 in Europe (Arias-de la Torre et al., 2021). Depressive symptoms are even more common among older adults with activity restrictions and functional limitations (Penninx et al., 1998; Williamson & Shaffer, 2002), and have been linked to declines in cognitive and physical functioning (Ormel, Rijsdijk, Sullivan, Van Sonderen, & Kempen, 2002). Depression is also a major cause of disability (James et al., 2018; Purebl et al., 2015), with economic costs estimated at 1.5% of GDP in major economies such as the United States (Greenberg et al., 2021), while the overall cost of mental illness reaches 4% of GDP in OECD countries (OECD/EU, 2018). As in the previous section, we will focus on home-based care settings, in particular in four countries where eligibility rules provide in-kind support for home-based care: Belgium, France, Germany and Spain. We measured psychological wellbeing using the EURO-D depression scale, a validated measure of depressive symptoms, and complemented this with data on quality of life (CASP-19 scale).

To examine the causal impact of home-based care eligibility on depression, we followed the same method as in the previous section, that is, we compared the psychological wellbeing of individuals with similar physical and cognitive functional status (and other socioeconomic characteristics), and yet with different eligibility status. In Table 3.4 we have shown that otherwise similar individuals with different eligibility status face very different likelihoods of accessing care. If eligibility for home-based care has an impact on depressive symptoms, we would expect eligible individuals to have lower levels of depressive symptoms than non-eligible individuals.

Eligibility rules allow care users to receive long-term care and improve their psychological wellbeing

The results of this analysis are summarised in Table 3.4, which shows the effect of being eligible for public home-based long-term care on our two outcomes of interest. The first column shows that being eligible for public long-term care lowers depression by a clinically significant amount – namely we estimate a reduction of 6 percentage points in the probability of having four or more depressive symptoms measured on the EURO-D scale (a validated cutoff for risk of clinical depression). Considering that the prevalence of depressive symptoms is around 30 per cent in our sample, the effect would seem clinically significant. Being eligible for public care also has a large positive effect on the CASP-19 score (column 2), a measure of quality of life. Specifically, being eligible improves the control component of the CASP-19 score (which captures individuals' perception of the extent to which they are able to shape life through their own behaviours) and the pleasure component, which captures the ability to pursue enjoyable activities.

These results show that the net effect of home-based long-term care on mental health and quality of life is positive and clinically meaningful: older people who are eligible for formal home care have better mental health and quality of life than those who are not eligible for formal home care services. Expanding eligibility for home-based care may impact depressive symptoms through several mechanisms. Home-based care may increase social connections and reduce feelings of loneliness (Berkman et al., 2000; Thomas et al., 2016; Wolff &

Table 3.4. *The impact of eligibility for long-term care on depressive symptoms and psychological wellbeing*

	Depressive symptoms (EURO-D)	**Psychological well-being (CASP–19)**				
Columns	**1**	**2**	**3**	**4**	**5**	**6**
	High depressive symptoms	CASP–19 score	CASP–19 Control	CASP–19 Autonomy	CASP–19 Self realisation	CASP–19 pleasure
Eligible for long-term care	–0.060***	0.678***	0.236**	0.054	0.137	0.277***
	(0.018)	(0.215)	(0.091)	(0.082)	(0.099)	(0.100)
N	24,878	21,955	21,955	21,955	21,955	21,955
Sample average	0.304	36.996	8.449	9.274	9.033	10.252

Notes. Standard errors in parentheses. Sample: individuals aged 65+, with children, in SHARE waves 1, 2, 5-7 in Belgium, France, Germany and Spain. Controls: age (quadratic), sex, living arrangements, education, living area, self-reported health, ADL limitations, IADL limitations, mobility limitations, cognitive health, fixed effects for household income (quintiles), waves and NUTS-1 regions. Standard errors are clustered by NUTS-1 regions (57). Full results available from the authors. Statistical significance: *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Agree, 2004). It may increase the capability to maintain participation in leisure activities, hobbies and social contacts, which may increase enjoyment, security, control, personal dignity and self-respect (Grewal et al., 2006). Home-based care may also help prevent further functional decline and activity restriction (Forder & Caiels, 2011), for example, by helping older persons to dress, eat and go out (WHO, 2015; Williamson & Shaffer, 2002). Home care may also increase flexibility in leisure time allocation, consumption and living arrangement decisions, which may increase control and autonomy (Grewal et al., 2006), thus leading to improved mental wellbeing.

In conclusion, these results provide evidence that a policy that increases eligibility for home-based care may improve the mental health and wellbeing outcomes of older people. This suggests that budget cuts to long-term care services should factor in possible welfare losses for older people, while investments in long-term care may bring wellbeing and mental health benefits that are often ignored.

3.11 Conclusions

All governments have limited fiscal space to provide long-term care support and services, and needs assessments are one mechanism to make sure those limited resources are used in ways that maximise access, affordability, equity (i.e. the most vulnerable are adequately protected) and efficiency (i.e. a given level of results is achieved at the lowest cost to the public purse). This chapter has focused on the lessons learned from OECD countries with advanced long-term care systems, many of which are European. Even though all countries explored in our analysis offer long-term care services and support, these programmes do not achieve comprehensive coverage due to the nature of their eligibility rules.

