EUROPEAN CENTRE PUBLICATION

Facts and Figures on Healthy Ageing and Long-Term Care

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Vienna
February 2025

EUROPEAN CENTRE FOR SOCIAL WELFARE POLICY AND RESEARCH

This publication received funding from the Swedish Ministry of Health and Social Affairs.

Graphics and Copyediting

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Quote as:

Kalavrezou, N., Pot, M., Kadi, S., Simmons, C., Leichsenring, K. (2025). *Facts and Figures on Healthy Ageing and Long-Term Care*. Vienna: European Centre for Social Welfare Policy and Research.

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Executive Summary

Significant demographic shifts are taking place in Europe. As life expectancy continues to rise, more people are living longer, especially those aged 80 and above. Declining fertility rates are contributing to an ageing population: with fewer births, there are fewer younger people to replace and support the older generations. While migration may help alleviate some of these effects, it cannot fully reverse them. The social implications are also profound and include shifts in household and family structures, as well as caregiving dynamics, with fewer children and extended families available to care for older individuals.

Against this backdrop, long-term care (LTC) systems play a crucial role. Public services across Europe vary significantly in terms of governance, structure, financing, and delivery – ranging from highly integrated systems in some countries to fragmented provisions in others. High-performing systems benefit from substantial public investment and comprehensive service coverage, while less developed systems face the challenges of over-reliance on informal care and high unmet needs.

This report highlights demographic trends and the impact of rising awareness in national and international policies to tackle the challenges related to rising needs in long-term care (LTC) as well as to expectations of citizens to be cared for as long as possible in the community. This involves shedding light on the needs of individuals requiring care, the status, characteristics, and experiences of the workforce – including informal caregivers who play an integral role in addressing care needs – and the various unmet needs and inequalities persisting in the care sector. Due to ongoing digital and ecological transformations it is important to consider imminent and potential consequences of climate change and new technologies in the area of long-term care. Last, but not least, financing and governing long-term care remain either low-priority areas or areas of concern in several countries. However, both should be prioritised and addressed proactively, before they escalate into even greater challenges.

This report builds on previous work at the European Centre and provides an update of latest facts and figures on LTC systems in Europe after the COVID-19 pandemic. It highlights that, in both countries that have been known as “first movers” – such as the Netherlands, Sweden and other Nordic countries – and those that are catching up more slowly, regardless of demographic pressure, expenditure on long-term care should be framed as an investment with multiple social, cultural and economic returns. The expansion of formal care services contributes to more socioeconomic and gender equality, boosts employment – particularly by increasing women’s participation in the labor market – and contributes to local and regional development, including in rural areas.

It is high time to revel rising longevity as an opportunity to design policies that ensure active and healthy ageing, including by expanding services, environments and technologies that enable dignified ageing also to those in need of long-term care. This compilation of facts and figures on long-term care provides evidence for policymakers offering insights from other countries as well as a chance to reflect on their own performance and challenges.

Chapter 1 provides an overview of population ageing in Europe, inluding decreasing fertility rates, migration, changes in household composition and increasing life expectancy. Even if higher age is not

automatically linked to declining health, it is to be expected that with rising shares of the older population groups European societies will also be confronted with rising need for long-term care.

This historical progression from acute and communicable diseases to higher shares of persons with chronic diseases and long-term care needs is outlined in *Chapter 2*. The large majority of European countries have experienced a significant increase of life expectancy over the past decades. However, improved longevity is leading to shifts in the types of conditions affecting the population. Chronic diseases, such as cardiovascular conditions and cancer, are now the leading causes of mortality. While life expectancy has increased across the EU, the additional years are often spent in poorer health, and accompanied by more complex needs for LTC. Statistically, this is evidenced by the fact that healthy life expectancy – defined as life expectancy in good health – is increasing at a slower pace than overall life expectancy. Still, aggregated data are often misleading as differences within and between countries clearly show significant inequalities between richer and poorer countries as well as between gender and socio-economic groups. Moreover, non-communicable and chronic diseases have contributed to higher needs. For instance, the prevelance of dementia has increased by up to 10 percentage points only over the past decade, and is likely to rise further over the coming decade. Together with other factors, rising needs for LTC will continue to challenge all European governments and policymakers as more refined and personalised care approaches are required.

Chapter 3 is therefore dedicated to the reactions of European countries in terms of service provision and other measures to support individuals with chronic illnesses, disabilities, or age-related LTC needs. The facts and figures show not only considerable heterogeneity, but also a general tendency to delimit or reduce places in residential care, although in most countries the pace of expansion in community care has not kept pace with the ever-growing demand An overview of policies in EU Member States shows not only persisting disparities between countries, but also difficulties in overcoming fragmented service delivery, achieving person-centredness and ensuring quality. Regulatory frameworks are therefore evolving to ensure services meet standards of affordability and quality, as outlined by the European Pillar of Social Rights. Countries are introducing accreditation, inspection, and monitoring processes, though significant challenges remain in ensuring consistent quality across Europe.

A key characteristic of LTC provision therefore remains the vital role of informal care as shown and analysed in *Chapter 4*. On average, 15% of the European population provide unpaid care to an older person. Gender disparities are particularly pronounced, as women often bear the brunt of caregiving responsibilities, which reinforces existing gender inequalities. Facts and figures show that, while Nordic countries are characterised by high percentages of caregivers (even with a relatively equal gender balance), the intensity of care tends to be lower, with over 80% of caregivers providing less than 10 hours of care per week. In contrast, intensive caregiving – defined as providing at least 20 hours of care per week – is more prevalent in Southern and East European countries, where the majority of carers are clearly women as spouses or daughters within family structures. This is also reflected in the fact that combining paid employment and unpaid care work is more frequent in countries with more developed LTC systems, but also in countries where carers are forced to combine employment and care due to the lack of LTC infrastructure. However, up to 20% of carers cite care responsibilities as the main reason for not seeking employment. As there is a positive correlation across EU countries between higher employment rates for women providing intensive informal care and greater gender

equality, policymakers are called to design appropriate support measures for informal carers of working age, including young carers, with a focus on flexible working conditions and health promotion.

While informal carers should be considered an integral part of the LTC workforce, paid LTC workers gained special attention during the COVID-19 pandemic as "system-relevant" workers, all while unveiling the increasingly visible staffing shortages. *Chapter 5* provides information on the number and status of LTC workers across Europe, again with large disparities between countries. For instance, while Denmark and other Nordic countries employ almost 12% of their labour force in LTC, East and Southern European countries employ only 1-2% of their workforce in the sector. Generally, the LTC sector has contributed significantly to rising employment, particularly of women. With an employment growth from 6.9 million people in 2008 to 9.4 million in 2023 across the EU, LTC has been among the most thriving economic sectors. Women continue to dominate the LTC workforce that spans a range of roles in both residential and home care settings. Those employed in the sector grapple with persisting issues such as low wages, precarious job security, and significant physical and emotional strain, with many workers experiencing negative health effects due to the demands of the job. In addition, the LTC sector is increasingly reliant on migrant and undeclared workers, particularly in live-in care, while there is a growing need for better recognition, improved working conditions, and enhanced social protection. Workforce shortages are becoming a pressing issue, with the demand for skilled care workers outpacing supply. The next decades will be marked by an ageing LTC workforce and pressures to train, recruit and retain well-qualified professionals. Addressing these challenges by fostering decent working conditions will be key to ensure both the well-being of workers themselves and better quality of life through person-centred LTC delivery.

To address this challenge, it is crucial to secure adequate funding for the LTC sector. *Chapter 6* therefore focuses on public expenditure in LTC, starting from the most common, though methodologically debatable, indicator used in international comparisons – the share of spending on LTC as a percentage of GDP. With a significant variation, ranging from 4.1% in the Netherlands and less than 1% of GDP in more than a dozen of EU countries, this indicator underscores the huge differences between the state of LTC systems in Europe. These differences can hardly be explained by demographics alone. Facts and figures show that they are rather due to different welfare policy traditions, "care regimes", funding systems (e.g., out-of pocket contributions), and attitudes towards public spending. Looking ahead, further investment in LTC will be necessary across all European countries, particularly in prevention and improved coordination between health and LTC systems. This is crucial not only to cover growing needs, but also to stimulate employment, reduce avoidable acute healthcare interventions, address gaps and inequalities, and improve the quality and overall effectiveness of both health and LTC services.

Chapter 7 informs concisely about demographic and socioeconomic characteristics of inequalities in LTC within and between countries. Facts and figures show that inequalities in care needs are strongly correlated to income gradients, with related consequences on the use of care services and corresponding out-of-pocket contributions that are widespread in the area of LTC services . Unmet LTC needs vary depending on the severity of care required, with individuals facing more severe difficulties experiencing higher levels thereof. Among older individuals, notable income-related inequalities in access to healthcare can be found, with higher unmet needs for medical care, medications, and mental health services among lower income groups. These disparities may translate into poorer health

outcomes and increased inequalities in care needs in later life. Facts and figures also point to various issues that call for further research, for instance regarding access to services by persons with a migration background.

The intersection of climate change, ageing, and LTC is becoming increasingly relevant and critical as highlighted in Chapter 8. Older adults, particularly those with pre-existing health conditions, are more vulnerable to extreme weather events, natural disasters and environmental pollutants. There are compounded risks faced by women, who experience higher morbidity and are more likely to live alone in old age, making them particularly susceptible to climate-related health challenges and adverse climatic and environmental events. More inclusive policies to mitigate the impact of climate change on ageing populations and improve care systems are needed.

Chapter 9 is dedicated to the intersection of ageing, technology and LTC that is often framed as both a potential solution and a critical factor in addressing challenges in policy and practice. The rapid evolution of digital technologies, such as AI and robotics, has the potential to revolutionise care delivery and offer opportunities to enhance care, improving both the independence and quality of life for older adults – provided the human aspects of care are preserved, the rights of care workers are respected, and inequalities in access to care do not deepen further by introducing a new digital divide. New technologies could improve health management and reduce social isolation, empowering older adults to live more independently. In this shift, the digital literacy of both care workers and care recipients will be key to unlocking the full potential that technology has to offer.

Introduction

As Europe's population continues to age, the challenges and opportunities associated with this demographic shift remain at the forefront of social, economic and political discourse. This discourse had for a long time focused on concerns about the sustainability of pension systems, resulting in reform efforts with the aim to extend working lives by raising the statutory and effective retirement ages, and to control pension spending by introducing stricter eligibility criteria for the award of pensions and less generous "calculation formulas" (e.g., Holzmann et al. 2003; Fouejieu et al., 2021). Over the past few decades, however, governments realised steadily that rising longevity also contributes to increasing needs in health and social care, calling for innovative approaches to develop person-centred integrated long-term care (LTC) systems. Investing in LTC to ensure the well-being of older adults in need of care is not only a pressing concern but also an opportunity to create sustainable support structures, to foster employment and to enhance the governance of health and social care systems (e.g., European Commission 2021a; 2021b; WHO, 2024; Colombo et al., 2011; OECD, 2005). In the context of ongoing demographic transformations (rising longevity, changing family structures, migration), digital transformations and other global challenges it is crucial to underscore both the challenges and the opportunities of investing in LTC, prevention as well as active and healthy ageing (WHO, 2020).

The European Centre for Social Welfare Policy and Research has contributed to the dynamic discourse on LTC since its onset, in particular by providing analyses and evidence for policy-making and further research, not least through its reports on *Facts and Figures on Long-term Care and Healthy Ageing* released in 2008 (Huber et al., 2008) and 2012 (Rodrigues et al., 2012). This report connects up to these overviews of key trends and developments in LTC and ageing across EU countries. Apart from updates of basic data on demographic developments and needs, expenditure and workforce issues, this report also addresses the important role of informal care, trends in quality assurance and in particular unmet needs and inequalities in LTC provision. In the context of digital transformations and climate change, the report also entails relevant facts and figures from a LTC perspective.

Given the vast scope of LTC and ageing-related topics, this publication focuses on selected themes and indicators that capture essential aspects of demographic change and LTC. The study is based on data by Eurostat, OECD, WHO and other organisations collecting and providing surveys and/or analyses for comparative research in a wider Europe.

The report is structured into nine chapters, each addressing a core aspect of ageing and LTC. It starts with an examination of demographic developments and trends in population health, followed by an analysis of LTC services, informal care, and the care workforce. The ensuing sections explore financial aspects, including LTC expenditure, as well as inequalities and barriers within care provision. Finally, the study discusses broader societal influences such as climate change and the role of technology in LTC, offering a focused examination of these pressing but underexplored issues.While far from exhaustive, this selection provides a structured and data-driven perspective, enabling some meaningful comparisons across European countries. The emphasis on 'facts' and 'figures' allows for

constructive benchmarking, supporting policymakers in identifying best practices and areas for improvement.

The European Centre has a long-standing expertise in ageing and LTC issues, and this publication reflects our commitment to contributing to informed policymaking in these fields. While ageing presents significant challenges, it also offers an opportunity to innovate, adapt, and implement policies that enhance the resilience of European societies and economies and promote the well-being of older adults. By remaining alert to these changes while embracing their potential, we can work towards sustainable and equitable solutions that benefit all generations.

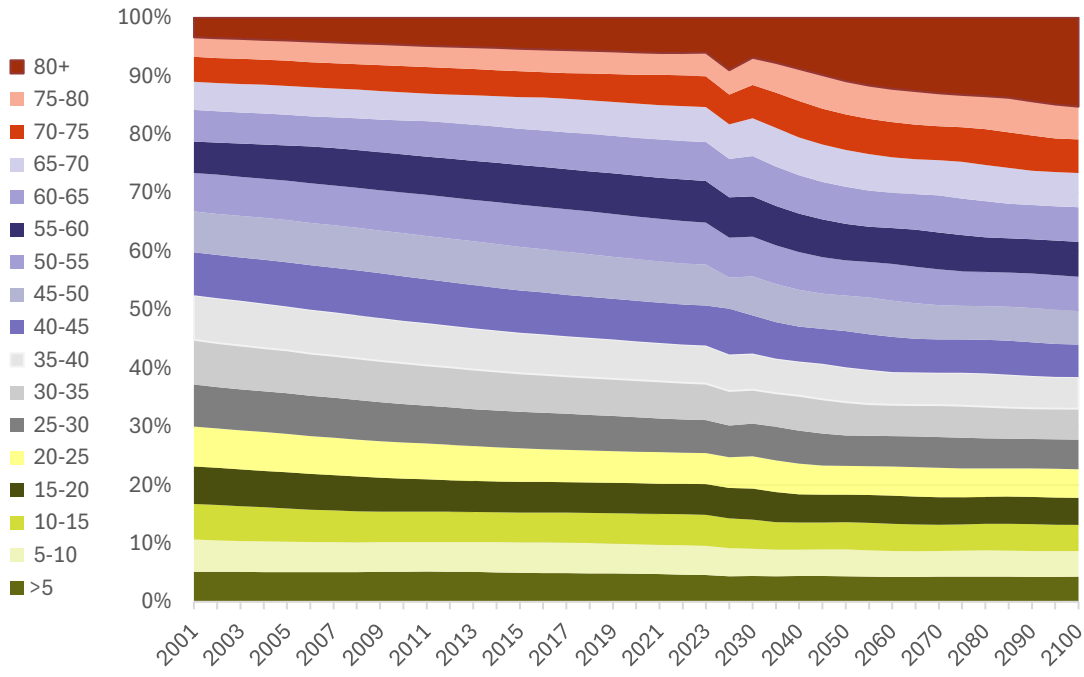
We are grateful to the Swedish Ministry of Health and Social Affairs for commissioning this study, which has allowed us to revisit the issues at stake in long-term care, with new data and insights shedding light on emerging challenges and policy responses.

May this report serve as a valuable resource for policymakers, researchers and stakeholders engaged in heralding population ageing and the future development of LTC. There is much more to explore in this evolving landscape, and we encourage continued dialogue and dynamic collaboration to address the pressing issues of our time with both pragmatism and optimism.

Chapter 1
Demographic developments

- Life expectancy in Europe is rising significantly, with many people expected to live much longer than previous generations. This development is great news and a testament to advancements in healthcare, living standards, and disease prevention, contributing to overall well-being and extended active participation in society.
- At the same time, Europeans are having fewer children since fertility rates are declining and often fall far below the needed replacement rate of 2.1 children per woman, which is the threshold necessary for a population to sustain itself without migration. This development is likely to cause major disruptions in our societies and economies.
- Demographic ageing refers to changes in the age distribution of a population, shaped by both the natural balance (the ratio of deaths to births) and the immigration balance (the ratio of inflows to outflows). European societies are ageing rapidly due to the dual forces of declining fertility rates and increasing life expectancy, which are reshaping the population structure across the continent.
- The share of older people is increasing. As of 2023, approximately 96 million people aged 65 or older resided in the European Union, representing a 40% increase (equivalent to 28 million people) compared to 2001 (Figure 1.1). This demographic group is expected to grow by an additional 34 million individuals by 2050, reflecting another 40% increase compared to the 2023 figures.

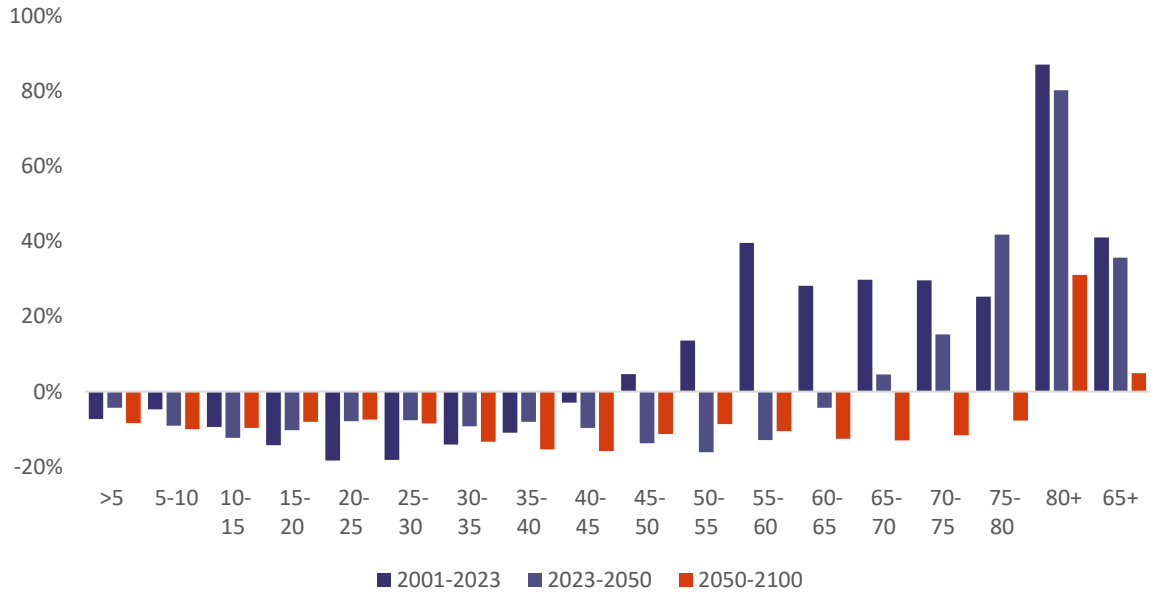
Figure 1.1. Composition of the EU-27 population by age group (actual + projections), 2001-2100



Source: EUROSTAT and authors' calculations. Note: The chart combines actual data (up to 2023) and projections (from 2025 to 2100).

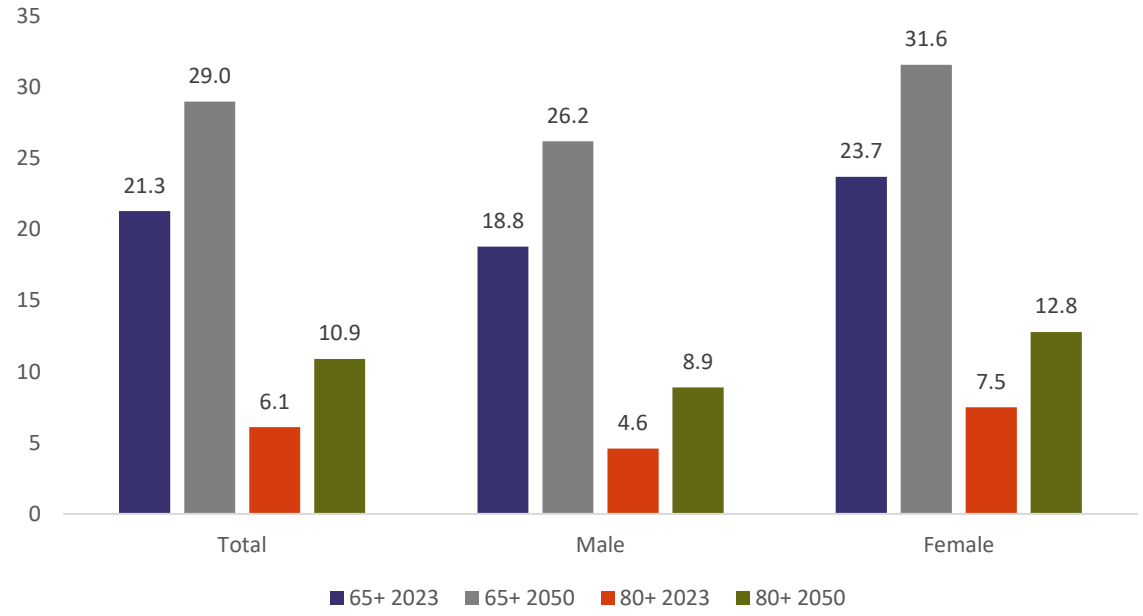
- More people will live longer. The figures are even more striking when examining the demographic group aged 80 years or older. Their population nearly doubled, rising from approximately 14 million to 27 million between 2001 and 2023, reflecting an increase of 13 million individuals (equivalent to an 87% rise). By 2050, this age group is projected to grow by an additional 22 million individuals (an 80% increase compared to 2023), the largest growth among all other age brackets.
- As a result of declining fertility rates, the share of young people has decreased. The most significant declines, observed between 2001 and 2023, occurred in the 20-30 age group, which saw a reduction of over 18%. In addition, both the 15-20 and 30-35 age groups experienced a 14% decline. Declines were also recorded across all age groups up to 45 years of age.
- The share of young people is expected to continue to decline as fewer babies are born. Current demographic projections extending to 2050 also indicate population declines across all younger age groups in the EU. Declines are expected throughout the age distribution, up to and including the 60-65 age bracket, while populations in older age groups (65 years and above) are projected to increase. Looking ahead to 2100, figures suggest a decrease across the entire EU population distribution, except for the 80+ age group, which is anticipated to grow by 31% (Figure 1.2). This shift in population structure may have far-reaching social and generational consequences, affecting community dynamics, caregiving patterns, and the overall balance between working-age and older populations.

Figure 1.2. Evolution of EU27 population by age group (% change: 2001-2023, 2023-2050 and 2050-2100)



Source: EUROSTAT and authors' calculations. Note: The chart combines actual data (up to 2023) and projections (from 2025 to 2100).

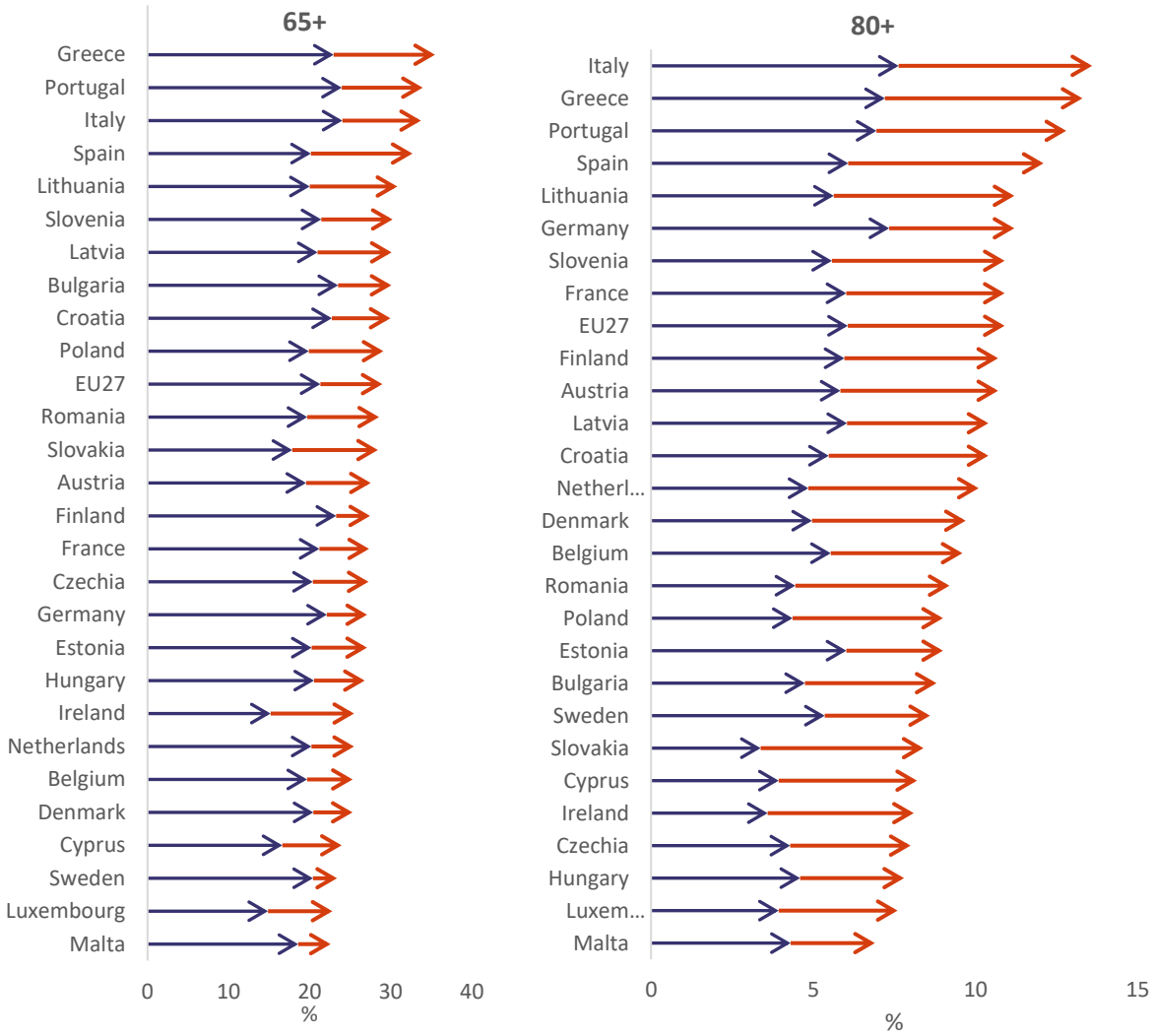
Figure 1.3. Projections of the share of the EU population aged 65+ and 80+, by gender



Source: EUROSTAT and authors' calculations.

- The share of people 65 years and older and at least 80 years and older will increase considerably. By 2050, 29% of the total EU population will be at least 65 years of age, and 11% will be at least 80 years of age, up from 21% and 6%, respectively (Figure 1.3). The female population is projected to age more rapidly: the share of women aged 65+ relative to the total female population is expected to increase to 32%, while the share of women aged 80+ is projected to reach 13%. For men, the corresponding shares are projected to increase to 26% and 9%, up from 19% and 5%, respectively.

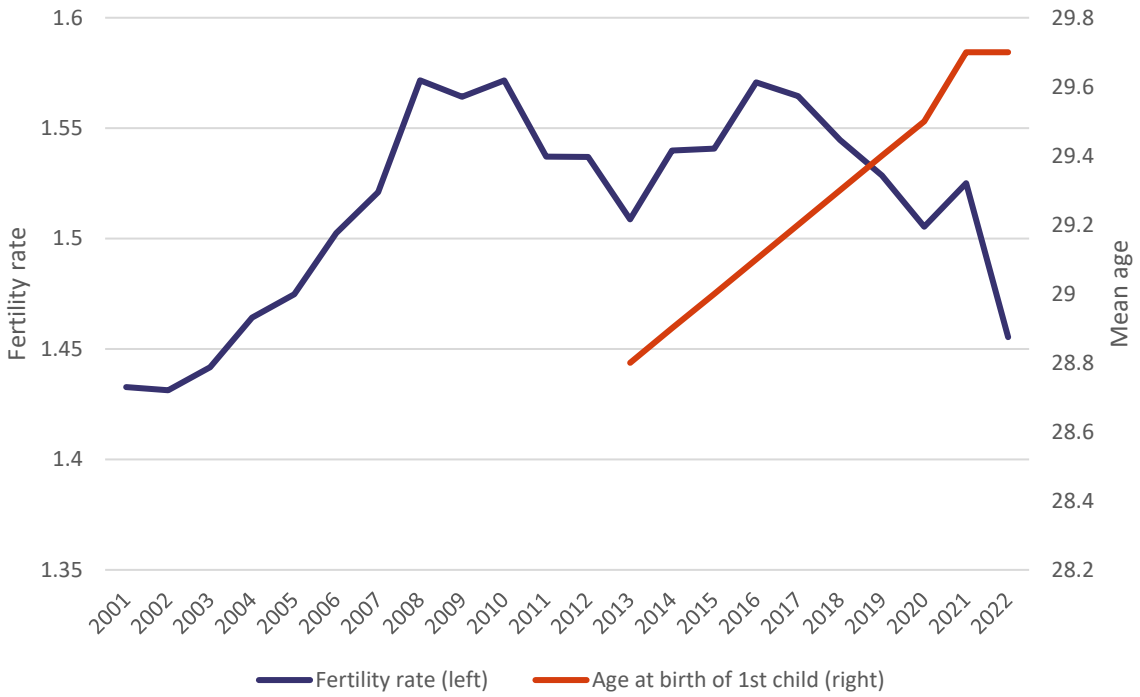
Figure 1.4. Evolution of the share of the population aged 65+ and 80+, 2023 and 2050



Source: EUROSTAT and authors' calculations.

- While all EU countries face demographic challenges, their individual shares of persons in older age groups within the total population vary significantly (Figure 1.4). As of 2023, Italy and Portugal had the highest proportion of individuals aged 65 or over (24%), followed closely by Bulgaria (23.4%), Finland (23.3%), and Greece (23%). Projections indicate a further increase by 2050, with Greece expected to lead the ranking at 35.5%, followed by Portugal (33.9%), Italy (33.7%), and Spain (32.7%). Conversely, countries such as Malta, Luxembourg, and Cyprus are projected to have relatively lower proportions of older citizens by 2050, though their shares will still be notably high compared to current levels. Additionally, Italy had the highest proportion of individuals aged 80 years or over (6.7%) in 2023, followed by Germany (7.3%), Greece (7.2%), Portugal (6.9%), and Spain (6.1%). Projections for 2050 indicate that Italy (7.6%), Greece (7.2%), Portugal (6.9%), and Spain (6.1%) will continue to lead in this demographic category.

Figure 1.5. Average EU-27 fertility rate (2001-2022) and women's mean age at birth of first child (2013-2022)



Source: Eurostat.

- Declining fertility rates are one of the key drivers of population ageing across the EU (Figure 1.5). These declines can largely be attributed to socioeconomic factors, particularly shifts in social norms over the past five decades. The lengthening of educational trajectories, the freedom to pursue individual preferences, and labour market dynamics are some of the factors that have contributed to a shift in the average childbearing age for both men and women in European societies (Sobotka, 2004; Billari & Kohler, 2004). Additionally, fewer women are choosing motherhood at a younger age, reflecting, among other things, considerable advancements in gender equality.

- However, the relationship between gender equality and fertility rates is complex. Historically, higher gender equality has been linked to fewer births (e.g., Lagerlöf, 2003; Lesthaeghe, 1995), but recent trends show that in developed economies, fertility rates are higher in more gender-equal societies, such as Scandinavian countries (e.g., Duvander & Andersson, 2006; Myrskyla et al., 2011). For instance, despite a recent drop, Sweden's fertility rates have been in general higher than the EU average which would lend support to this theory. Also in Denmark and Iceland, they are still higher than the EU average according to the 2022 data. This relationship is often described as U-shaped: while gender equality may initially reduce fertility, it later increases it as women no longer must choose between career and family in more egalitarian societies with better family policies (Esping-Andersen, 2016; MacDonald, 2000; Goldscheider et al., 2015). These dynamics extend to several EU countries with even higher rates (e.g., France, Romania), possibly explained by additional factors, and East Asian countries, like South Korea, where the tension between persistent gender ideologies and rapid socioeconomic development drives low fertility rates (e.g., Myong et al., 2021).

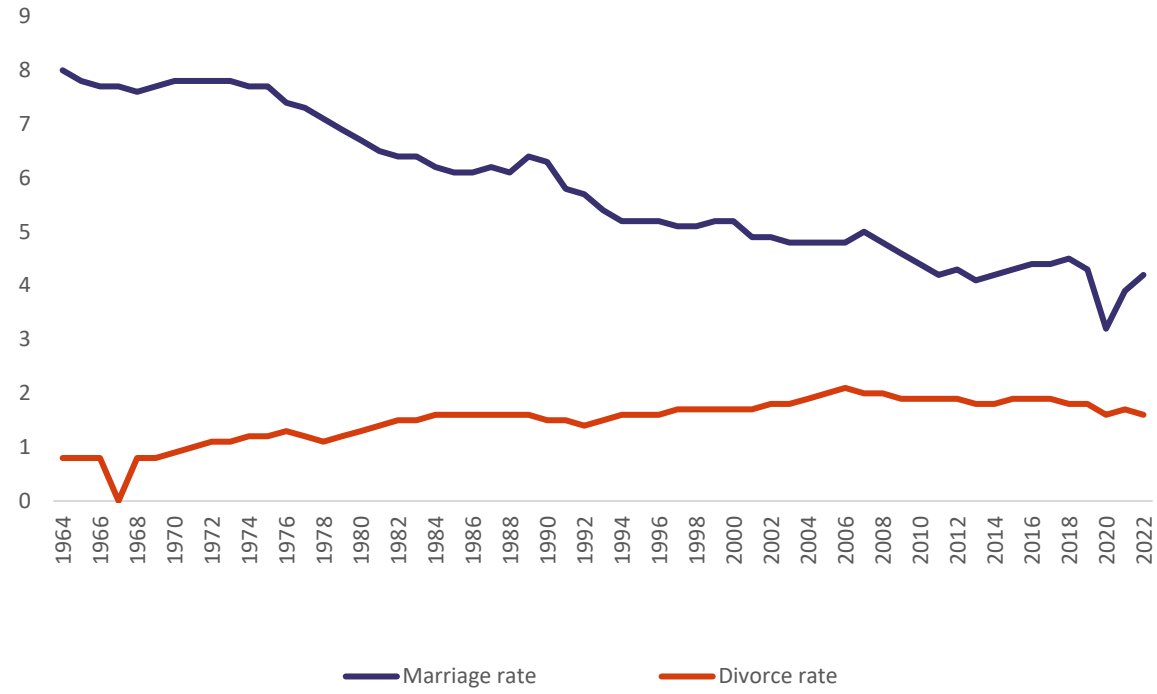
- In demographic studies, it is commonly acknowledged that maintaining a stable population requires a fertility rate of at least 2.1 births per woman, known as the replacement-level fertility rate (Craig, 1994).[1] Throughout the latter half of the 20th century, fertility rates in Europe started to decline, gradually slipping below this critical threshold. Over the past two decades, the average fertility rate across the EU has remained consistently low, hovering around 1.4 births per woman. While some variance has been observed among countries and over time, fertility rates have remained consistently below the replacement level in all EU countries over the past decades (Figure 1.6). Over time, the decline in fertility rates and the decreasing number of children will translate into fewer people of working age and in the labour force. This is likely to hamper economic growth and the long-term sustainability of the European social welfare model.
- As a result of these social and demographic trends, household composition in the EU is undergoing significant changes. Declining marriage rates and, to a lesser extent, increasing divorce rates (Figure 1.7) have led to a rise in single-person households, observed across both younger and older age groups. Population ageing has further contributed to an increase in the proportion of households with older members, while simultaneously reducing the number of households with younger members. Additionally, declining fertility rates have resulted in a higher proportion of households without dependent children, replacing those with minors (1.8).

Figure 1.6. Fertility rates in EU countries, 2001 versus 2022

Source: Eurostat.

1 The rate, however, can differ among countries, influenced by factors such as mortality trends, immigration patterns, and other macro-level variables. For example, nations with high infant mortality rates would necessitate a higher replacement-level fertility rate to keep their population constant.

Figure 1.7. Crude marriage and divorce rates (EU27 average), 1964-2021



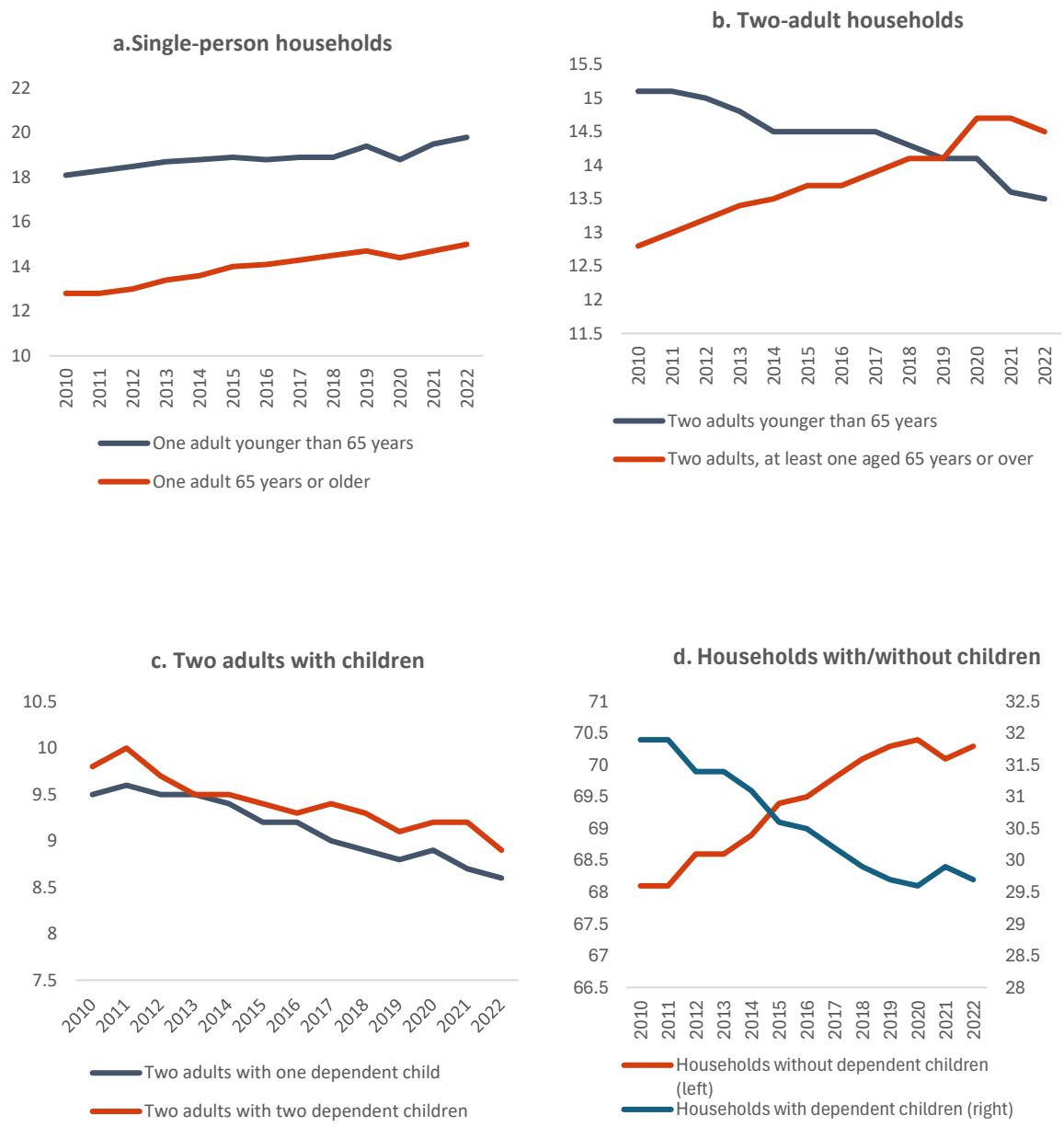
Source: Eurostat.