This chapter has explored the economic and wellbeing consequences of long-term care eligibility rules, with a particular focus on home-based care. Eligibility rules of public care can substantially affect access to home-based care among older people. Eligibility to receive care can also offer social protection from the financial risks associated with functional decline and the need for long-term care, contributing to reducing the risk of poverty. Long-term care coverage through public eligibility can also improve the mental wellbeing and life satisfaction of older people, thus delivering better outcomes. We have shown that, in most countries with mature long-term care systems, eligibility for home-based care targets advanced levels of disability, with a focus on compensation or rehabilitation rather than prevention. Going beyond disability and incorporating measures of frailty may enable governments to intervene early and prevent a spiral of decline, which may improve long-term wellbeing outcomes and reduce costs of long-term care. Moreover, eligibility rules are sometimes complemented with means assessments, which prioritises groups with lower economic resources.

We outline here four major takeaways from our study.

1. *Policy makers should carefully design eligibility rules that may use a range of criteria based on functional health-related needs, monetary and contextual characteristics of the applicants*

In defining the procedures and mechanism that regulate access to care, governments must anticipate challenges in establishing homogeneous assessment procedures due to the lack of a universally agreed approach to measuring the need for care. Disability, dependency and frailty are contested concepts and the methods of assessing them represent particular theoretical perspectives on the physical and cognitive decline that occurs with ageing. Even among countries with well- established welfare systems, the operational definition of ‘need of care’ varies largely. As a result, individuals with very similar functional health can face different entitlements to long-term care by virtue of the eligibility rules they are subject to. This translates into important differences in care use and wellbeing, as eligibility for public long-term care is an important incentive for older people to use formal care. Our analysis has shown that potential coverage is generally lower for countries or regions where the minimum threshold for eligibility is triggered either by multiple limitations in ADLs or by severe cognitive deficit. These rules identify individuals in an advanced stage of disability and dependency, and therefore do not cover older people who are facing early signs of loss of autonomy (e.g., having lost the ability to perform one ADL and multiple IADL tasks). Conversely, eligibility rules focused on more complex dimensions of vulnerability such as IADLs, mobility and less severe cognitive impairment, tend to be more inclusive, leading to higher coverage. Likewise, using frailty rather than ADLs and IADLs to define eligibility may enable earlier intervention and prevent a spiral of functional and physiological decline (Fried et al., 2004), although it might be challenging for countries to implement it in practice unless screening through the health system is in place.

Given the substantial heterogeneity between countries in the weight given to different limitations, we believe countries should put considerable effort into adopting a common framework for the evaluation of needs which links more consistently with the evidence in the literature. For example, many laws assign equal weight to all ADL or IADL limitations. However, countries could consider that a hierarchy exists within and between ADL and IADL limitations and assign a higher weight to limitations which are likely to represent more severe signs of loss of autonomy.

Further challenges exist in defining the best approach to means testing – based on income or various types of assets – for establishing eligibility. Means tests can promote both equity and efficiency. However, assets tests can act as a form of taxation on the wealth and savings of older people receiving care and, as such, have the potential to distort saving behaviour (OECD, 2018), influencing the allocation of savings across different types of assets and over the lifecycle.

2. *Policy makers should balance transparency of rules with individual consideration of needs assessment and eligibility rules*

This chapter has also discussed how eligibility rules can be designed to enhance transparency of the needs evaluation process (algorithm-based) at the cost of reducing consideration of individual circumstances. The algorithm-based approach provides clearer and more explicit information to the applicant, while a case-managed approach that focuses on each individual situation requires a more complex and often less transparent evaluation process. However, the algorithm-based approach is generally less able than the case-managed approach to account for the complexity of individuals' characteristics and contextual circumstances, and therefore less able to fully match entitlement to needs.

In choosing what approach (or mix of approaches) to adopt, governments should remember that older people who require long-term care

are often in a vulnerable situation. It is probably not optimal to have them navigate a complicated system to access support, with intricate definitions of needs, complex sets of rules and procedures to determine eligibility and OOP costs, and unpredictable consequences for their mental, physical and financial wellbeing. Policy makers seeking to introduce a long-term care system or reform an existing system should take inspiration from recent health care reforms, which increasingly favour person-centred, responsive, accessible and affordable high-quality services. Older people should be able to navigate the system, starting with clear entry points (e.g., a referral from their local GP or family doctor, or a reference from their local government office). Once in the system, they should be able to understand how their needs relate to the services that are available to them, and how their means (income and assets) determine how much financial support they will receive. We suggest that eligibility rules should be designed so that older people and their families can clearly anticipate how their social context and living arrangements may affect their eligibility for public support, and what responsibilities each stakeholder has. If there are means tests, these should be easy to understand and give predictable results: the older person and their relatives should be able to predict the OOP costs and the potential impact on their disposable income and net wealth before deciding. If multiple services are available, some degree of choice for the older person and their relatives should be allowed.