- These demographic shifts indicate a growing proportion of the population living alone in older age, along with the transformation of traditional family structures. As family sizes shrink, with fewer children and extended family members providing care and support, these responsibilities are increasingly falling on a smaller number of individuals. This shift will lead to resource constraints and increased pressure on those providing care. Moreover, these trends have significant economic implications at the macroeconomic level. The rising proportion of older individuals, combined with a shrinking working-age population, places pressure on European tax and social security systems, as decreased fiscal revenues from the working-age population are expected to coincide with the rising demand for services in healthcare, pensions, and long-term care.

- The most widely used indicator for capturing these challenges is the old-age dependency ratio (Figure 1.9). According to the latest projections, under the baseline scenario, the ratio of people aged 65 or older to working-age individuals is expected to reach 55% across the EU by 2055. This ratio is projected to rise further to 65% by 2100. The countries with the highest projected dependency ratios in 2050 are Greece (74.1%), Portugal (68.6%), Italy (66%), and Spain (63.7%).

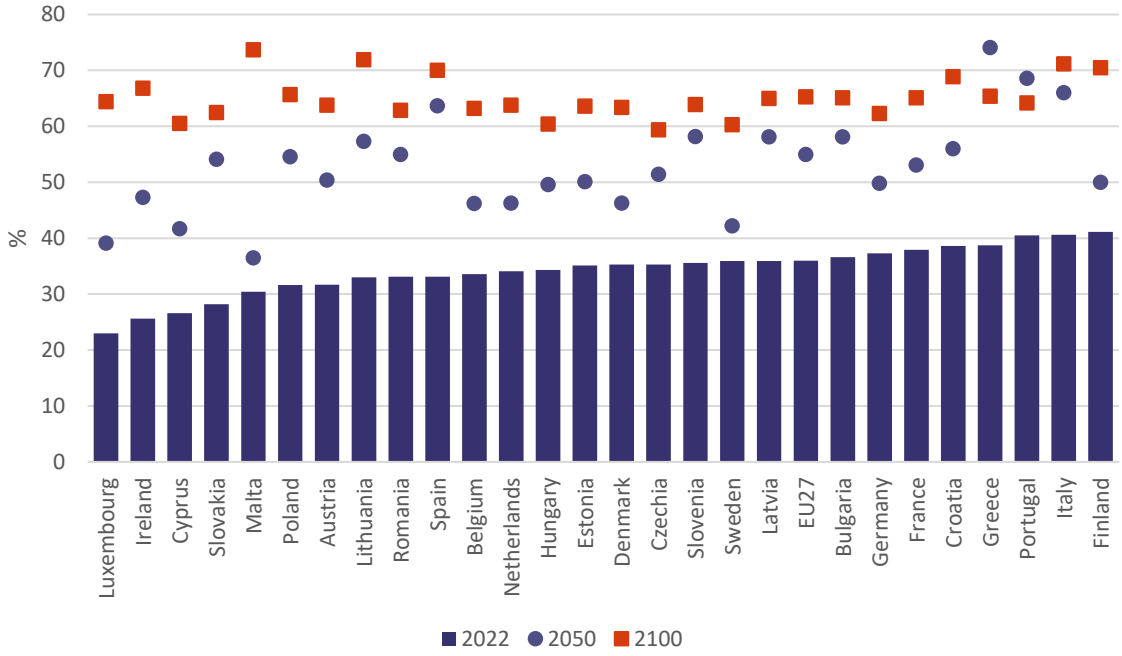
- Finally, alternative assumptions regarding fertility and mortality rates (to account for variations in the natural balance) and migration patterns (to reflect differences in the migration balance) have led to alternative scenarios for demographic projections, including age distribution and other ageing indicators across Europe. For example, migration trends are expected to significantly influence the pace of population ageing in Europe, but they will not, by themselves, be sufficient to reverse these macro-level trends, according to the current projections (Figures 1.10 and 1.11).

Figure 1.8. Evolution of EU-27 household composition, 2010-2022



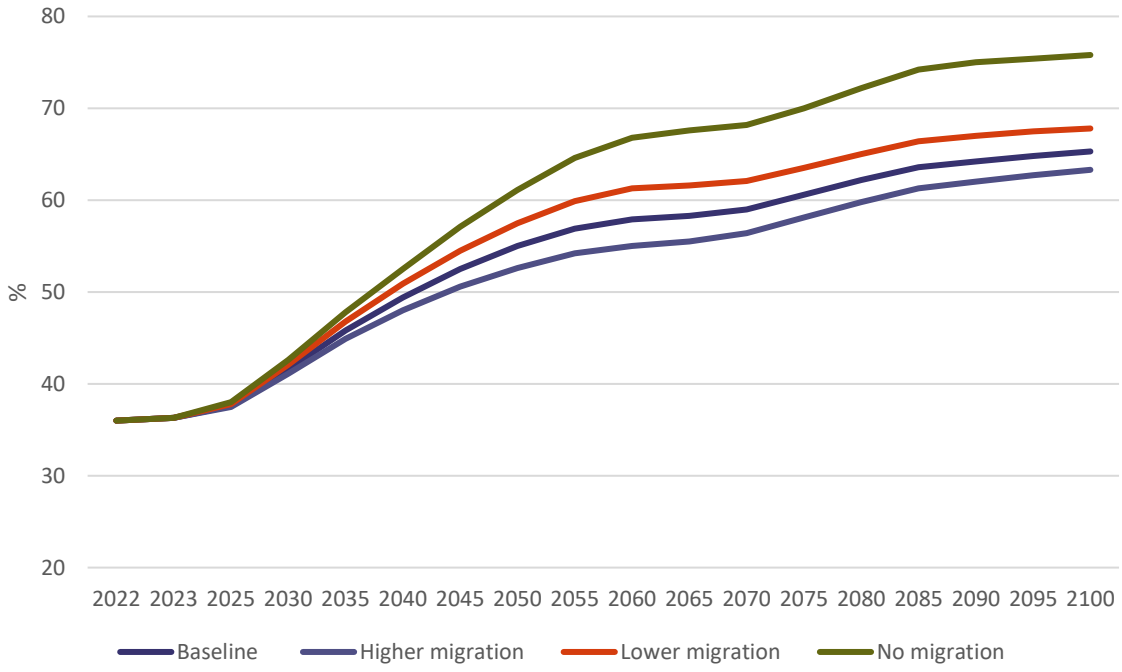
Source: Eurostat.

Figure 1.9. Old-age dependency ratio projections: population 65 years or over to population 20 to 64 years (2022, 2050 and 2100)



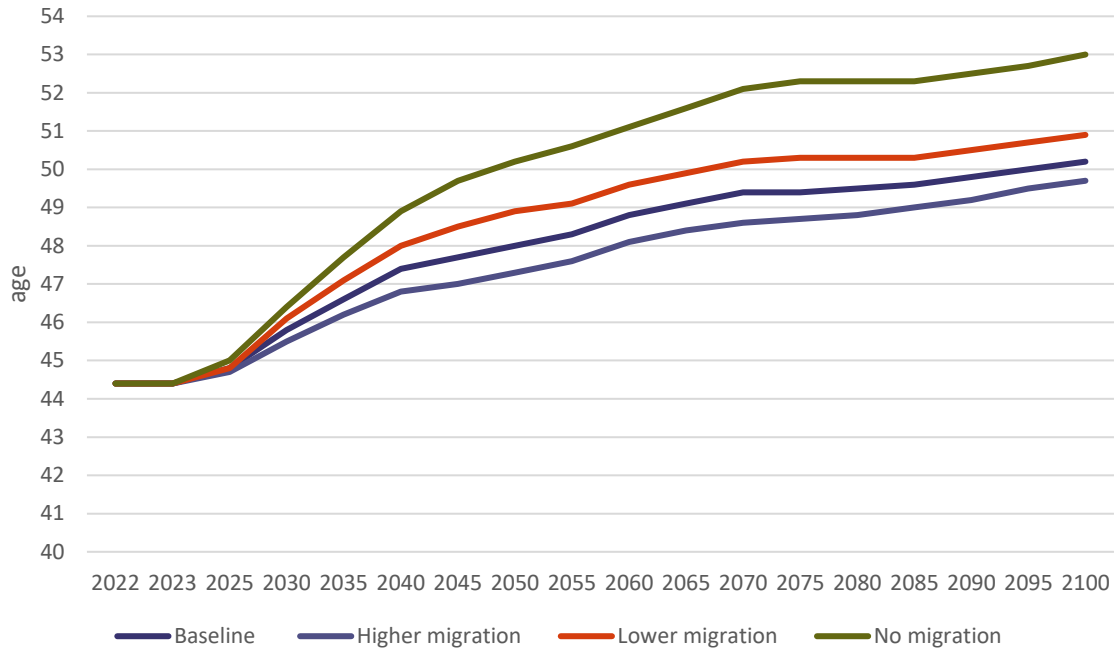
Source: Eurostat.

Figure 1.10. Old-age dependency ratio projections under alternative migration scenarios (population 65 years or over to population 20 to 64 years), EU-27, 2022-2100



Source: Eurostat.

Figure 1.11. Median age of EU-27 population (projections), under different migration scenarios, 2022-2100

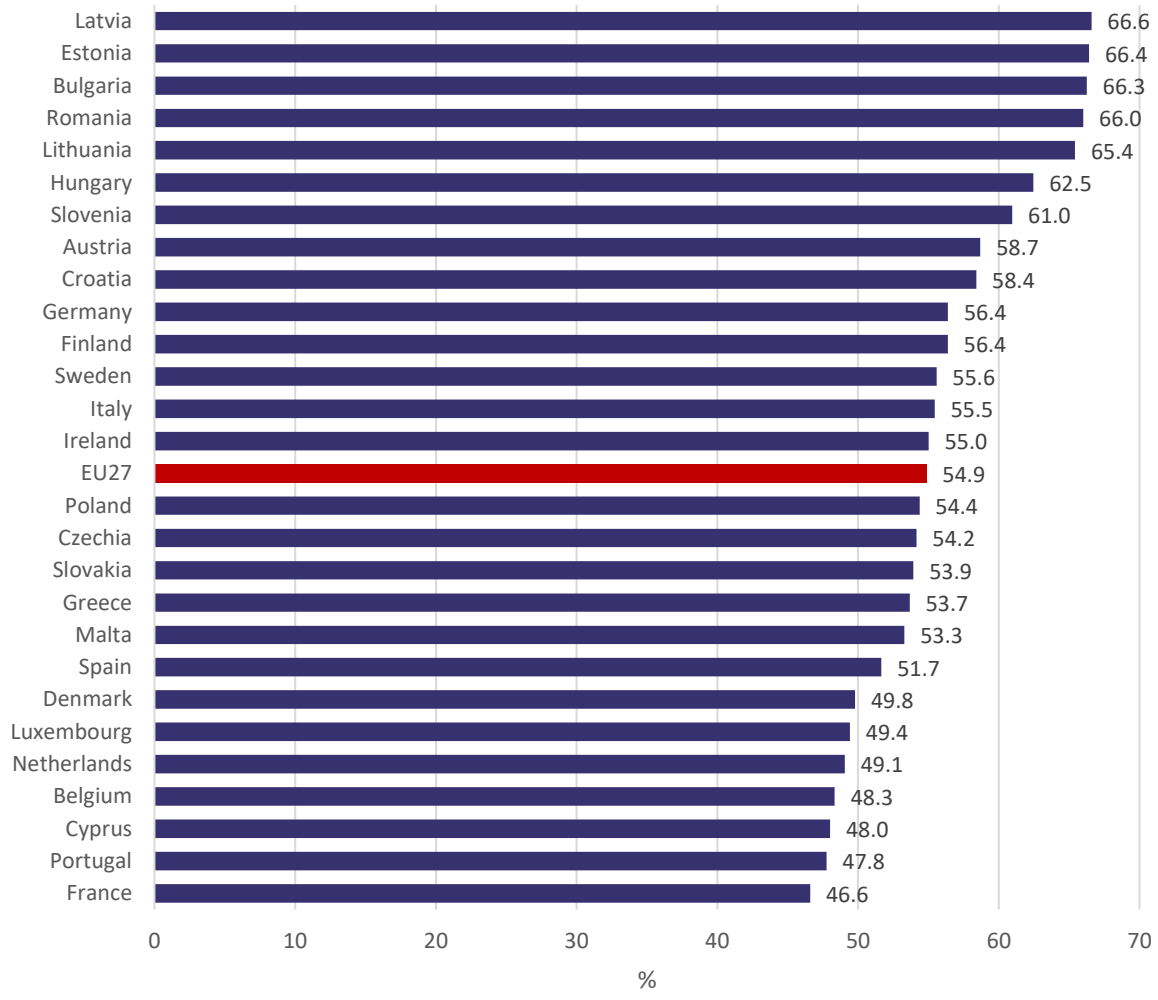


Source: Eurostat.

Chapter 2
Developments in population health

- Improved health is driving increasing longevity. Population ageing is associated with shifts in epidemiological patterns concerning the causes of morbidity and mortality. According to the theory of epidemiological transition, initially proposed by Omran (1971) and later expanded by Olshansky and Ault (1986), these shifts are attributed to socioeconomic development, marking a historical progression from acute and communicable diseases to chronic and degenerative ones.
- Europe's mortality profile reinforces the validity of the epidemiological transition theory: as of 2022, over 32% of deaths in the EU were attributable to cardiovascular diseases, 23% to neoplasms and just under 5% to accidents and infectious diseases (excluding COVID-19 cases after 2020). Across EU27 countries, mortality due to the two leading causes combined (cardiovascular disease and cancer) varied from 46.6% in France to 66.6% in Latvia in the same year (Figure 2.1).

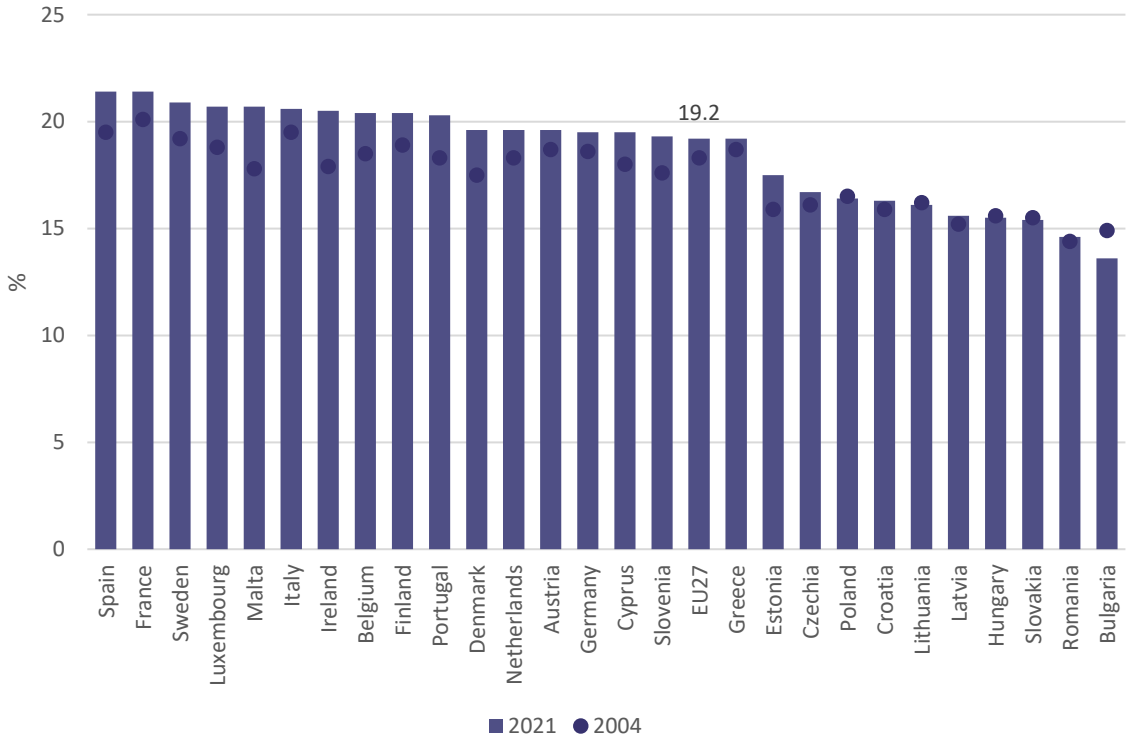
Figure 2.1. Mortality due to circulatory diseases and neoplasms (% of total mortality), 2022



Source: Eurostat.

- These positive developments have resulted in an increase in life expectancy across the EU. Life expectancy at 65 years of age rose from 18.3 to 19.2 years between 2004 and 2021 (Figure 2.2). Among the leading EU countries in this regard are Malta (+2.9 years), followed by Ireland (+2.6 years) and Denmark (+2.1 years). However, some countries have experienced a decline, with Bulgaria being the most notable example (-1.3 years), owing to a decrease in life expectancy after 2019. As of 2021, life expectancy at 65 years of age was the highest in Spain and France (21.4 years) and the lowest in Romania and Bulgaria (14.6 and 13.6 years respectively).

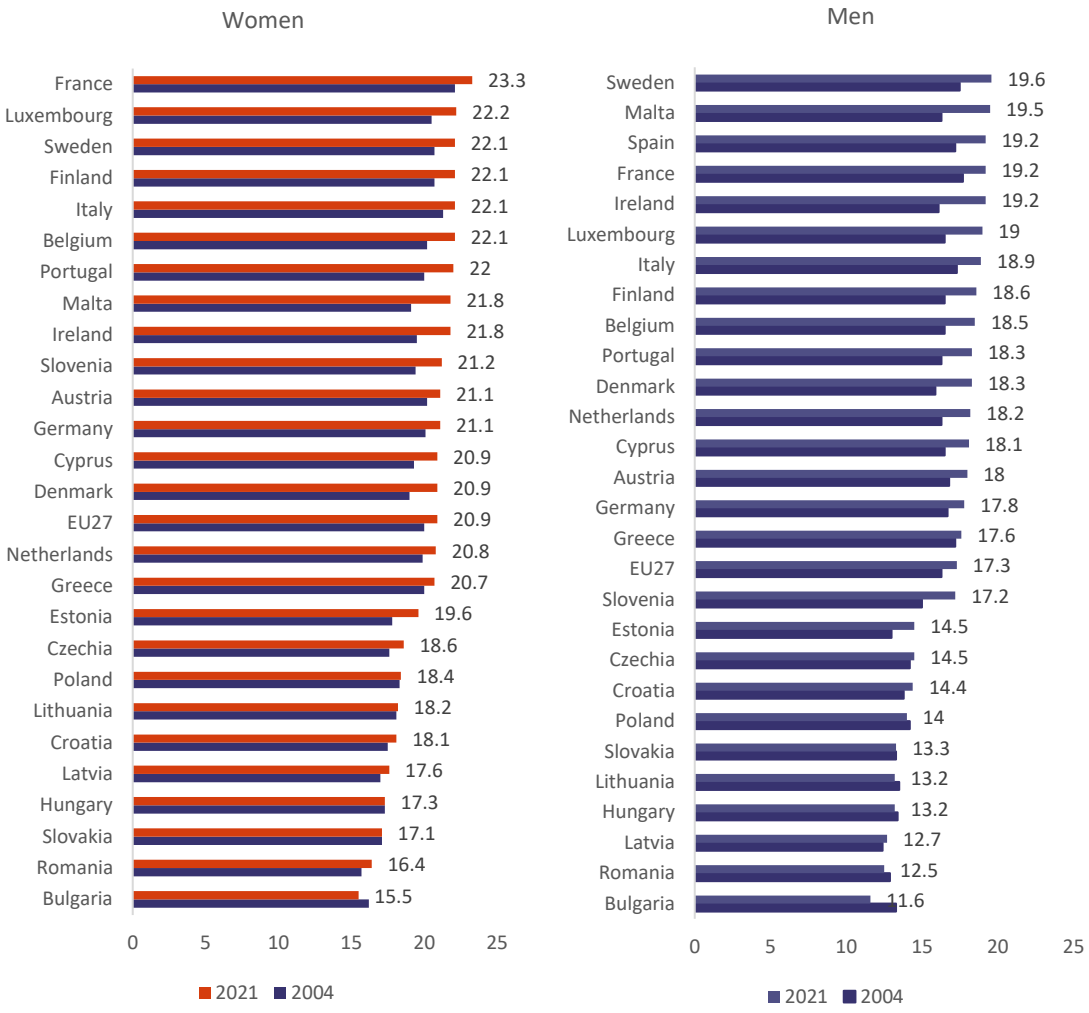
Figure 2.2. Life Expectancy at 65 (total), 2004 and 2021



Source: Eurostat.

- Women have a higher life expectancy than men, across the EU (Figure 2.3). Gender differences in life expectancy range from 2.3 years in Malta to 5.1 years in Estonia. Among all countries, women have the highest life expectancy at 65 in France (23.3 years), while men have the highest life expectancy at 65 in Sweden (19.6 years). Life expectancy at 65 is the lowest in Bulgaria for both men and women (11.6 and 15.5 years, respectively). However, these national averages do not fully capture significant disparities in life expectancy within countries, particularly the persistent inequalities between different socioeconomic groups and regions (e.g., Fors et al., 2021; Enroth et al., 2022; Mackenbach et al., 2019).

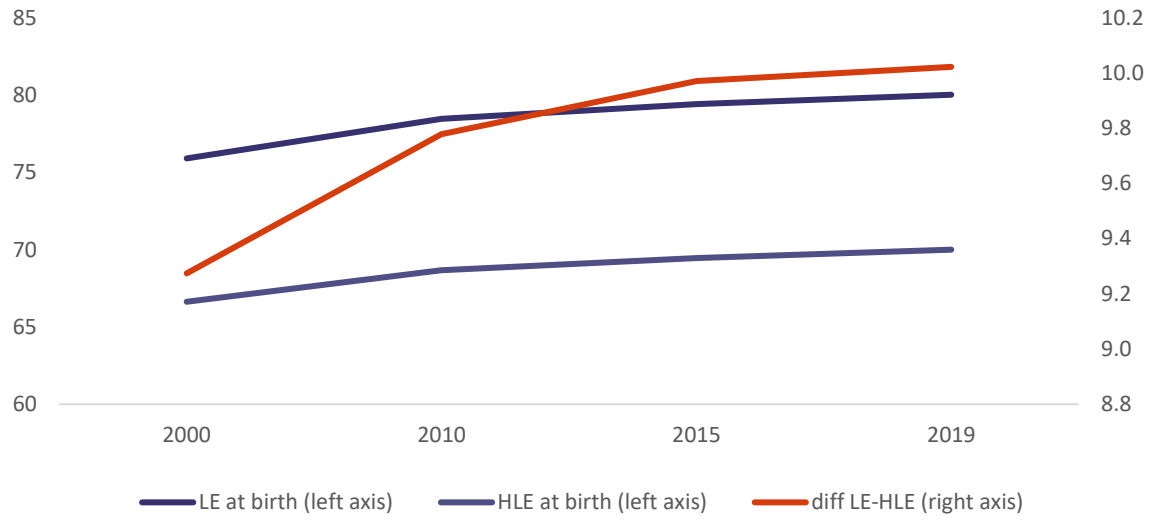
Figure 2.3. Life Expectancy at 65 (by gender), 2004 and 2021



Source: Eurostat.

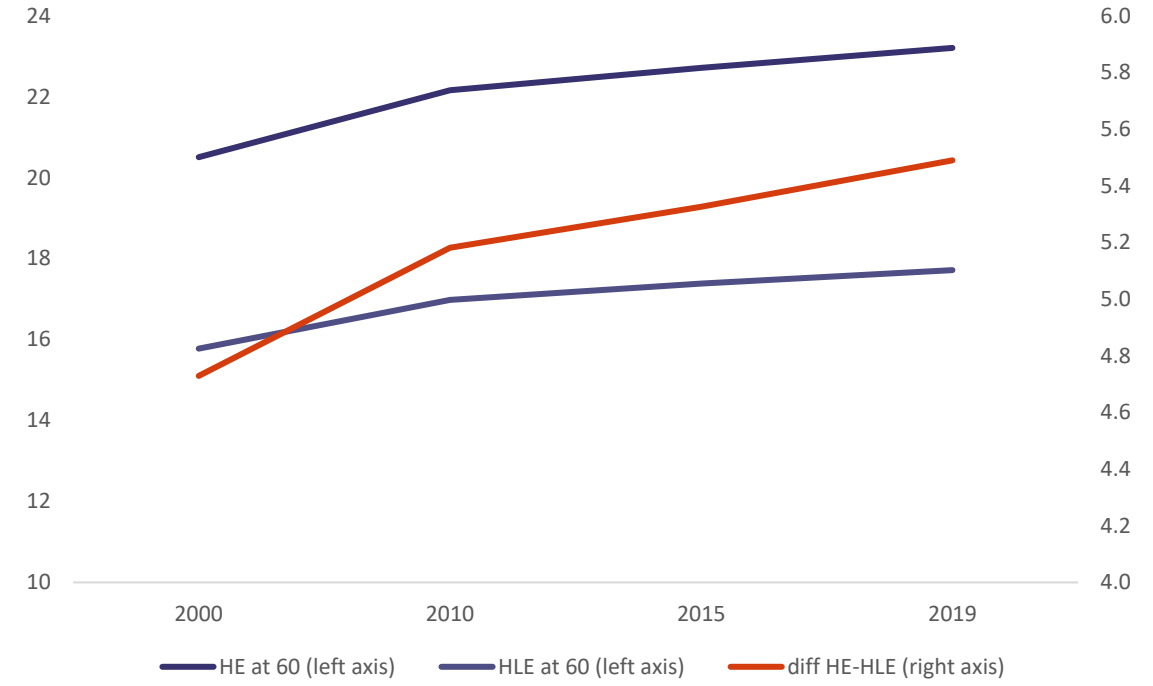
- While more individuals are living longer, a growing proportion of these additional years are spent in poor health and/or requiring care (Figures 2.4 and 2.5). A significant consequence of the transition from infectious to chronic and degenerative diseases is the rising prevalence of morbidity in older age. Available data indicate that healthy life expectancy – defined as life expectancy in good health – is increasing at a slower pace than overall life expectancy.

Figure 2.4. Evolution of life expectancy and healthy life expectancy at birth (EU27), 2000-2019



Source: WHO, authors' calculations.

Figure 2.5. Evolution of life expectancy and healthy life expectancy at 60 (EU27), 2000-2019

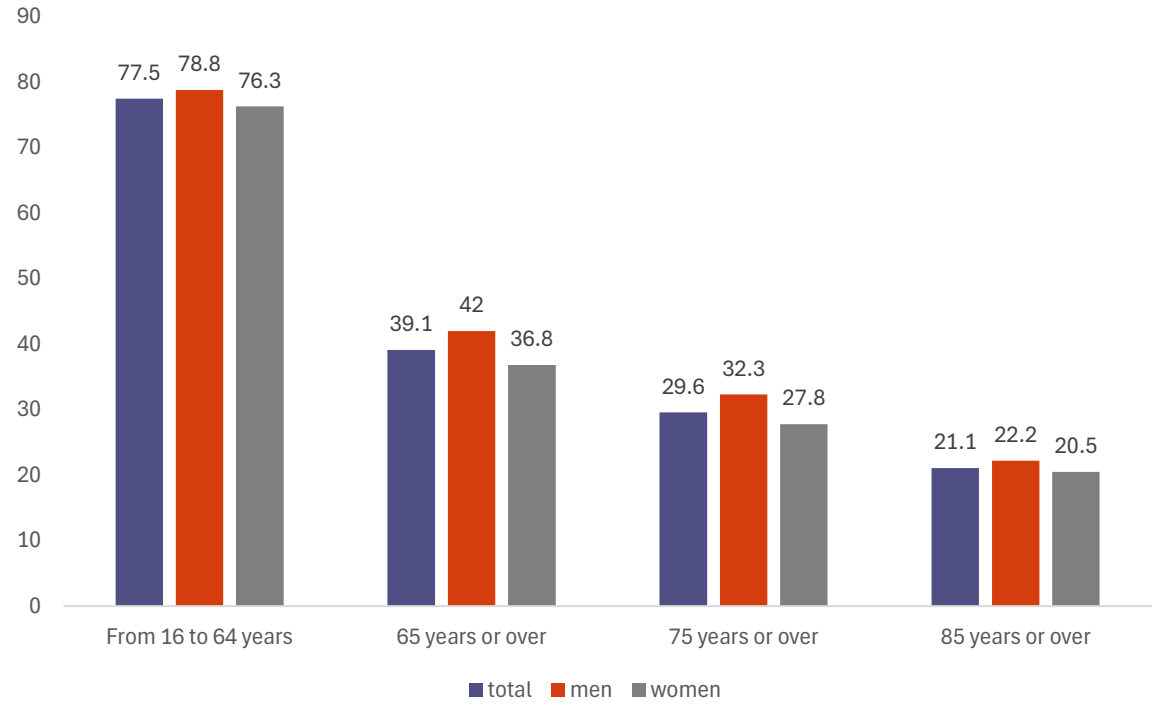


Source: WHO, authors' calculations.

- Self-reported indicators highlight age and gender differences in physical health. In 2022, 39% of the EU population aged 65 and older rated their health as excellent or very good. This proportion declined with age, dropping to 30% among those aged 75 and older and to 21% in the 85+ age

group. Despite their longer life expectancy, women consistently report higher levels of morbidity and lower self-rated health compared to men (Figure 2.6). This pattern, observed globally and supported by a systematic global review of relevant surveys (Boerma et al., 2016), reflects a combination of biological and societal factors. Notably, men reported better health status at ages 65+ and 75+ across all EU countries in 2022, with the exceptions of Luxembourg and France (Figure 2.7).

Figure 2.6. Age and gender gradients in excellent/very good self-rated health (EU27), 2022

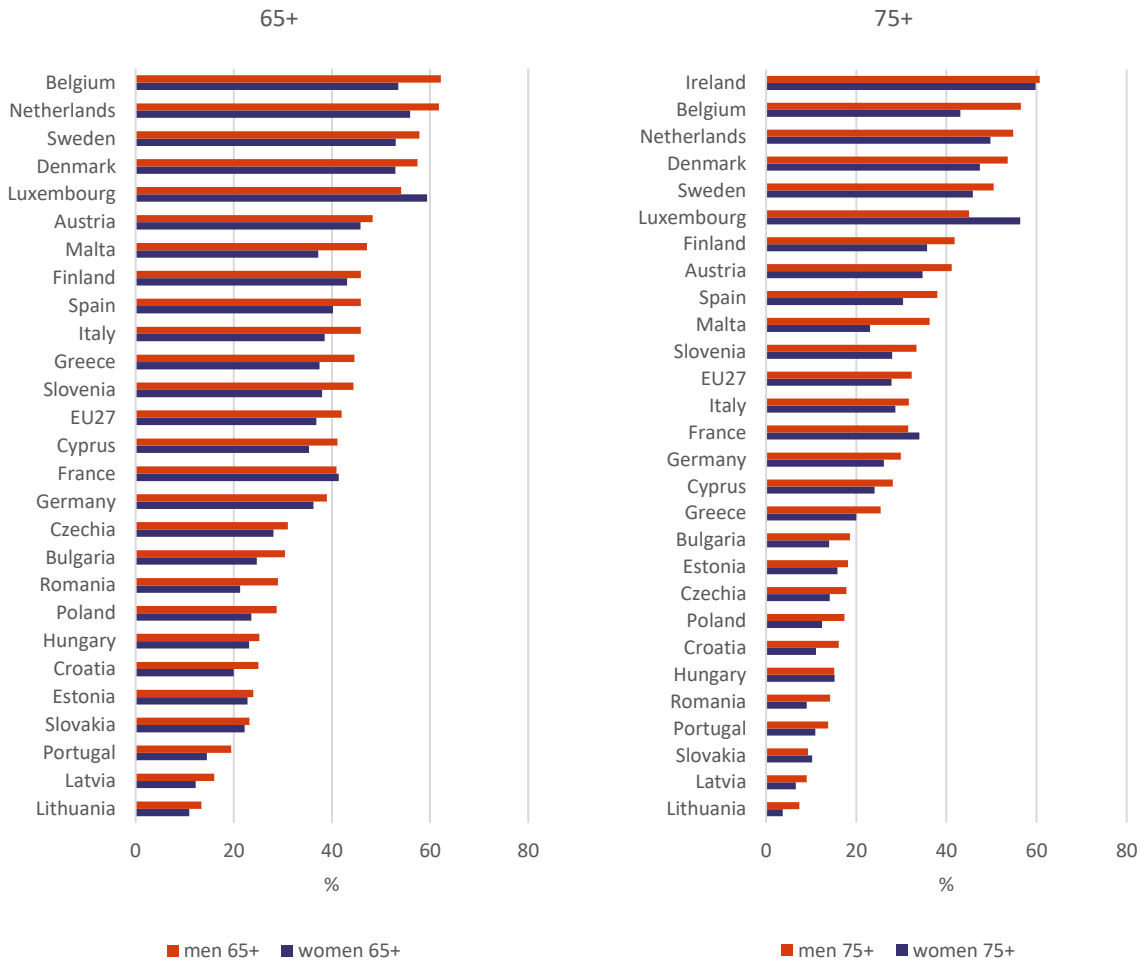


Source: Eurostat (EU-SILC).

- As individuals age, they encounter a range of health-related challenges beyond the onset of chronic diseases and their effects on physical health. For example, older adults are significantly more vulnerable to accidents at home. In 2019, 3.5% of the EU population reported home accidents resulting in injury, but this rate doubled to 7% among those aged 75 and older (Eurostat, EHIS). Mental health challenges also increase with age: major depressive symptoms were reported by 4.4% of individuals aged 75 and older, compared to 2.7% of the total population. Furthermore, in 2022, fewer people aged 75 and above reported feeling happy in the previous four weeks compared to the overall population (Eurostat, EU-SILC).
- With increasing life expectancy and the prevalence of chronic diseases, multi-morbidity—defined as the coexistence of multiple health challenges or disabilities—has become increasingly common. Multi-morbidity is strongly linked to age, with its prevalence rising to 30% among individuals aged 45–64 years, increasing further to 65% in those aged 65–84, and becoming almost universal (82%) among individuals aged 85 or older (Barnett et al., 2012; Fortin et al., 2006). This complexity

significantly amplifies care needs, particularly when clusters of conditions, such as those involving mental health disorders, result in more severe functional limitations and increased healthcare costs (Tang et al., 2020; Sheridan et al., 2019). Traditional medical approaches to multi-morbidity often prioritize the treatment of dominant conditions. However, there is growing recognition of the need for patient-centred approaches in long-term care that address the variability in conditions, their severity, and their unique impact on individuals' quality of life.

Figure 2.7. Share of population reporting excellent/very good health, 2022

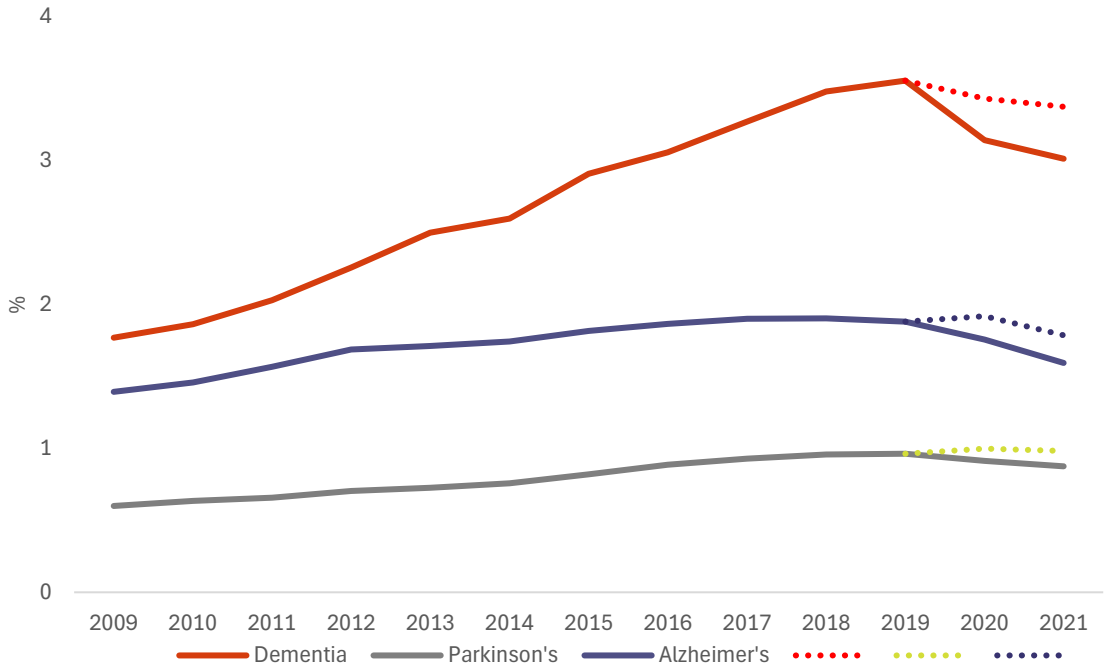


Source: Eurostat (EU-SILC).

- Another significant health challenge in ageing societies is the decline in cognitive abilities, particularly the growing prevalence of dementia. Dementia is a distinct condition, not solely linked to the normal ageing process, though age remains its most significant risk factor. It encompasses a spectrum of diseases and injuries that impair cognitive functions, manifesting with varying degrees of severity. While it can occur at any age, dementia is more commonly associated with older individuals. Among the various forms of dementia, Alzheimer's disease is the most prevalent, accounting for over 60% of all cases (WHO, 2022). Addressing dementia requires specialised approaches, given its profound impact on individuals, families, and healthcare systems alike.

- Across Europe, fatalities linked to dementia and diseases of the nervous system have been steadily increasing (Figure 2.8). Notably, after 2020, the proportion of deaths attributed to dementia, Parkinson's disease, and Alzheimer's declined. However, this decline is primarily attributed to a rise in overall mortality during the COVID-19 pandemic, which increased the denominator rather than indicating a decrease in the prevalence or impact of these conditions.