3. *Policy makers should consider expanding eligibility rules to increase access to care and improve wellbeing*

Policy makers should consider expanding eligibility for home-based long-term care for older adults in need, as they can directly impact older people's care arrangement choices and improve wellbeing. There are three arguments to support this recommendation. First, softening eligibility rules raises incentives to access long-term care. Among people with loss of autonomy, being eligible for long-term care implies higher rates of care utilisation. This suggests that on average, older people with limitations react to the availability of public support (in cash or in kind) and use it to improve the amount of care they receive. This is important for reducing the risk of unmet need, which can in turn reduce the burden of ill health and disability on families and government. In addition, studies show that if given the opportunity to receive more government support, older people tend to also receive more support from their informal network, which acts as a complement to the formal pillar of care provision (Carrino et al., 2018). This effect would further enhance the aforementioned positive effects of long-term care eligibility in reducing the risk of unmet needs among vulnerable people.

Second, although government support might be available, its intensity is often limited. Differences in eligibility rules imply a different intensity of social protection across countries. In most OECD countries, including those with the most mature long-term care systems, the majority of older people would not be able to afford long-term care services unless they had savings to draw on, even when they were entitled to public support. Lower-income groups face a particularly high risk of being unable to afford the costs of long-term care services from their incomes alone. Even with social protection, the risk of poverty is still higher for those with long-term care needs than for the population in general. Government support for home care for severe needs is often not sufficient to reduce poverty risks to the levels of people who do not need long-term care (Angrisani et al., 2022).

Third, we show that by expanding eligibility governments can improve the mental health and quality of life of older people. Expanding eligibility rules is likely to allow individuals to increase social connections, reduce feelings of loneliness, enhance their capability to sustain active ageing, and face a lower functional decline. All these positive effects may contribute to an enhanced feeling of control and autonomy, leading to improvements in wellbeing. This effect is socially and economically relevant, as mental health problems such as depression are an increasingly common among older people and are a major cause of disability, with large economic costs. This suggests that a policy shift towards coverage of publicly funded home-based care may be justified in terms of increased societal welfare. In turn, cuts in public funding for long-term care services might entail welfare losses that are often ignored.

4. *Policy makers should consider the equity impacts of eligibility rules for long-term care*

Our analysis highlights that inequalities in access to long-term care may be increased as a result of eligibility rules. For example, older people with lower levels of education are less well versed in how to accrue the benefits of eligibility than those with higher education. The literature indeed suggests that older people of lower socioeconomic status find it harder to cope with a long-term care system that is often complex and intricate (Bottery, 2018; Carrino & Orso, 2015). This reinforces the previous discussion about the need for clear and simple eligibility rules that can be communicated and understood by older adults, or for the implementation of tools that can compensate for the difficulties in navigating complex bureaucratic procedures which may limit access to care.

3.12 Appendix to Chapter 3: Needs assessments and eligibility rules review

Table 3.5. *Needs assessments in use in EU member states and OECD countries*

Country	Standardised assessment	Evaluation	ADL, IADL, cognitive	Weights/points threshold	Categories or levels
Australia	National standardised assessment ACAT	Multidisciplinary Aged Care Assessment Teams (ACATs)	Yes to all. Use 5 domains, Social, Physical, Medical, Psychological, and Complexity / Vulnerability.	Under each of the 5 domains there is a classification of ability with 4 levels	4 levels
Austria	Based on care needs comprising a scale with 21 elements	Doctor's 'expert opinion', representatives of other fields (e.g., nursing) are also brought in for an extensive assessment of the situation	ADLs and IADLs as well as cognitive impairment	Eligibility set a 65h/ month and that lasts presumably for at least 6 months	7 categories of long-term care based on care hours per month
Belgium	KATZ and Resident Assessment Instrument (RAI). For its financial benefits, Belgium uses the KATZ instrument at a national level.	Professionals involved in the assessments are part of a multidisciplinary team	ADL, IADL, and cognitive. Includes the need for supervision, to have a social life and to be aware of dangers	For cash benefit, points attributed for each function are added up and the person is assigned to a category	5 categories

Bulgaria	No nationwide system	Permanent assistance of a carer is defined by medical specialists while for long-term care social services it is by social workers	ADL	Minimum 50% disability	3 degrees
Croatia	No nationwide assessment	A body of experts composed of specialist doctors and other professionals	Type and degree of severity of physical, mental, intellectual or sensory impairments	Full amount for persons with severe disabilities	2 levels: full or partial
Czech Republic	National, differentiated on a four level scale according to the recipient's care needs using the International Classification of Functioning, Disability and Health (ICF)	Care Allowance (Příspěvek na péči) is assessed by a social worker from the Labour Office and by a medical doctor of the Medical Assessment Service	Uses ADLs and IADLs as well as cognitive impairment Indicators are based on the 10 basic living needs in ICF	Eligibility based on points Needs at least 3 out of 10 testing basic needs	4 levels
Denmark	No specific international scale is used. The decision on the assistance is taken on the basis of a questionnaire established by the local authorities.	Evaluators hired by the municipality and have experience in the social sector	Include functional ability based on Barthel index, IADL, cognitive but also home conditions and possibilities of self-determination, and an indication of rehabilitative support	No minimum level	

Table 3.5. (*cont.*)

Country	Standardised assessment	Evaluation	ADL, IADL, cognitive	Weights/points threshold	Categories or levels
England	No nationwide but use the Fair Access to Care initiative	Social care professionals are involved in the assessment and care management of social care needs. Cash benefits: A non-medical person is responsible for making a decision on a claim for personal care benefits	Feeding, personal hygiene, toileting, dressing, safety, household tasks, social relations, use of services		
Estonia	The State has developed an instrument for the local governments' social workers to assess the need for care based on the RAI – Resident Assessment Instrument	The assessment of the need for welfare services is undertaken by local social workers. The need for nursing care is undertaken by medical doctors and nurses and for more	ADL, IADL, psychological (mental health) and social (ability to work, communicate, etc.) capability is considered	Minimum 20 points	3 categories

	Local authorities have their own standards for assessing and reviewing the state of health, need for personal assistance, guidance or supervision	difficult cases by a multidisciplinary rehabilitation team			
Finland	No national assessment. Not standardised, the municipality grants services on the basis of an assessment of individual needs. Some use RAI.	The needs must be assessed in a versatile manner, using reliable evaluation methods, and in cooperation with various actors.	Assessment of the various dimensions of functional capacity, i.e. physical, cognitive, mental, social and environmental factors.	Thresholds vary across municipalities	
France	National grid AGGIR *(autonomie gérontologique groupes iso-ressources)*, aimed at assessing the degree of loss of autonomy or the degree of physical and mental dependency.	A medical-social team is responsible for evaluating the degree of loss of autonomy and elaborating an assistance plan	ADL, IADL, cognitive	10 variables with 4 degrees (spontaneously, totally, correctly, normally)	6 levels but only levels 1 to 4 give entitlement to APA

Table 3.5. (*cont.*)

Country	Standardised assessment	Evaluation	ADL, IADL, cognitive	Weights/points threshold	Categories or levels
Germany	Nationwide assessment in 6 areas of life	Specialist nurses and doctors	ADL, IADL, cognitive and communicative skills, behaviour and psychological problems, autonomy, but also coping with disease, organisation of everyday life and social contacts	For each criterion in the 6 areas the degree of autonomy is measured between 0 and 3. There are also different weightings which are combined to form a total value. Minimum of 12.5 points	5 grades or care levels
Greece	No specific nationwide indicators	Centres for Certifying Incapacity comprised of specialist doctors	No specific indicators. Invalidity levels of 50%, 67% or 80% on account of certain illnesses result in different levels of care provision	Minimum 50% invalidity	
Hungary	National assessment. A care needs assessment scale takes into account the person's need for social and health care as well as daily activities.	The evaluation of the dependency level is undertaken by the service provider	ADL, IADL, orientation in time and space, behaviour, communication	Points. Determines the level.	3 levels

Iceland	No nationwide standardised, although RAI often used for nursing homes	A specially appointed group of professionals in each health care district	Special assessment tool which describes ADL.	
Ireland	The Single Assessment Tool (SAT) is being implemented	For home care, a health care professional, usually a Public Health Nurse. For nursing home, a multidisciplinary assessment, involving a consultant geriatrician or psychiatrist of old age	ADL, IADL and cognitive, includes risks within the home environment and informal care availability	5 factors. The assessment of likelihood of a risk occurring is assigned a number from 1-5 and each factor has 0- 25 risk rating, with an overall priority ranking to a score of between 0-100
Italy	Non-standardised, depend on the regions	Ad hoc commissions within both the local health authorities and the legal medical department at the INPS	The method used is based on the KATZ scale (ADL), which uses bathing, feeding, dressing, continence, transferring and toileting. The criteria taken into account refer to the ability to take care of oneself.	

Table 3.5. (*cont.*)

Country	Standardised assessment	Evaluation	ADL, IADL, cognitive	Weights/points threshold	Categories or levels
Japan	Standardised and uniform across the country using a standardised national questionnaire	Needs assessment is entered into the computer for an initial care level. Computer generated decision is then reviewed by a nursing care needs certification board consisting of physicians, nurses and other experts in health and social care services	ADL, IADL, BPSD related care	74 items are used to estimate caring time for 8 categories	7 possible categories: two support levels and care levels graded from 1-5
Latvia	Nationwide	Multidisciplinary team composed of a general practitioner and a specialist social worker. If the person claims long-term institutional care, financed from the State budget, an additional check is provided by the State Social Integration Agency	ADL, IADL, communication, behaviour, settlement of conflicts.	Minimum level (level I of care): 75% ability for self-care and independency	4 levels

Lithuania		By social workers. It may also be assessed by a team of specialists, consisting of a social worker, their assistant, a community caregiver and a mental health caregiver	The need for social services is assessed on the basis of the relations of the person concerned with the community, communicativeness, and ability to accept the help of others, nutrition, housework, financial situation, cognitive and emotional, perceptions and other functions.		3 levels
Luxembourg	Nationwide	Doctor or a health professional (nurse, psychiatric nurse, occupational therapist, psychologist or social worker)	Focus on ADL, IADL	at least 3.5 hours per week and if his/her dependency condition is likely to last longer than 6 months or to be irreversible	15 levels based on minutes of care per week
Netherlands	Nationwide for Wlz, non-standardised for the municipal home care services	Care Needs Assessment Centre (Centrum Indicatiestelling Zorg, CIZ) for Wlz ZvW insurance Municipal social workers for home care	Health problems, physical and cognitive limitations, social and home environment, quality of life and service use, takes into account informal support		No specific care levels but based on the assessment, profiles are created