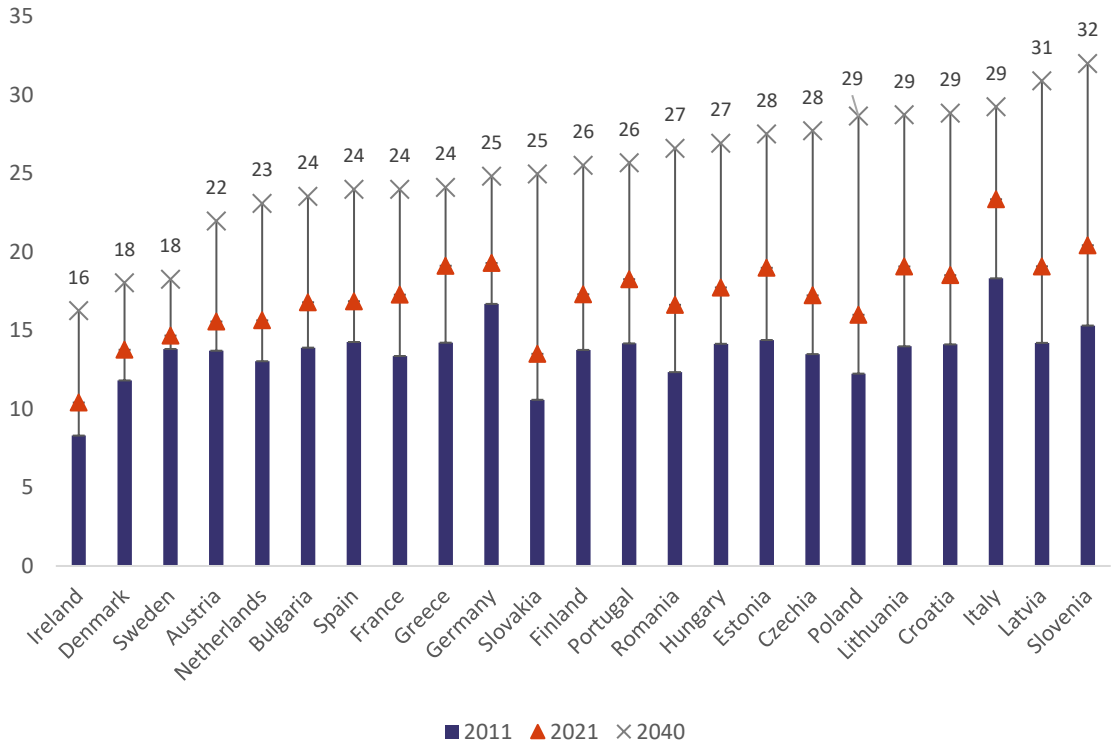
Figure 2.8. Mortality due to dementia, Parkinson's, and Alzheimer's (% of total mortality), 2009-2021



Source: Eurostat and authors' calculations. Note: The dotted lines exclude fatalities due to Covid-19 after 2020.

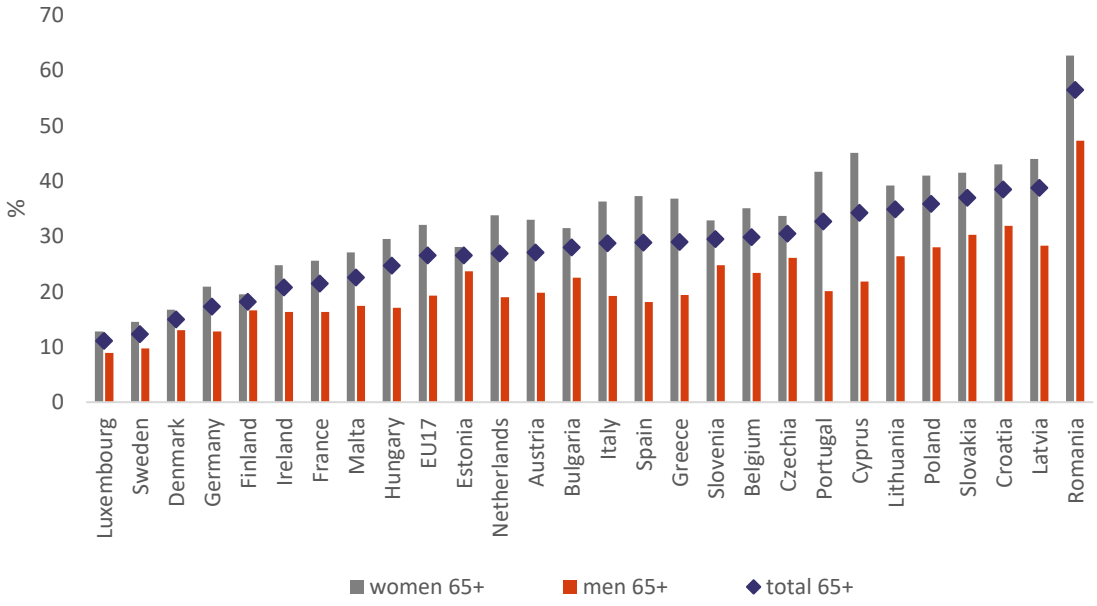
- The future prevalence of dementia is typically estimated using models that incorporate dementia risk factors along with other variables such as educational attainment (Nichols et al., 2022; OECD, 2023). According to OECD estimates, EU countries with a significant proportion of older individuals—such as Italy, Germany, Greece, and Slovenia—had the highest dementia prevalence rates in 2021. Projections for 2040 indicate a sharp rise in dementia prevalence across the EU, with countries like Slovenia, Latvia, Italy, and Croatia expected to face particularly high rates (Figure 2.9).
- Although longevity as such does not automatically trigger the need for care, the combination of dementia and related diseases, along with other chronic conditions, contributes heavily to the rising demand for long-term care.
- In 2019, 32% of individuals aged 65 or over across the EU reported severe difficulty with personal care or household activities. However, the need for long-term care varies significantly among European countries. Within the age group 65+ and over, the range spans from 20% in Sweden to 67% in Romania, according to the latest data from the European Health Interview Survey (EHIS). These differences can be attributed not only to variations in health status but also to the fact that responses to self-reported variables may vary between countries due to cultural differences.

Figure 2.9. Dementia prevalence (per 1,000 population), 2011, 2021 and 2040



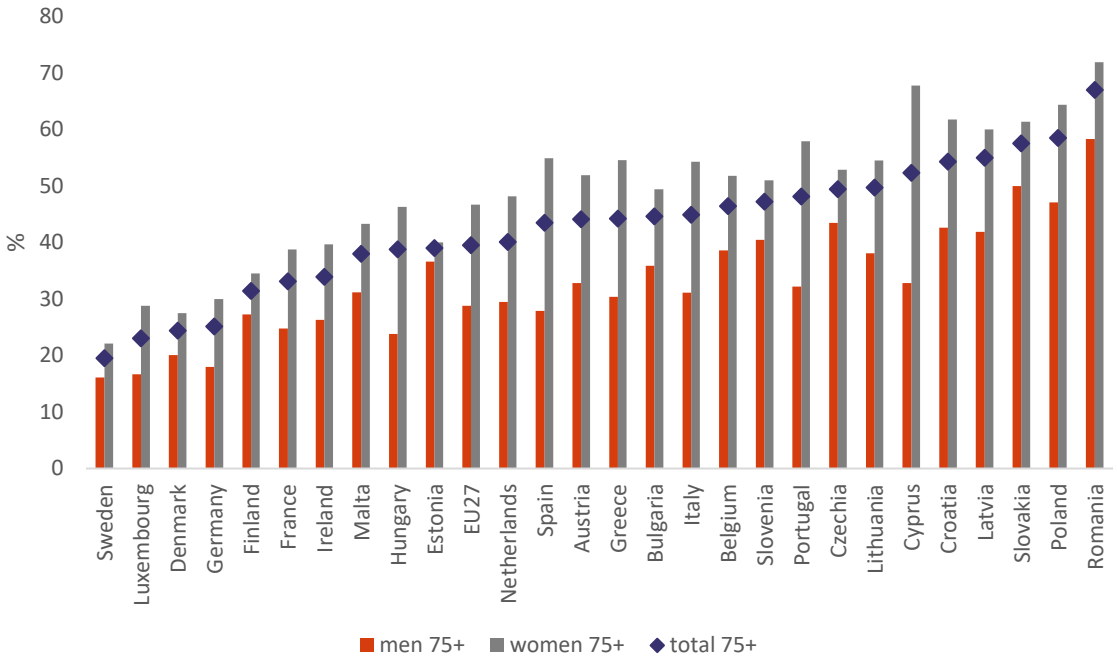
Source: OECD, Health at a Glance 2023. Note: No data for Cyprus, Malta, Belgium and Luxembourg.

Figure 2.10. Share of people aged 65+ with a severe level of difficulty with personal care or household activities, 2019



Source: Eurostat (EHIS).

Figure 2.11. Share of people aged 75+ with a severe level of difficulty with personal care or household activities, 2019



Source: Eurostat (EHIS).

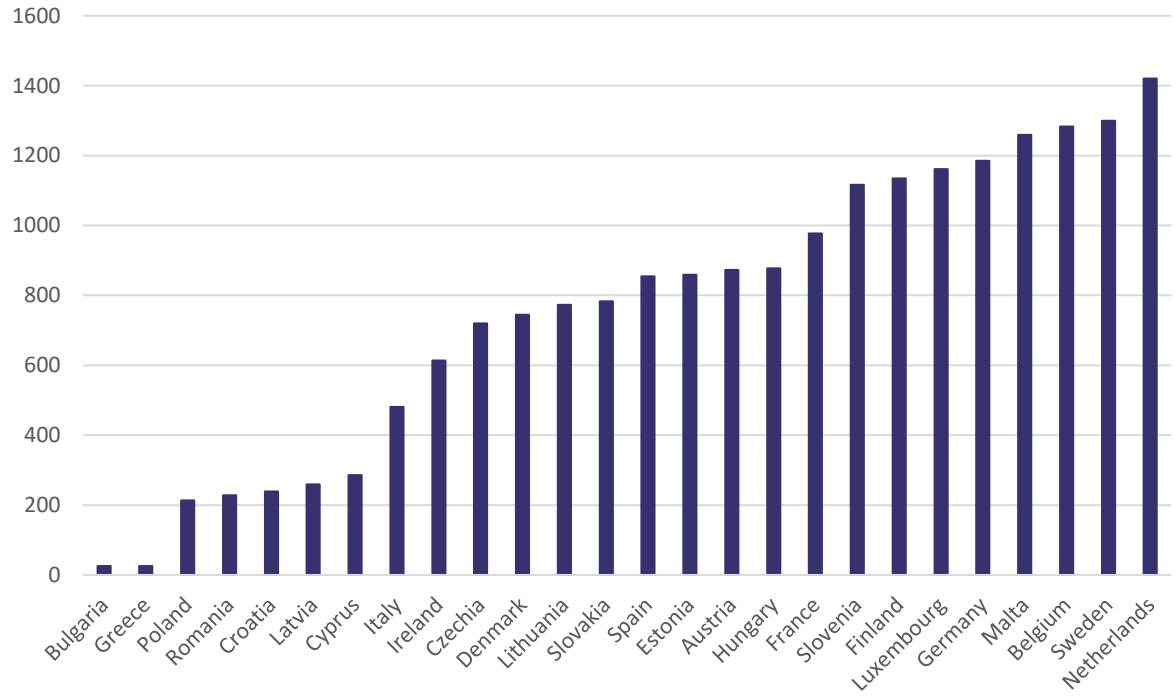
Chapter 3
Long-term care services

- Long-term care (LTC) services in Europe include a wide range of support measures for individuals with chronic illnesses, disabilities, or age-related LTC needs. However, there is considerable heterogeneity in how these services are governed, structured, financed and delivered across EU Member States. Some countries have established exceptionally integrated LTC systems, ensuring a clear governance framework and coordinated service delivery. In contrast, others rely on fragmented provision that spans multiple social support systems, including health care, social insurance, social protection, disability, housing assistance, family policies, and even educational support. This diversity reflects not only differences in policy priorities but also different historical approaches to welfare systems in a broader sense.
- The governance of LTC systems often involves multiple jurisdictions, leading to further complexity. In many countries, LTC oversight is shared between ministries, typically the Ministry of Health and the Ministry of Labour or Social Affairs, although other ministries or entities may also play a role. Significant responsibilities may rest with local administrations, particularly in countries where local authorities are tasked not only with service provision but also with revenue collection through taxes and fees to fund these services. This decentralization can result in varied service quality and accessibility within countries, depending on local fiscal and service capacity, potentially exacerbating regional inequalities in LTC provision.
- Despite generalised efforts to expand LTC services, significant disparities persist between EU countries in terms of the level and the sources of funding, and priorities regarding the mix of residential, community-based, and home care services. Typically, countries with well-developed and well-funded LTC systems often have higher coverage and a mix of service types. In contrast, underfunded or underdeveloped systems exhibit characteristics such as delays in the deinstitutionalization of care, an over-reliance on informal care with high indirect social and economic costs, high levels of unmet needs, and accessibility and affordability barriers.
- The heterogeneity of LTC systems, combined with the unclear boundaries between LTC and other sectors, has long complicated efforts to gather consistent and comprehensive statistics on service availability and performance. Available data remains exceptionally limited and often fails to capture the full scope of LTC provision across the EU.
- The number of places in nursing and residential LTC facilities per 100,000 inhabitants (Figure 3.1) reveals a significant variation among countries in 2022. At the lower end of the distribution, Bulgaria (25 places per 100,000) and Greece (26 places per 100,000) are identified as countries with notably low residential care capacity. In contrast, capacity in the Netherlands (1,420 places), Sweden (1,299 places), and Belgium (1,283 places) indicates more developed LTC systems.
- Figure 3.2 examines the correlation between LTC beds per 100,000 inhabitants and LTC spending as a percentage of GDP across EU countries. The resulting correlation coefficient of 0.8

demonstrates a strong positive relationship, suggesting that higher levels of LTC spending are closely associated with greater capacity in residential care services.

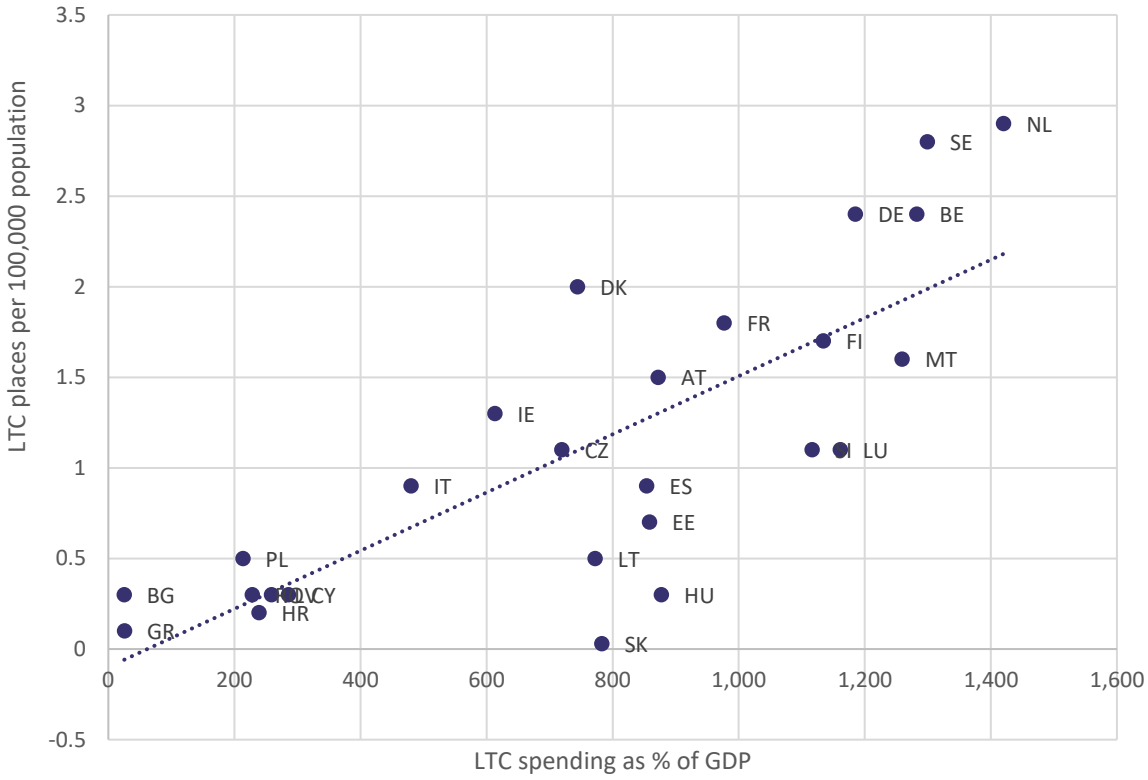
- However illustrative, these indicators do not reflect broader developments in home or community-based care for which data are unavailable. To address these limitations, information from the European Commission's 2021 Long-Term Care Report was collated. The report provides detailed country LTC profiles and offers a valuable snapshot of LTC systems in each Member State. Using these profiles, a comprehensive table was compiled summarizing the key characteristics, strengths, and weaknesses of LTC systems across the EU which can serve as a foundation for conceptualizing differences in service availability and quality across the EU (Table 3.1).

Figure 3.1. Places in nursing and other residential long-term care facilities (per 100,000 inhabitants), 2022



Source: Eurostat.

Figure 3.2. Scatter plot: Association between LTC capacity in care homes and LTC spending in EU countries (2022)



Source: Eurostat.

Table 3.1. Overview of Long-Term Care Systems and Services in EU Member States

Country	Key characteristics	Strengths and notable practices	Main weaknesses	Spending (% of GDP), 2022
Belgium	Fragmented governance structure between federal and regional levels. Financing through social contributions, subsidies from general and earmarked taxation	(i) Deinstitutionalization, (ii) Recent reforms for healthcare professionals, (iii) Other reforms (assessment tools, recognition of informal caregivers etc.), (iv) *"overall a well-developed system of social protection for older people in need of LTC"*	(i) Regional disparities are the main issue, (ii) Accessibility can improve for some benefits (e.g., in cash disability benefits)	2.4% (high)
Bulgaria	Services split between LTC health and LTC social (regulated by different bodies and legislation)	(i) Deinstitutionalization/ increase of community-based care, (ii) Recent increases in spending, (iii) Comprehensive reforms launched in 2019	(i) Low coverage of benefits, (ii) Affordability issues, (iii) High reliance on informal care	0.3% (low)
Czech Republic	Responsibility strictly divided between the healthcare and the social care sectors	Recent increases in spending	(i) System inflexible and fragmented, (ii) Insufficient capacity of home services, (iii) Low bed capacity, (iv)High reliance on informal care, (v) High OOP costs	1.1% (moderate)

Denmark	LTC is organised at the municipal level. Services delivered by public and private providers, mainly free of charge. Financing through general taxation	Emphasis on (i) deinstitutionalisation, (ii) Quality, (iii) Independence of people in need of care), (iv) "*system amongst most universal and comprehensive in the world*"	(i) De facto retrenchment ("*the level of provision has remained stable, but the number of older people has increased"*), (ii) Needs assessment has become stricter, (iii) High waiting times in some municipalities	2% (high)
Germany	Heavy reliance on social insurance through compulsory contributions. Other needs covered through OOP, informal care or social assistance	(i) Eligibility of benefits extended recently, (ii) Recent reforms aimed at increasing the attractiveness of care professions and quality	(i) High demand due to rapid ageing and personnel shortages, (ii) High private burden for those lacking insurance, (iii) Issues of quality	2.4% (high)
Estonia	Organisational fragmentation between the state and local governments. Financing mainly from municipalities through taxation and supplemented by the central government	Recent investments and modernisation in LTC infrastructure	(i) Uncoordinated and fragmented public provision, (ii) Regional disparities, (iii) High reliance on informal care, (iv) Limited supply of home-based services	0.7% (moderate)

Ireland	LTC provision mainly organised in terms of income support (strongly centralised) and health/care service-related provisions (under the health system). Home care dominated by informal caregiving	Several reforms already implemented and others in the pipeline	(i) Home-based services not regulated, (ii) Over-reliance on informal care, (iii) Regional and socioeconomic disparities, (iv) Upward pressures in terms of needs	1.3% (moderate)
Greece	No comprehensive formal LTC system or universal coverage. Quasi-system of services (mainly through disability benefits and limited residential and home-based care). Excessive reliance on families for practical and financial support of persons with LTC needs	Recent expansion of services through EU co-financing	(i) No comprehensive LTC policy, (ii) Over-reliance on informal care, (iii) High unmet needs for care	0.1% (low)
Spain	Medium coverage, mainly financed by general taxation, with informal care still playing a significant role. Universal coverage	Current system emerged in 2007 after a comprehensive reform aimed at universal coverage and an extensive role for the local government	(i) Limited home care and community-based services (ii) Regional disparities, (iii) Over-reliance on informal care (female-dominated and time-intensive)	0.9% (moderate)