Table 3.5. *(cont.)*

Country	Standardised assessment	Evaluation	ADL, IADL, cognitive	Weights/points threshold	Categories or levels
Norway	Assessment depends on the municipality	Assessment by doctors and/or other qualified personnel (e.g., physiotherapists) about the need for services			
Poland	Nationwide	The authorised physician (doctors)	ADL, IADL	People with 0 to 40 points on the Barthel scale receive long-term care	
Portugal	Integrated Bio-psychosocial Assessment Instrument	Medical boards operating in the framework of the system for determining incapacity in terms of social security.	ADL		4 levels
Romania		Medical doctors and social workers	Integrated system of indicators: functional, sensory and psycho-emotional		

Slovak Republic		The medical examiner in cooperation with specialised doctors and with a social worker (social assessment activity)	ADL, IADL	Determined by the number of hours and activities – minimum requires at least 2h/day of assistance 12 criteria where activity is assessed by points 0-10.	5 levels of care based on the degree of reliance
Slovenia	No unified assessment	For home, it is done by individual experts while the need for institutional long-term care services is assessed by special teams (medical doctor, social worker, nurse)	ADL and IADL		For nursing homes there are 3 categories
Spain	Nationwide but instruments could be different across the regions	Evaluation board of the Autonomous Communities (Comunidades Autónomas). The board is composed of health and social professionals	A scale considers 47 tasks grouped into ten activities (eating and drinking, control of physical needs, bathing and hygiene, other physical care, dressing and undressing, maintaining one's health, mobility,	Score is the sum of the weights of the tasks for which the individual has difficulty, multiplied by the degree of supervision required and the weight assigned to that activity Minimum 25 points (highest is 100)	3 levels

Table 3.5. (*cont.*)

Country	Standardised assessment	Evaluation	ADL, IADL, cognitive	Weights/points threshold	Categories or levels
			moving inside the home, moving outside the home, housework and making decisions).		
Sweden	Not standardised nationwide	Social workers employed by the municipalities	Some municipalities use the KATZ ADL or any other type of scale. Others use an administrative application form.		

Source: Hashiguchi and Llena-Nozal (2020)

Table 3.6. *Clinical profiles evaluated under the eligibility rules of Belgium and Germany*

Profile A	Profile B	Profile C	Profile D
Limited in 2 ADL, 3 IADL	Limited in 2 ADL, 3 IADL	Limited in 2 ADL, 3 IADL	Limited in 3 ADL, 3 IADL
Age: 74	Age: 85	Age: 74	Age: 84
Limitations in ADL: dressing, bathing	Limitations in ADL: dressing, bathing, transferring	Limitations in ADL: incontinence, bathing	Limitations in ADL: bathing, eating, using WC
Limitations in IADL: outdoor mobility, using the telephone, managing money	Limitations in IADL: shopping for groceries, meal preparation, housework	Limitations in IADL: outdoor mobility, shopping for groceries, housework	Limitations in IADL: shopping for groceries, housework, managing money
Cognitive limitations: yes	Cognitive limitations: no	Cognitive limitations: no	Cognitive limitations: no
Eligibility status:	Eligibility status:	Eligibility status:	Eligibility status:
ELIGIBLE ONLY IN BELGIUM	ELIGIBLE ONLY IN BELGIUM	ELIGIBLE ONLY IN GERMANY	ELIGIBLE ONLY IN GERMANY

3.13 References

Alders, P., Costa-Font, J., de Klerk, M., Frank, R. (2015). What is the impact of policy differences on nursing home utilization? The cases of Germany and the Netherlands. *Health policy*, 119(6), 814–820. doi:https://doi.org/10.1016/j.healthpol.2015.02.006

Andersen, R., Newman, J. F. (2005). Societal and individual determinants of medical care utilization in the United States. *The Milbank Quarterly*, 83(4).

Angrisani, M., Regalado, J. C. O., Hashiguchi, T. C. O. (2022). Financial social protection and individual out-of-pocket costs of long-term care in the USA and Europe: an observational study. *eClinicalMedicine*, 50, 101503. doi:10.1016/j.eclinm.2022.101503

Arias-de la Torre, J., Vilagut, G., Ronaldson, A., Serrano-Blanco, A., Martín, V., Peters, M., et al. (2021). Prevalence and variability of current depressive disorder in 27 European countries: a population-based study. *The Lancet Public Health*, 6(10), e729–e738. doi:10.1016/S2468-2667(21)00047-5

Asada, Y. (2007). *Health inequality: morality and measurement*. Toronto: University of Toronto Press.

Bakx, P., Wouterse, B., van Doorslaer, E., Wong, A. (2020). Better off at home? Effects of nursing home eligibility on costs, hospitalizations and survival. *Journal of health economics*, 73, 102354. doi:https://doi.org/10.1016/j.jhealeco.2020.102354

Bandeen-Roche, K., Gross, A. L., Varadhan, R., Buta, B., Carlson, M. C., Huisingh-Scheetz, M., et al. (2020). Principles and issues for physical frailty measurement and its clinical application. *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 75(6), 1107–1112. doi:10.1093/gerona/glz158

Bandeen-Roche, K., Xue, Q. L., Ferrucci, L., Walston, J., Guralnik, J. M., Chaves, P., et al. (2006). Phenotype of frailty: characterization in the women's health and aging studies. *Journals of Gerontology Series A: Biological Sciences and Medical Science*, 61(3), 262–266. doi:10.1093/gerona/61.3.262

Barber, S. L., Ong, P., Han, Z. A. (2020). Long-term care in ageing populations. In: Haring, R. et al., eds. *Handbook of Global Health*. Cham: Springer: 1–34.

Barr, N. A. (2012). Introduction. In: Barr, N. A. *Economics of the welfare state, fifth edition*. Oxford: Oxford University Press: 4-21.

Becker, U. (2018). Long term care in Europe: an introduction. In: U. Becker, H. Reinhard, eds. *Long-term care in Europe*. Cham: Springer: 1–18.

Berkman, L. F., Glass, T., Brissette, I., Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium. *Social Science & Medicine*, 51(6), 843–857. doi:https://doi.org/10.1016/S0277-9536(00)00065-4

Bertin, G., Carrino, L., Pantalone, M. (2021). Do standard classifications still represent European welfare typologies? Novel evidence from studies on health and social care. *Social Science & Medicine*, 281, 114086.

Borsch-Supan, A., Brandt, M., Hunkler, C., Kneip, T., Korbmacher, J., Malter, F., et al. (2013). Data resource profile: the Survey of Health, Ageing and Retirement in Europe (SHARE). *International Journal of Epidemiology*, 42(4), 992–1001. doi:10.1093/ije/dyt088dyt088 [pii]

Bottery, S., Varrow, M., Thorlby, R., Wellings, D. (2018). *A fork in the road: next steps for social care funding reform*. London: The Health Foundation.

Brugiavini, A., Carrino, L., Orso, C. E., Pasini, G. (2017). *Vulnerability and long-term care in Europe: an economic perspective*. London: Palgrave Macmillan.

Buscher, A., Wingenfeld, K., Schaeffer, D. (2011). Determining eligibility for long-term care – lessons from Germany. *International Journal for Integrated Care*, 11, e019. doi:10.5334/ijic.584

Carinci, F., Van Gool, K., Mainz, J., Veillard, J., Pichora, E. C., Januel, J. M., et al. (2015). Towards actionable international comparisons of health system performance: expert revision of the OECD framework and quality indicators. *International Journal for Quality in Health Care*, 27 (2), 137–146. doi:10.1093/intqhc/mzv004

Carrino, L., Orso, C. E. (2015). Eligibility regulations and formal home-care utilisation among the vulnerable older people in SHARE Wave 5. In: Börsch-Supan, A. et al., eds. *Ageing in Europe – supporting policies for an inclusive society*. *SHARE study*. Berlin: de Gruyter: 343–352.

Carrino, L., Nafilyan, V., Avendano, M. (2022). Should I care or should I work? The impact of work on informal care. *Journal of Policy Analysis and Management*, 42(2), 424–455.

Carrino, L., Orso, C. E., Pasini, G. (2018). Demand of long-term care and benefit eligibility across European countries. *Health Economics*, 27(8), 1175–1188. doi:doi:10.1002/hec.3665

Chaves, P. H., Garrett, E. S., Fried, L. P. (2000). Predicting the risk of mobility difficulty in older women with screening nomograms: the Women's Health and Aging Study II. *Archives of Internal Medicine*, 160 (16), 2525-2533. doi:10.1001/archinte.160.16.2525

Colombo, F., Mercier, J. (2012). Help wanted? Fair and sustainable financing of long-term care services. *Applied Economic Perspectives and Policy*, 34(2), 316–332.

Cremer, H., Pestieau, P. (2018). Means-tested long-term care and family transfers. *German Economic Review*, 19(3), 351–364. doi:https://doi.org/10.1111/geer.12132

Davey, J., de Joux, V., Nana, G., Arcus, M. (2004). *Accommodation options for older people in Aotearoa/New Zealand*. Wellington, New Zealand: New Zealand Institute for Research on Ageing.

de Vries, N. M., Staal, J. B., van Ravensberg, C. D., Hobbelen, J. S. M., Olde Rikkert, M. G. M., Nijhuis-van der Sanden, M. W. G. (2011). Outcome instruments to measure frailty: a systematic review. *Ageing Research Reviews*, 10(1), 104–114. doi:https://doi.org/10.1016/j.arr.2010.09.001

Eleftheriades, C., Wittenberg, R. (2013). *A critical review of international practice on assessment and eligibility in adult social care: lessons for England*. Oxford: Centre for Health Service Economics & Organisation (CHSEO), University of Oxford (CHSEO Report No 5).

Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Princeton: Princeton University Press.

European Commission (2021). *The 2021 ageing report: economic & budgetary projections for the EU Member States (2019–2070)*. Brussels: Directorate-General for Economic and Financial Affairs (Institutional Paper 148).

Fernandez, J.-L., Forder, J., Knapp, M. (2011). Long-term care. In: Glied, S., Smith, P. C., eds. *The Oxford Handbook of Health Economics*. Oxford: Oxford University Press: 578–601.