France	Mixed model combining public and family care provision. Several levels of government involved. Wide range of funding (mixed system).	Significant ongoing public investment in LTC and a wide range of services	(i) Access and affordability issues), (ii) Fragmentation, (iii) Difficult working conditions and qualification barriers	1.8% (high)
Croatia	Benefits and services are fragmented and accounted for as parts of the social care, healthcare, and war veterans' systems. Low level of spending	Quality standards mandatory for all providers since 2014	(i) Insufficient provision of fragmented services, (ii) Low transparency in terms of needs assessment, (iii) Significant regional and socioeconomic disparities, (iv) Workforce shortages	0.2% (low)
Italy	LTC organised around two main pillars: cash transfers and services. System strongly based on informal care and migrant care workers	The country is willing to invest in LTC (currently the level of spending is not low)	(i) Need to improve quality assurance (half of the expenditure absorbed by the Companion Allowance with no beneficiary accountability on how it was used), (ii) Over-reliance on informal care and migrant work (precarious and difficult working conditions), (iv) Access issues	0.9% (moderate)

Cyprus	No comprehensive LTC scheme of universal coverage. Shared jurisdiction between Ministries of Health and Labour, Welfare and Social Insurance. Policies financed through general taxation, but level of spending is too low	Some positive reform steps taken in recent years	(i) Very low coverage, (ii) Issues of availability and affordability, (iii) Very high care burden on informal carers	0.3% (low)
Latvia	Horizontal sharing of responsibilities between the healthcare and social care sectors. LTC services are generally underfinanced and depend on the financial capacity of users themselves and on municipal budgets, which vary greatly within the country	(i) Developing alternatives to residential care by encouraging homecare, (ii) Professionals are, in general, highly qualified	(i) Low level of spending, (ii) Regional and socioeconomic disparities, (iii) Issues of quality	0.32% (low)

Lithuania	Shared responsibility between Ministries of Social Security and Labour and Health. Formal public care services predominate, growing involvement of NGOs. Private market in the early stage of development. Informal caregiving important	LTC sector is a developing and expanding area with home care growing	(i) Regional disparities in the availability of home care, (ii) Low attractiveness of care work, (iii) Low support for informal caregivers, (iv) Need to expand quality assurance to include qualitative indicators	0.5% (moderate)
Luxembourg	System based on compulsory LTC insurance and financed through social contributions, the state budget and an energy fee paid by the biggest electricity consumers	(i) Preference for homecare over residential care (iii) Preference for in-kind benefits over cash benefits (iv) Continuity in LTC	(i) Some small gender gaps in poverty rates after OOP payments, (ii) Individuals with low needs excluded due to efficiency reasons	1.1% (moderate)
Hungary	Dual structure of healthcare and social care with an emphasis on institutional care. Access to healthcare is based on insurance, and access to social care is based on needs	Rapid extension of home care between 2008 and 2014	(i) System based on institutional care for the most part, (ii) Home care financed OOP/ issues of affordability, (iii) Needs for LTC distributed unequally according to socioeconomic status	0.3% (low)

Malta	Mixed system of care involving state, church and private institutions. System managed centrally due to the country's size. Universal coverage	Long-standing tradition prioritising community-based and home care	(i) Provision (public and private) not enough to meet demand, (ii) Affordability for home care can be improved	1.6% (high)
Netherlands	Complex and fragmented system providing extensive rights to those in need. Variety in terms of organisation, financing and provision	Focus on (i) Quality, (ii) Community involvement, (iii) Financial sustainability, (iv) Longer independent living and (v) Access for the most vulnerable	(i) Long waiting lists for residential care, (ii) Workforce shortages	2.9% (high)
Austria	Mix of LTC cash benefits and services. Responsibilities split between the federal and the regional levels. LTC cash benefit is universal and financed through general taxation	(i) Wide variety of services and high level of spending, (ii) Recent reforms to address labour shortages and to improve working conditions	(i) Regional disparities in terms of availability and affordability of services, (ii) Coordination could be improved	1.5% (high)
Poland	LTC benefits in separate legal regulations in the health and social sector. A variety of financing sources and management structures in effect	Recent initiatives to support local authorities in providing services	(i) Regional disparities in the availability of home care, (ii) Long waiting times for residential care	0.5% (moderate)

Portugal	Integrated health and social care under a unified network including different types of services. Coordination between central and local government, non-profit organisations and the private sector. LTC system financed through general taxation	(i) Very high usage rates for services, (ii) Recent approval of a formal status for informal carers	(i) Persisting issues of affordability and access, (ii) Over-reliance on informal care	0.5%(moderate)
Romania	No specific LTC insurance scheme: different social protection schemes target different groups, which sometimes overlap. Principle of subsidiarity between central and local authorities	Recent programmes for financing through the state budget of community-based services	(i) Fragmented provision (ii) Lack of a more general cash/in-kind support, especially for informal carers of older people, (iiI) Unavailability/ inequality in the availability of services, (iv) Services biased towards residential care	0.3% (low)

Slovenia	No uniform LTC system or definition of LTC. Services provided within different social protection systems: health care, social care system, parental care, pension, educational and disability care. Services mainly financed through social contributions.	A variety of benefits that could be classified as LTC	(i) Fragmented and segmented needs assessment procedures, (ii) Lack of policy coordination (ii) Unequal financing of the same needs, (v) Insufficient supply of home-based services and long waiting times for residential care, (vi) System financially unsustainable	1.1% (moderate)
Slovakia	LTC relies heavily on informal care. In formal care, residential care prevails, and responsibilities are split between the social and the health sector. Services financed through general taxation at the national level and by fees levied at the local level	(i) Quality an object of systematic action by the government, (ii) Recent reforms increasing support for caregivers	(i) Lack of coordination between the social and health care sector, (ii) Low capacities of home care/residential and nursing care services, and (iii) Very low level of spending on LTC, (iv) Over-reliance on informal care	0.03% (low)

Finland	Legally mandated universal LTC care. LTC in-kind services provided by municipalities. Cash benefits provided by municipalities, the Social Insurance Institution and the Tax Authorities	(i) Universal system, (ii) Care personnel well-trained	(i) Some municipalities face more difficulties in financing and delivering LTC services, (ii) Staff shortages increasing	1.7% (high)
Sweden	LTC system is decentralised, and the municipalities have the main responsibility for institutional and home care. LTC is universal, tax-financed, public spending high and OOP spending is relatively low.	(i) System is considered "comprehensive" with good coverage, (ii) Home care services are most common and include a variety of services and activities	(i) Eligibility criteria, services and sustainability vary locally, (ii) Some cuts in coverage have resulted in higher family involvement and pure market-based solutions, (iii) System of needs assessment has been debated	2.8% (high)

Source: Information collated from the 2021 Long -Term Care Report, jointly prepared by the Social Protection Committee (SPC) and the European Commission (DG EMPL), country profiles and Eurostat (on LTC spending levels). Note: Spending levels are classified as low (<0.5% of GDP), moderate (0.5–1.5% of GDP), and high (>1.5% of GDP), based on 2022 data.

- This comparative exercise reveals significant diversity in governance, service provision, funding, and system maturity. High-performing systems, such as those in Sweden, the Netherlands, and Belgium, are characterized by substantial public investment, universal coverage, and a well-developed mix of residential, community-based, and home care services. However, even these systems face challenges, including regional disparities, workforce shortages, and waiting times for services. Conversely, countries like Bulgaria and Greece face the limitations associated with underdeveloped LTC systems, marked by minimal public spending, a heavy reliance on informal care, and high unmet needs. Countries with moderate LTC development, such as Ireland and Spain, are characterized by complex governance structures, regional disparities, and limited service capacity while making incremental improvements. Disparities are further compounded by fragmentation between social, health, and other support systems, emphasizing the importance of integrated policy approaches.

- The quality of services provided emerges as another crucial element with heterogeneity evident also in terms of the regulatory frameworks governing service standards. Quality assurance in LTC has become an increasingly important issue, due to the rising involvement of private providers in service delivery.

- Principle 18 of the European Pillar of Social Rights (EPSR) states that "Everyone has the right to affordable long-term care services of good quality, in particular home care and community-based services". The incremental development of LTC systems, therefore, goes hand in hand with the creation of regulatory frameworks. However, compared to, for instance, the health system, there is still a general lack of definitions, rules and regulations to define which structures and processes should be in place to produce which outcomes for persons in need of LTC. With the sector's growth under conditions of New Public Management (NPM) and the rising number of private (for-profit) providers, it can be observed that the governance of LTC services has resulted in the introduction of structures and processes that help define, monitor and ensure the quality of these services. In the context of quasi-markets of LTC services in which public, private non-profit and private for-profit providers compete for 'customers' and public funding, it has been necessary to introduce standards and service specifications that equally apply to all suppliers.

- Structures would entail the establishment of dedicated quality assurance bodies such as VALVIRA in Finland (https://valvira.fi/en/healthcare-and-social-welfare) or HIQA in Ireland (https://www.hiqa.ie/), integrating accreditation, inspection and monitoring, but generally legislation and guidance are with the responsible national (or regional) ministries, while inspection remains a responsibility of regional or local authorities (Table 3.2). Austria is one of the first countries where a national quality certificate has been established, though for nursing homes only and on a voluntary basis. Notably, many providers have introduced their own

quality management system (often responding to related accreditation requirements) that might include third-party certification.

Table 3.2. Quality assurance bodies and their responsibilities in selected European countries

Country	Quality assurance bodies	Responsibilities			
		Accredi-tation	Inspec-tion	Certifi-cation	Moni-toring
AT	Federal Ministry for Social Affairs, Health, Care and Consumer Protection (Voluntary National Quality Certificate Agency)			✓	
	Regional governments with individual regulations, standards and procedures (inspections)	✓	✓		
BE	Brussels: IRISCARE	✓	✓		
	Flanders: Agency for Care and Health	✓	✓		
	Wallonia: AVIQ – Agency for Quality of Life	✓	✓		
CR	Ministry of Labour, Pensions, Family and Social Policy		✓		
DK	Ministry of Health and the Elderly (quality framework)				✓
	Local authorities		✓		
	Danish Patient Safety Authority	✓			✓
FI	Ministry of Social and Health Affairs				✓
	Institute of Health and Welfare (quality standards, national data)				✓
	VALVIRA – National Supervisory Authority of Welfare and Health				✓
	Regional State Administrative Agencies		✓		✓
	Municipalities (local supervision)	✓	✓		

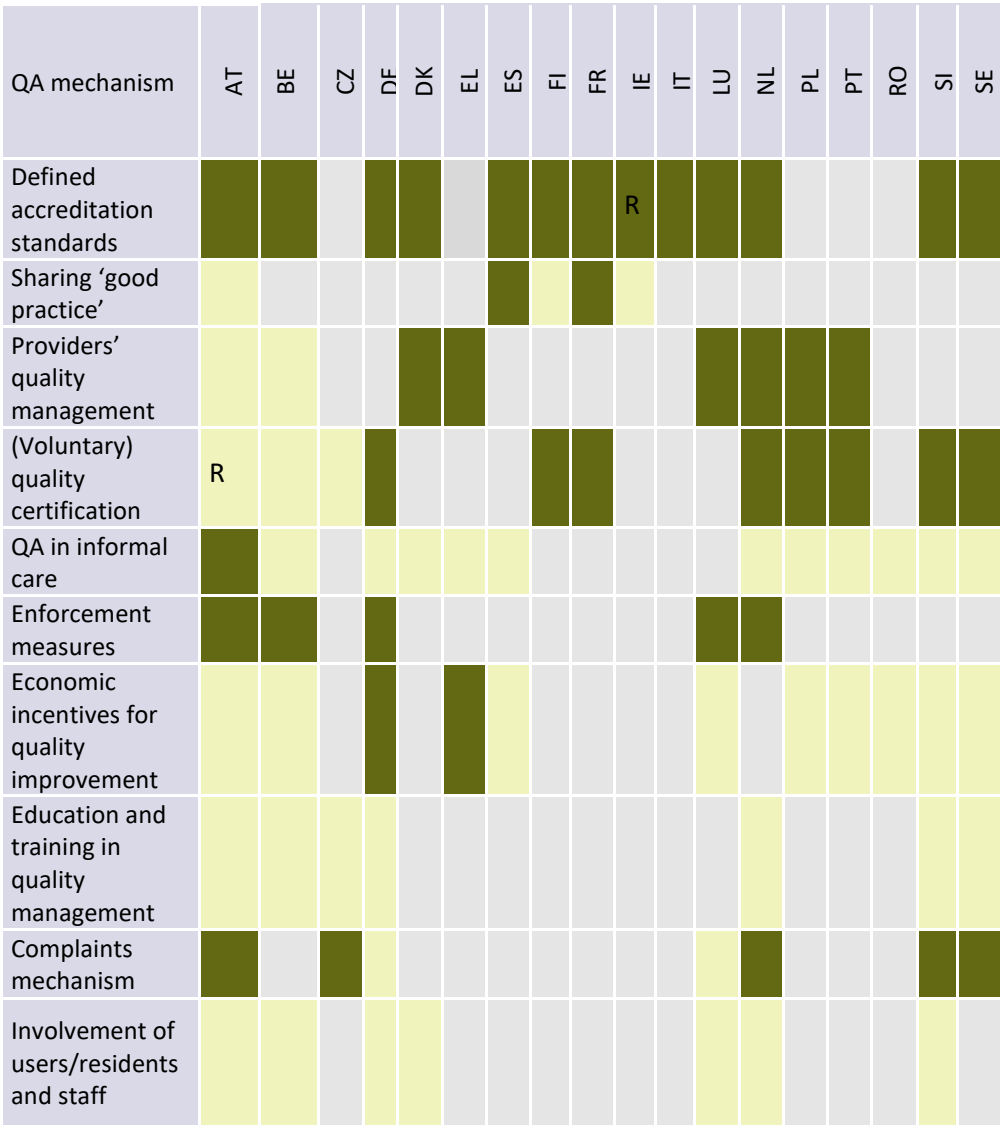
FR	High Authority of Health (HAS), including the National Agency for Quality Assessment of Social and Medico-Social Care Institutions (ANESM)	✓	✓		✓
	Regional Health Agencies (health)		✓		
	Audit commission (financial control)		✓		
	Inspectorate-General for Social Affairs (social care)		✓		
DE	Medical Review Board of the Statutory Health Insurance Funds' Federation	✓			✓
	Medical Review Boards of the Statutory Health Insurance Funds (regional)	✓	✓		
	Regional authorities (structural, hygiene and safety standards)		✓		
IE	HIQA – Health Information and Quality Authority	✓	✓		✓
IT	National Agency for Regional Health Services				✓
	Regional Agencies for Social and Health Services	✓	✓		
LV	Methodological Management and Control Department of the Ministry of Welfare		✓		✓
LU	Ministry of Family Affairs, Integration and the Greater Region	✓			
MT	SCSA – Social Care Standards Authority	✓	✓		✓
	Parliamentary Secretariat for Rights of the Disabled and Active Ageing				✓
	National Audit Office (financial audits)		✓		
NL	National Healthcare Institute (care standards for nursing homes)				✓
	Healthcare Inspectorate (standard setting, inspection, public reporting)		✓		✓
	Regional care offices (accreditation and accounting of care providers)	✓	✓		

RO	National Agency for Payments and Social Inspection	✓	✓		✓
SI	Ministry of Labour, Family and Social Affairs		✓		✓
ES	Region of Madrid: Autonomous Community		✓		✓
	Region of Catalonia: UCQEC – Quality Control Unit at the municipal level CatSalut – Catalan Health Service AQUAS – Agency of Health Quality and Assessment of Catalonia		✓ ✓		✓ ✓
	Region of Asturias: Inspection Services of the Regional Ministry of Social Rights and Welfare		✓		
SE	National Inspectorate	✓	✓		

Source: Own elaboration based on ESN, 2021; ESPN country reports. Note: For Spain: selected examples from autonomous regions.

- Processes would be clearly defined procedures for inspection, monitoring and quality improvement that can be gathered from authorisation, accreditation or licensing guidelines that were introduced at national or regional levels. Some of these mechanisms are synthesized in Table 3.3.

Table 3.3. Quality assurance mechanisms in selected European countries



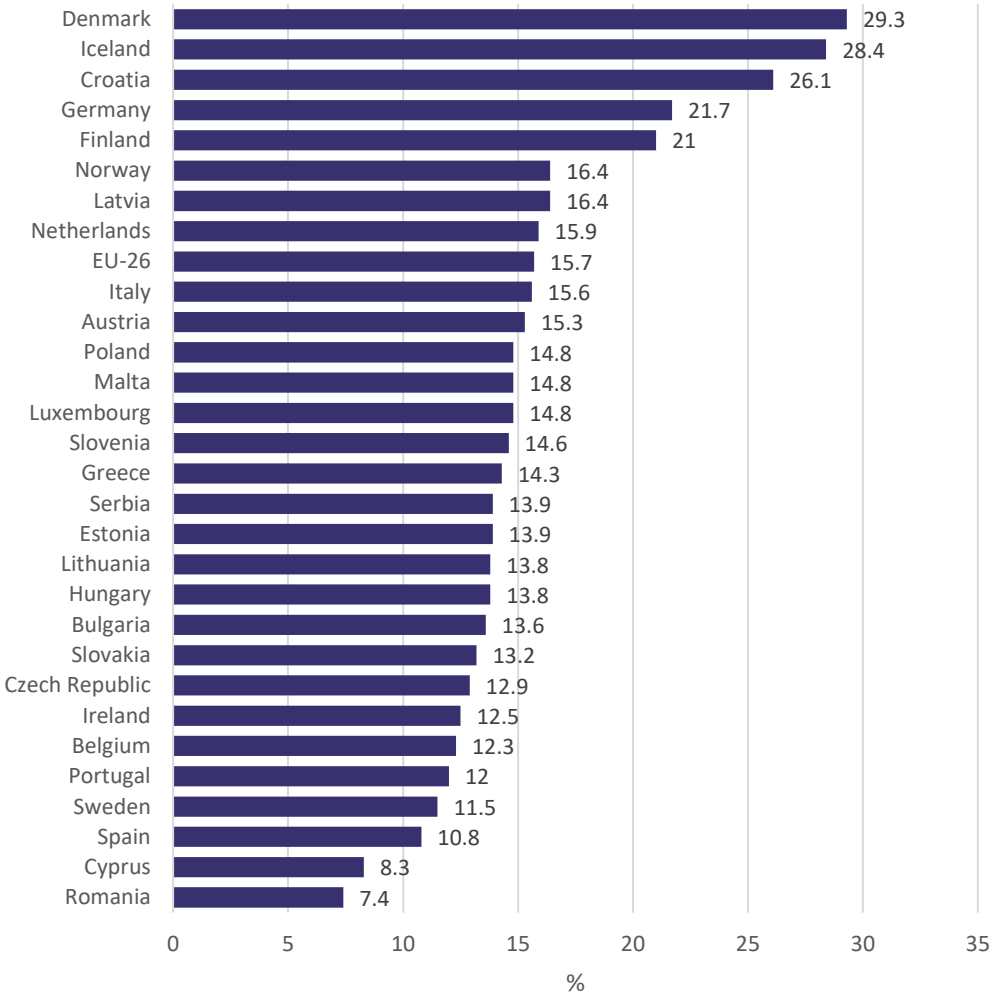
Source: Own compilation based on national reports for SPC (2021b), ESPN country reports (2018/19); Cès & Coster, 2019; Spasova et al., 2018.

Assessment guide: green: fully implemented; light green: partially implemented; Grey: missing or missing information; R = Residential care only.