Fernández, J.-L., Forder, J., Trukeschitz, B., Rokosová, M., McDaid, D. (2009). How can European states design efficient, equitable and sustainable funding systems for long-term care for older people? Copenhagen: WHO Regional Office for Europe (Health Systems and Policy Analysis, Policy brief 11).

Forder, J., Vadean, F., Rand, S., Malley, J. (2018). The impact of long-term care on quality of life. *Health economics*, 27(3), e43–e58.

Forder, J. E., Caiels, J. (2011). Measuring the outcomes of long-term care. *Social Science & Medicine*, 73(12), 1766–1774. doi:https://doi.org/10.1016/j.socscimed.2011.09.023

Fried, L. P., Cohen, A. A., Xue, Q.-L., Walston, J., Bandeen-Roche, K., Varadhan, R. (2021). The physical frailty syndrome as a transition from homeostatic symphony to cacophony. *Nature Aging*, 1(1), 36–46. doi:10.1038/s43587-020-00017-z

Fried, L. P., Ferrucci, L., Darer, J., Williamson, J. D., Anderson, G. (2004). Untangling the concepts of disability, frailty, and comorbidity: implications for improved targeting and care. *Journals of Gerontology Series A: Biological Sciences and Medical Science*, 59(3), 255–263. doi:10.1093/gerona/59.3.m255

Fried, L. P., Tangen, C. M., Walston, J., Newman, A. B., Hirsch, C., Gottdiener, J., et al. (2001). Frailty in older adults: evidence for a phenotype. *Journals of Gerontology Series A: Biological Sciences and Medical Science*, 56(3), M146–156. doi:10.1093/gerona/56.3.m146

García-Gómez, P., Hernández-Quevedo, C., Jiménez-Rubio, D., Oliva-Moreno, J. (2015). Inequity in long-term care use and unmet need: two sides of the same coin. *Journal of Health Economics*, 39, 147–158. doi: https://doi.org/10.1016/j.jhealeco.2014.11.004

Gori, C. (2012). Home care in Italy: a system on the move, in the opposite direction to what we expect. *Health & Social Care in the Community*, 20(3), 255–264.

Gori, C., Fernandez, J.-L., Wittenberg, R. (2016). *Long-term care reforms in OECD countries*. Bristol: Policy Press.

Greenberg, P. E., Fournier, A.-A., Sisitsky, T., Simes, M., Berman, R., Koenigsberg, S. H., Kessler, R. C. (2021). The economic burden of adults with major depressive disorder in the United States (2010 and 2018). *Pharmacoeconomics*, 39(6), 653–665. doi:10.1007/s40273-021-01019-4

Grewal, I., Lewis, J., Flynn, T., Brown, J., Bond, J., Coast, J. (2006). Developing attributes for a generic quality of life measure for older people: preferences or capabilities? *Social Science & Medicine*, 62(8), 1891–1901.

Hashiguchi, T. C. O., Llena-Nozal, A. (2020). *The effectiveness of social protection for long-term care in old age: is social protection reducing the risk of poverty associated with care needs?* París: OECD Publishing (Health Working Paper No. 117). https://doi.org/10.1787/2592f06e-en.

Hu, B. O., Ma, S. A. I. (2018). Receipt of informal care in the Chinese older population. *Ageing and Society*, 38(4), 766–793. doi:10.1017/S0144686X16001318

James, S. L., Abate, D., Abate, K. H., Abay, S. M., Abbafati, C., Abbasi, N., et al. (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, 392(10159), 1789–1858.

Kalwij, A., Pasini, G., Wu, M. (2014). Home care for the elderly: the role of relatives, friends and neighbors. *Review of Economics of the Household*, 12(2), 379–404. doi:doi: 10.1007/s11150-012-9159-4

Levesque, J.-F., Harris, M. F., Russell, G. (2013). Patient-centred access to health care: conceptualising access at the interface of health systems and populations. *International Journal for Equity in Health*, 12, 18.

Lloyd-Sherlock, P. (2014). Beyond neglect: long-term care research in low and middle income countries. *International Journal of Gerontology*, 8(2), 66–69. doi:https://doi.org/10.1016/j.ijge.2013.05.005

Matteo, J., Emmanuele, P., Michele, R., Natili, M. (2018). *ESPN thematic report on challenges in long-term care – Italy*. Brussels: European Commission.

Mitnitski, A. B., Mogilner, A. J., Rockwood, K. (2001). Accumulation of deficits as a proxy measure of aging. *Scientific World Journal*, 1, 323–336. doi:10.1100/tsw.2001.58

Njegovan, V., Man-Son-Hing, M., Mitchell, S. L., Molnar, F. J. (2001). The hierarchy of functional loss associated with cognitive decline in older persons. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 56(10), M638–M643.

OECD (2018). *Taxation of household savings*. Paris: OECD Publishing (OECD Tax Policy Studies, No. 25). doi:https://doi.org/10.1787/9789264289536-en.

OECD (2019). *Promoting healthy ageing: background report for the 2019 Japanese G20 presidency*. Paris: OECD Publishing (https://www.oecd.org/g20/topics/global-health/G20-report-promoting-healthy-ageing.pdf).

OECD/EU (2018). *Health at a glance: Europe 2018*. Paris/Brussels: Organisation for Economic Co-operation and Development/European Union. doi:https://doi.org/10.1787/health_glance_eur-2018-en.

Oliveira Hashiguchi, T. C., Llena-Nozal, A. (2020). *The effectiveness of social protection for long-term care in old age: is social protection reducing the risk of poverty associated with care needs?* Paris: OECD Publishing (OECD Health Working Papers, No. 117).

Ormel, J., Rijsdijk, F. V., Sullivan, M., Van Sonderen, E., Kempen, G. I. (2002). Temporal and reciprocal relationship between IADL/ADL disability and depressive symptoms in late life. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 57(4), P338–P347.

Paat-Ahi, G., Masso, M. (2018). *ESPN thematic report on challenges in long-term care – Estonia*. Brussels: European Commission.

Pacolet, J., De Wispelaere, F. (2018). *ESPN thematic report on challenges in long-term care – Belgium*. Brussels: European Commission.

Penninx, B. W., Guralnik, J. M., Ferrucci, L., Simonsick, E. M., Deeg, D. J., Wallace, R. B. (1998). Depressive symptoms and physical decline in community-dwelling older persons. *JAMA*, 279(21), 1720–1726.

Pickard, L. (2001). Carer break or carer-blind? Policies for informal carers in the UK. *Social Policy & Administration*, 35(4), 441–458. doi:https://doi.org/10.1111/1467-9515.00244

Plath, D. (2007). Independence in old age: the route to social exclusion? *The British Journal of Social Work*, 38(7), 1353–1369. doi:10.1093/bjsw/bcm045

Plath, D. (2009). International policy perspectives on independence in old age. *Journal of Aging & Social Policy*, 21(2), 209–223. doi:10.1080/08959420902733173

Purebl, G., Petrea, I., Shields, L., Tóth, M., Székely, A., Kurimay, T., Martin Abello, K. (2015). *Depression, suicide prevention and e-health: situation analysis and recommendations for action*. Lisbon: Joint Action on Mental Health and Well-being.

Rocard, E., Llena-Nozal, A. (2022). *Supporting informal carers of older people*. Paris: OECD Publishing (OECD Health Working Papers, No. 140). doi:doi:https://doi.org/10.1787/0f0c0d52-en

Rockwood, K., Mitnitski, A. (2007). Frailty in relation to the accumulation of deficits. *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 62(7), 722–727. doi:10.1093/gerona/62.7.722

Rodrigues, R. (2013). *The indirect costs of long-term care*. Brussels: European Commission (Research Note, 8/2013).

Rodrigues, R., Ilinca, S., Schmidt, A. E. (2017). Inequality and inequity in the use of long-term care service in Europe: is there reason for concern? *Eurohealth*, 23(4), 7–10.

Schokkaert, E., Van de Voorde, C. (2009). Direct versus indirect standardization in risk adjustment. *Journal of Health Economics*, 28(2), 361–374.

Thomas, K. S., Akobundu, U., Dosa, D. (2016). More than a meal? A randomized control trial comparing the effects of home-delivered meals programs on participants' feelings of loneliness. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 71(6), 1049–1058.

Twigg, J., Atkin, K. (1994). *Carers perceived: policy and practice in informal care*. Buckingham: Open University Press.

UN (2006). *Convention on the Rights of Persons with Disabilities*. New York, NY: United Nations (https://social.desa.un.org/issues/disability/crpd/convention-on-the-rights-of-persons-with-disabilities-crpd, accessed 15 November 2023).

Vellenoweth, C. (1999). The Royal Commission and structures for elder care. *Journal of Integrated Care*, 7(4), 3–8. https://doi.org/10.1108/14769018199900021

Walston, J., Bandeen-Roche, K., Buta, B., Bergman, H., Gill, T. M., Morley, J. E., et al. (2019). Moving frailty toward clinical practice: NIA Intramural Frailty Science Symposium summary. *Journal of the American Geriatrics Society*, 67(8), 1559–1564. doi:10.1111/jgs.15928

WHO (2007a). *Everybody's business – strengthening health systems to improve health outcomes: WHO's framework for action*. Geneva: World Health Organization.

WHO (2007b). *International classification of functioning, disability, and health: children & youth version: ICF-CY*. Geneva: World Health Organization.

WHO (2015). *World report on ageing and health*. Geneva: World Health Organization.

WHO (2017). *Frailty and intrinsic capacity (report of consortium meeting, 1–2 December 2016)*. Geneva: World Health Organization Clinical

Consortium on Healthy Ageing (https://www.who.int/publications/i/item/WHO-FWC-ALC-17.2, accessed 15 November 2023).

Williamson, G. M., Shaffer, D. R. (2002). The activity restriction model of depressed affect. In: Williamson, G.M., et al. eds. *Physical illness and depression in older adults*. New York, NY: Kluwer Academic Publishers: 173–200.

Wolff, J. L., Agree, E. M. (2004). Depression among recipients of informal care: the effects of reciprocity, respect, and adequacy of support. *The Journals of Gerontology: Series B*, *59*(3), S173–S180. doi:10.1093/geronb/59.3.S173