Chapter 4
Informal care

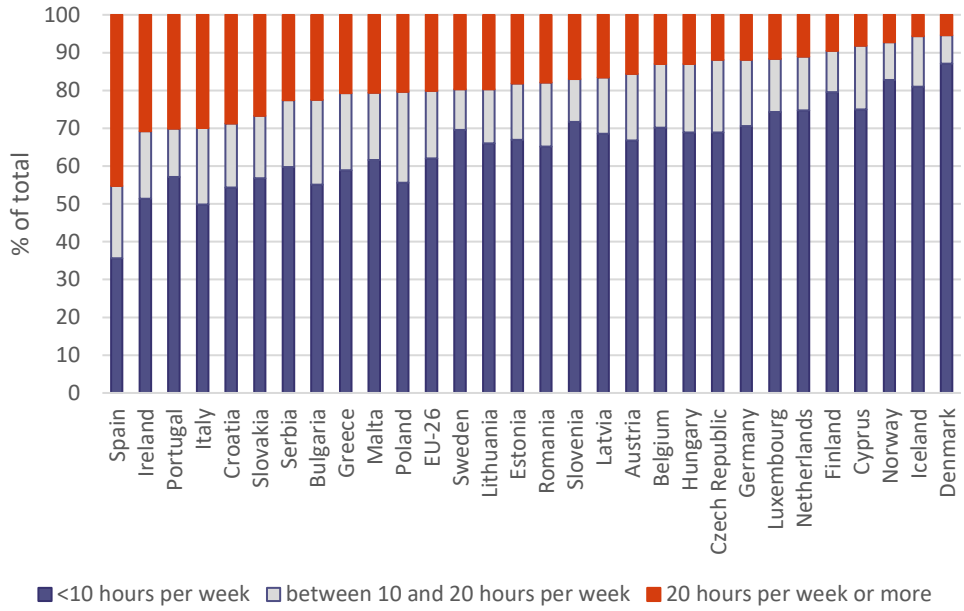
- Informal care is essential in sustaining the social fabric of any society. In addition to easing the pressure on formal healthcare systems, it strengthens community cohesion and family bonds, preserves cultural values, and offers personalised care that is often more attuned to the emotional needs of those in need.
- In 2019, over 15% of the European population provided unpaid care to at least one person experiencing old age, a chronic condition, or infirmity on a weekly basis. The prevalence of informal caregiving varied significantly across countries, with rates as high as nearly 30% in Denmark and Iceland, compared to less than 10% in Romania and Cyprus (Figure 4.1).
- However, this ranking does not account for the intensity of care provided, which can vary significantly. While Nordic countries like Denmark and Iceland have high percentages of caregivers, the intensity of care tends to be lower, with over 80% of caregivers providing less than 10 hours of care per week. In contrast, intensive caregiving – defined as providing at least 20 hours of care per week – is more prevalent in Southern European countries such as Spain, Portugal, and Croatia, as well as in Ireland (Figure 4.2).
- Family ties are the primary reason for providing informal care. Across Europe, more than 80% of informal caregiving is directed towards relatives, while less than 20% is provided to individuals outside the family. The provision of care to non-relatives is relatively higher in countries like Latvia and Greece, at approximately 40% of total informal care (Figure 4.3).
- Informal care is most commonly provided by individuals aged 40-69 (Figure 4.4). Those in the 40-54 age group often balance caregiving with other demanding roles, such as senior professional positions and childcare, which can intensify their caregiving responsibilities. Individuals aged 25-39 also frequently take on caregiving roles, while older caregivers, typically aged 70 and above, often care for their spouses or partners while managing their own physical and mental health challenges.

Figure 4.1. Share of population providing care or assistance to one or more persons suffering from some age problem, chronic health condition or infirmity at least once per week (professional activities excluded), 2019



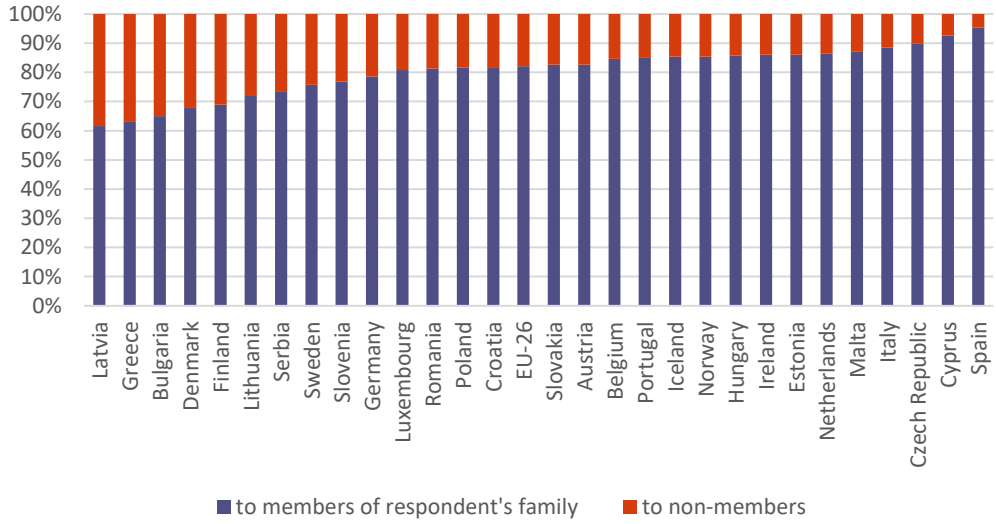
Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Figure 4.2. Number of hours per week (% of total) the respondent provides care or assistance to the person(s) suffering from any chronic condition or infirmity due to old age, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Figure 4.3. Prevailing relationship to the person suffering from any chronic condition or infirmity due to old age being provided with care or assistance at least once a week, 2019

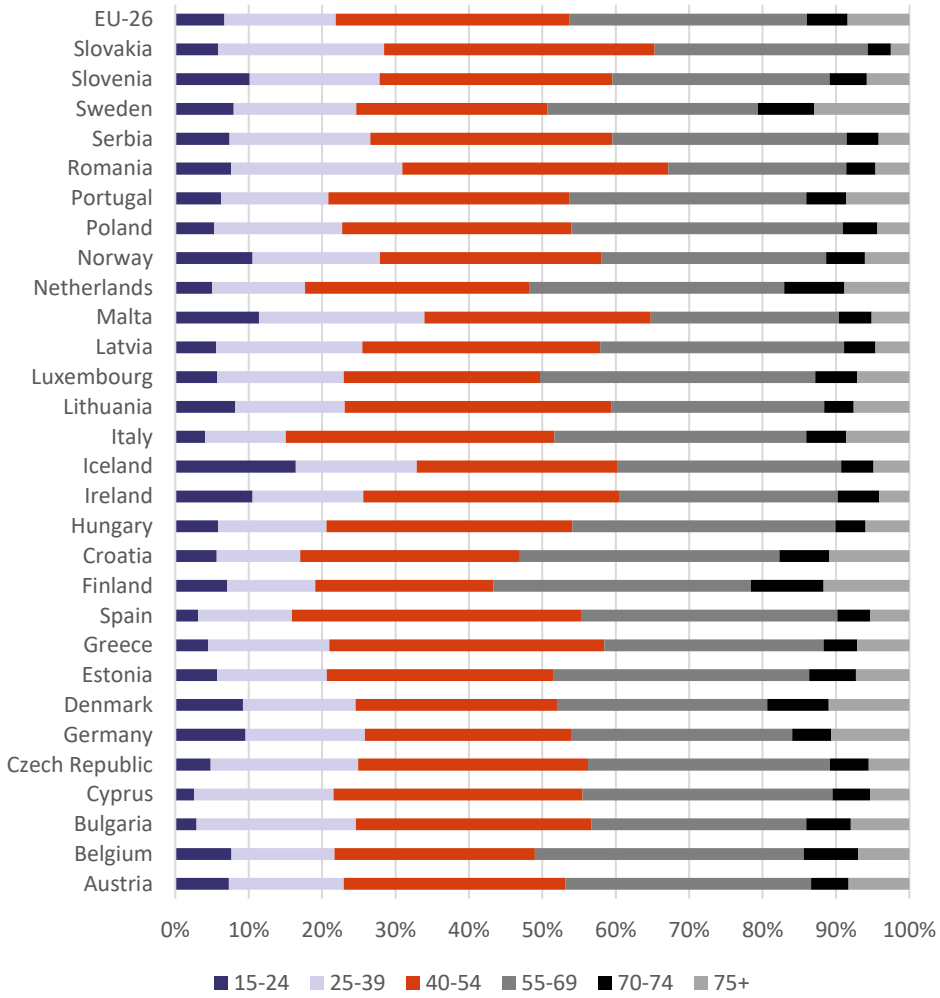


Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

- While less common, young carers form a unique and socially vulnerable group that deserves special attention and support (Kadi et al., 2023). For example, in England, it is estimated that 22% of 11 to 15-year-olds live with someone who has long-term care needs, and 10% of them provide a high to very high level of informal

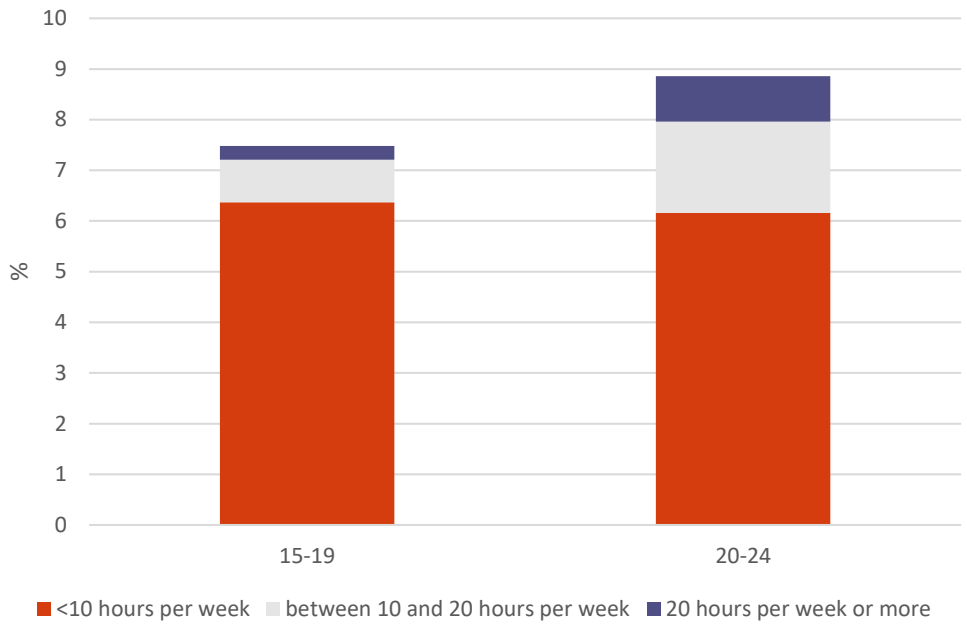
care (Joseph et al., 2019). In the EHIS sample, nearly 7% of all informal carers were aged 15-24, with variations between countries (Figure 4.4). When considering the total number of individuals in their age groups, approximately 8% of those aged 15-19 and 9% of those aged 20-24 across the EU are informal caregivers. While most of the care provided is of lower intensity, a non-negligible portion of these young carers are responsible for medium to high-intensity caregiving (Figure 4.5).

Figure 4.4. Informal caregivers by age group (% of total caregivers), 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

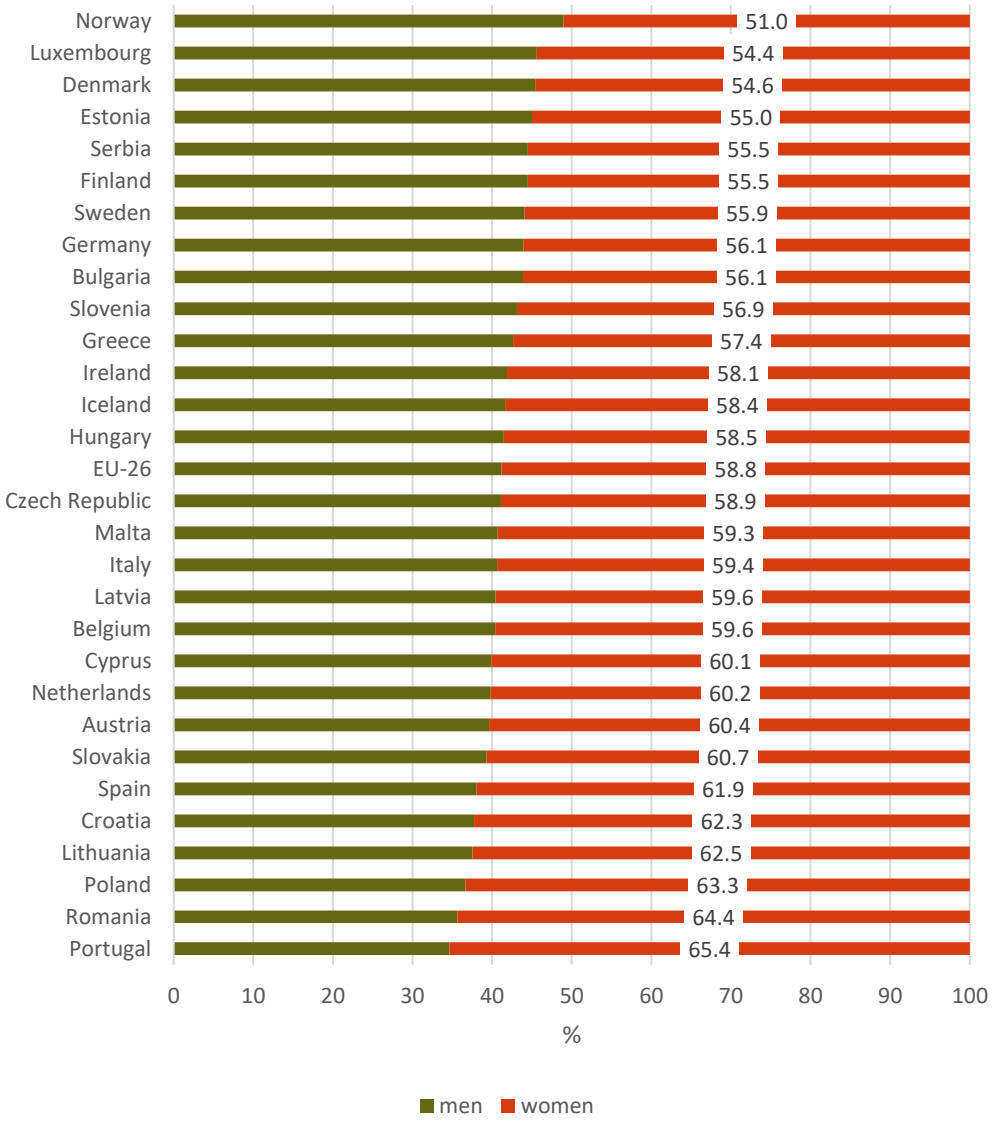
Figure 4.5. Young carers aged 15-19 and 20-24 as a % of their respective age groups, by caregiving intensity, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

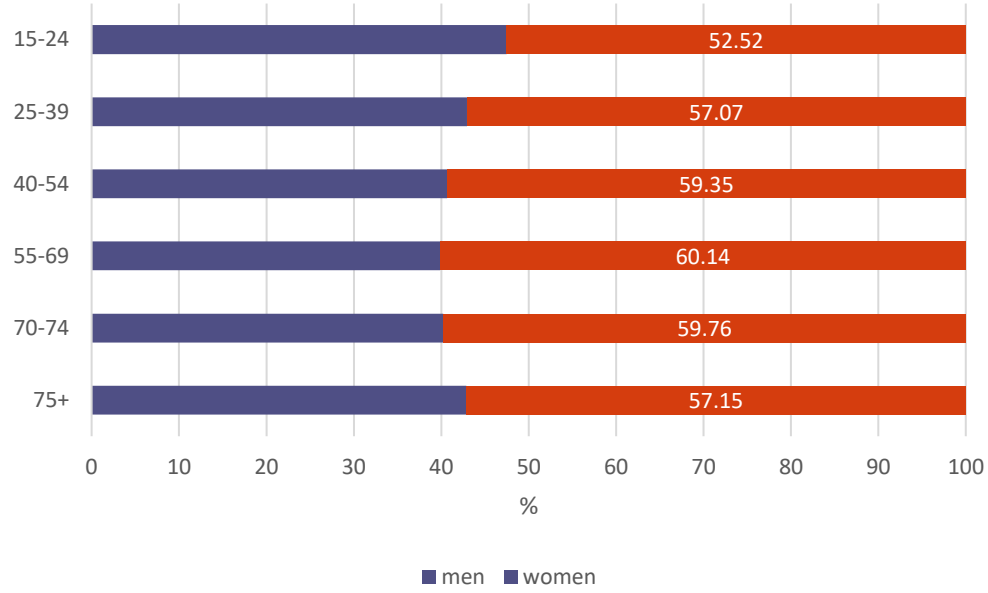
- Informal caregiving is more frequently undertaken by women. Across the EU, approximately 60% of informal care is provided by women, compared to 40% by men. In all EU-26 countries, women consistently make up the majority of caregivers, with the proportion ranging from 51% in Norway to 65% in Portugal (Figure 4.6). While this gender distribution in informal caregiving does not vary significantly by age, young carers (ages 15-24) show a more balanced gender split (Figure 4.7). However, the intensity of caregiving reveals a more pronounced gender dimension: over 66% of individuals providing at least 20 hours of care per week across the EU are women (Figure 4.8).

Figure 4.6. Informal caregivers by gender (% of total caregivers), 2019



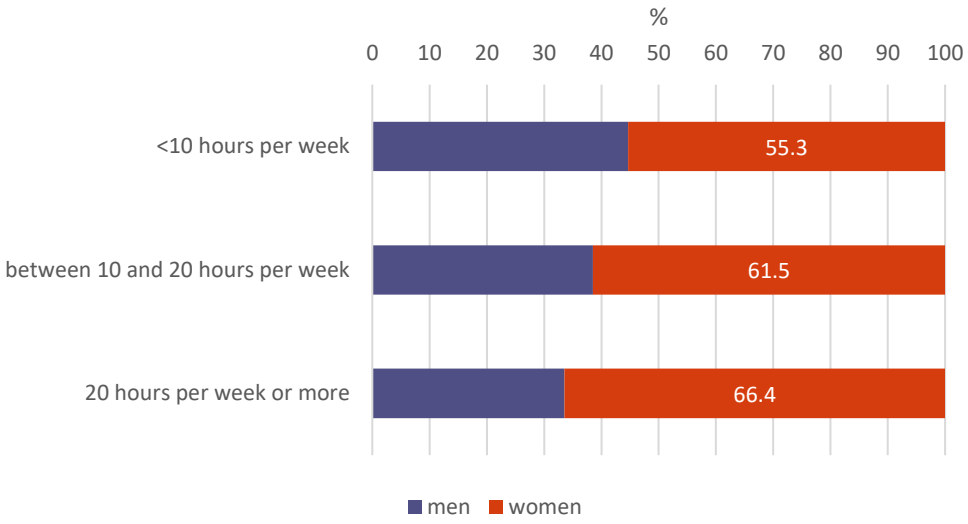
Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Figure 4.7. Informal caregivers by age group and gender (% of total), EU-26, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

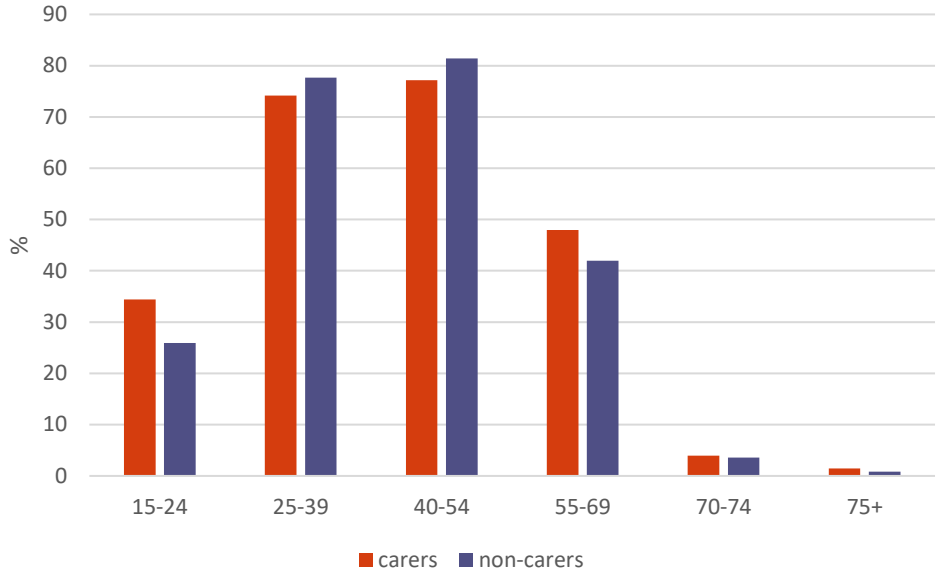
Figure 4.8. Informal caregivers by intensity and gender (% of total), EU-26, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

- Informal care can significantly impact the employment prospects of those providing it. Across Europe, individuals engaged in informal caregiving are less likely to be employed, particularly in age groups traditionally associated with higher productivity. Frequently, however, no significant differences in employment rates between carers and non-carers are observed unless gender and/or caregiving intensity are taken into account (Figure 4.9).

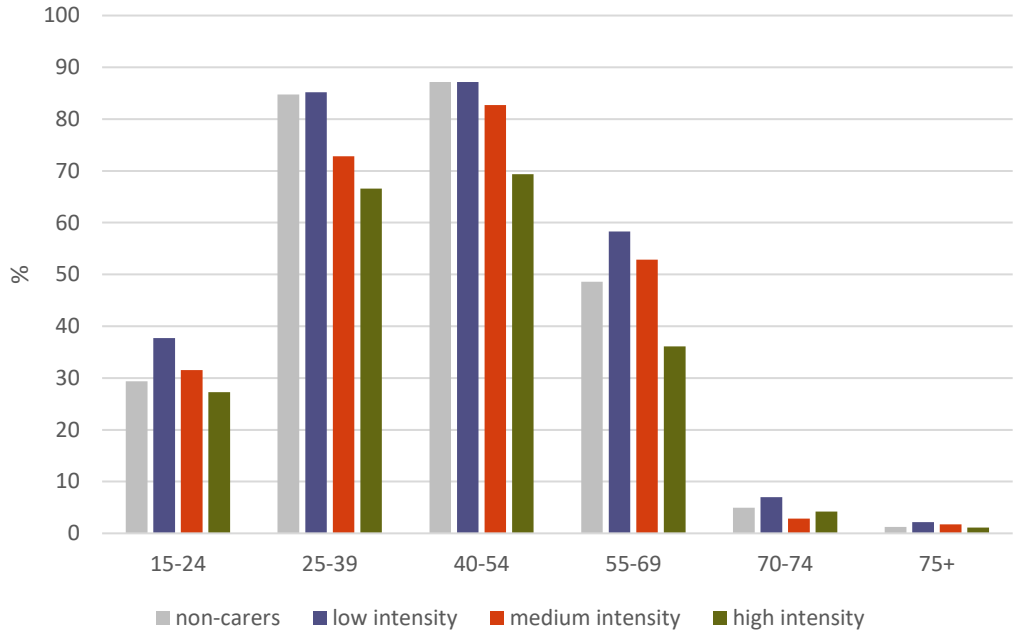
Figure 4.9. Employment rates of carers vs. non-carers, EU-26, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

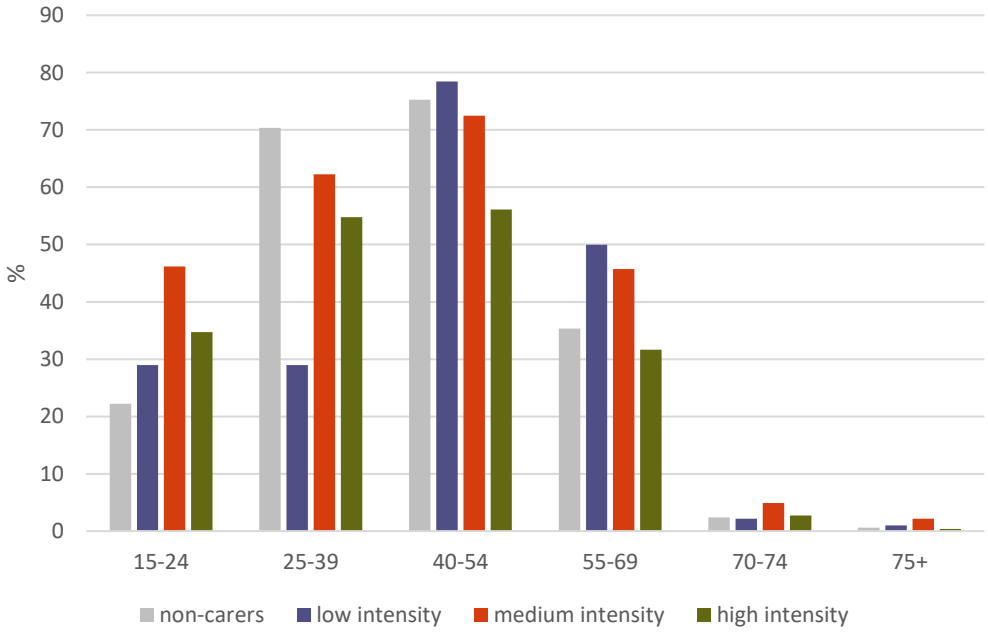
- When considering both gender and caregiving intensity, the disparities in employment rates become more pronounced. For both men and women, providing low-intensity care (less than 10 hours per week) generally does not negatively affect employment across most age groups (Figures 4.10 and 4.11). A notable exception is female caregivers aged 25-39, who show significantly lower employment rates compared to their counterparts in other categories. In contrast, employment rates are notably lower among both men and women providing medium to high-intensity care (more than 10 hours per week) across the three main productive age groups (25-39, 40-54, and 55-69).
- For younger and older carers (aged 15-24 and 70+), the absence of clear employment gradients is likely due to traditionally lower overall employment rates at both ends of the adult age distribution. This is influenced by factors such as enrolment in tertiary education for younger individuals and exit from the labour market due to old-age pensions for older individuals. Focusing on the 40-69 age group—where caregiving is more prevalent—clear employment gaps emerge based on gender (women carers vs. men carers) and caregiving intensity (Figure 4.12).

Figure 4.10. Male employment rates of carers vs. non-carers by age group, EU-26, 2019



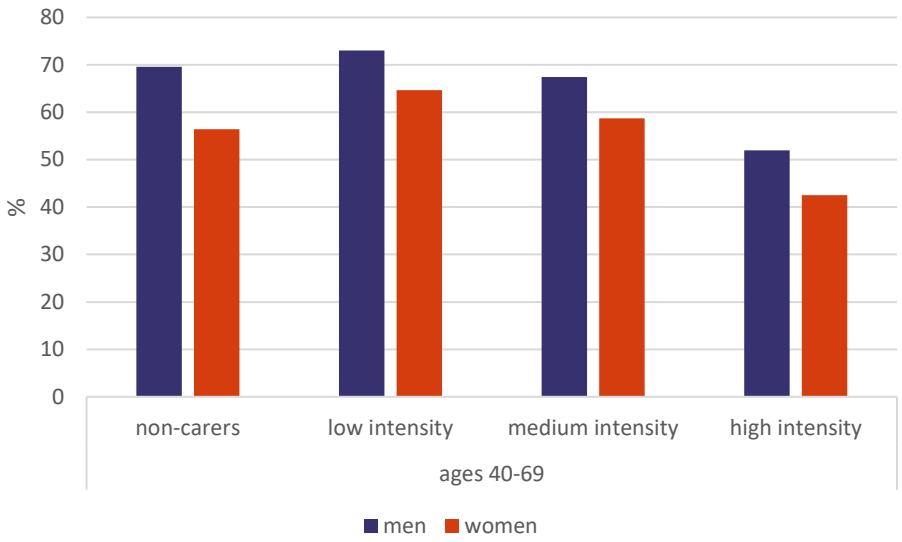
Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Figure 4.11. Female employment rates of carers vs. non-carers by age group, EU-26, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

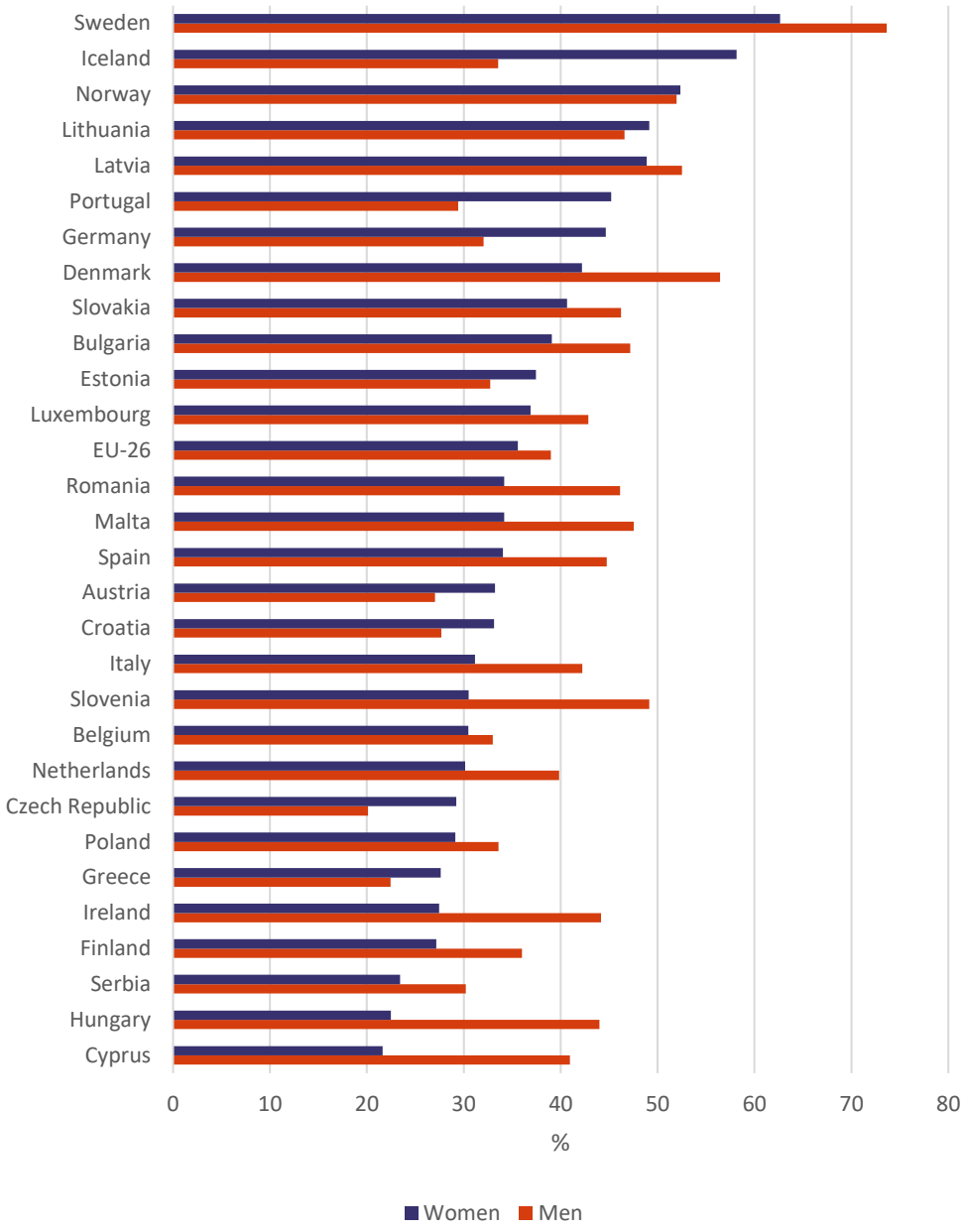
Figure 4.12. Employment rates of carers vs. non-carers, ages 40-69, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

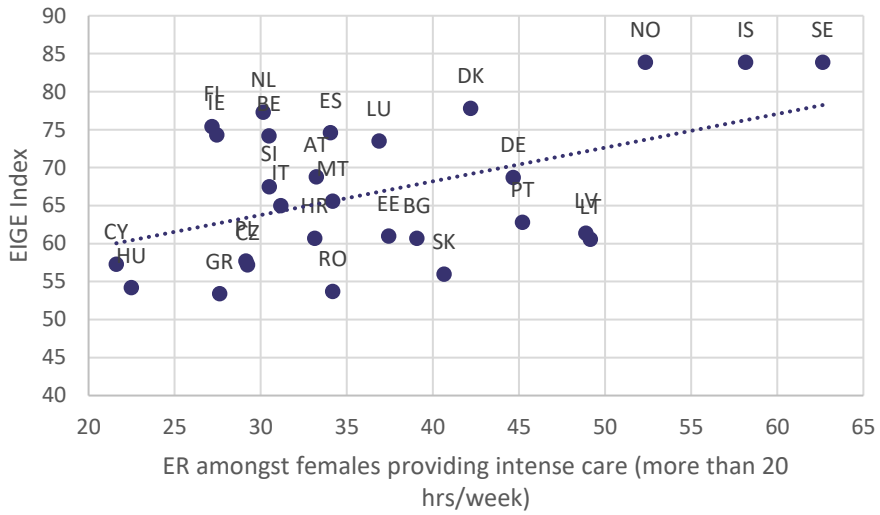
- Employment rates for individuals providing more than 20 hours of informal care per week vary significantly across EU countries (Figure 4.13). These differences are notable and, in some cases, striking. In Nordic countries such as Sweden, Iceland, and Norway, women providing intensive informal care exhibit the highest employment rates among European countries. In contrast, much lower employment rates for this category are observed in countries like Cyprus and Hungary. The largest gender employment gaps for those providing intensive care are found in Cyprus, Ireland, Hungary, and Slovenia. However, there are exceptions to this trend. In several countries, including Germany, Portugal, and Iceland (and to a lesser extent Austria, Croatia, and Greece), women providing substantial hours of informal care participate in the labour market at higher rates compared to their male counterparts (Figure 4.13).
- Additionally, plotting employment rates for female intensive caregivers against the overall Gender Equality Index of the European Institute for Gender Equality (EIGE) reveals a correlation: higher employment rates for women providing intensive informal care are associated with greater gender equality across Europe (Figure 4.14).

Figure 4.13. Employment rates of persons providing care for at least 20 hours per week by gender, by country, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Figure 4.14. Employment rates of women providing intense care (2019) and Gender Equality Index (2022)



Source: authors' calculations based on EHIS microdata, wave 3 (2019) and EIGE. Notes: 1) Iceland and Norway were assigned Sweden's Gender Equality Index score, 2) Correlation coefficient: 0.48.

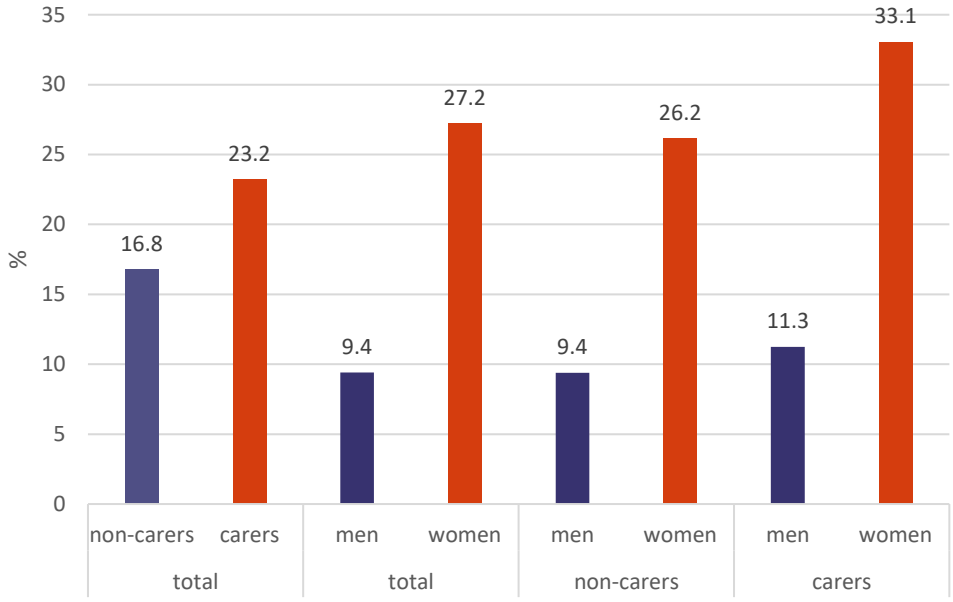
- Disparities in labour market outcomes extend beyond participation rates to include differences between full-time and part-time employment. In fact, individuals providing informal care are less likely to work full-time, often balancing their caregiving responsibilities with part-time or flexible jobs. Part-time employment is more prevalent among female caregivers, and the gender gap in part-time versus full-time work is notably wider among caregivers compared to the general population (Figure 4.15).

- Figure 4.16 is based on microdata from the annual LFS survey and presents the share of individuals who are not working but would like to work, citing care responsibilities as the main reason for not seeking employment. Sweden (2.0%) and Finland (2.4%) have the lowest percentages, indicating relatively fewer individuals in these countries are not seeking work due to care responsibilities. In contrast, Ireland (20.7%) and Poland (20.5%) report the highest shares, suggesting a significant proportion of individuals in these countries are unable to work because of caregiving duties. Countries such as Spain, Greece, and Cyprus also show higher percentages.

- While the provision of informal care can be profoundly fulfilling, offering a deep sense of purpose and connection with the care recipient, it also entails significant emotional and physical demands that can strain the caregiver's well-being, especially when caregiving is intensive. An interesting finding is that providing low-intensity care – defined as 10 hours per week or less – may improve outcomes for some groups of caregivers. The provision of care (when not overly burdensome) can indeed provide a sense of purpose which may be even more

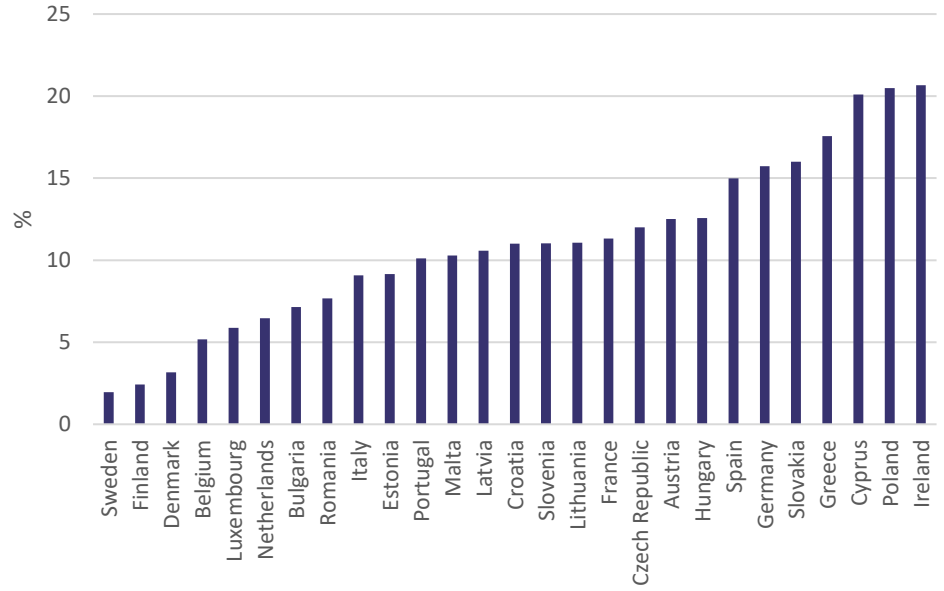
pronounced when care is provided to family members. However, this positive effect tends to reverse as the intensity of care increases, suggesting that the level of caregiving intensity is a crucial factor.

Figure 4.15. Share of total employed persons working part-time by gender and carer status, EU-26, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

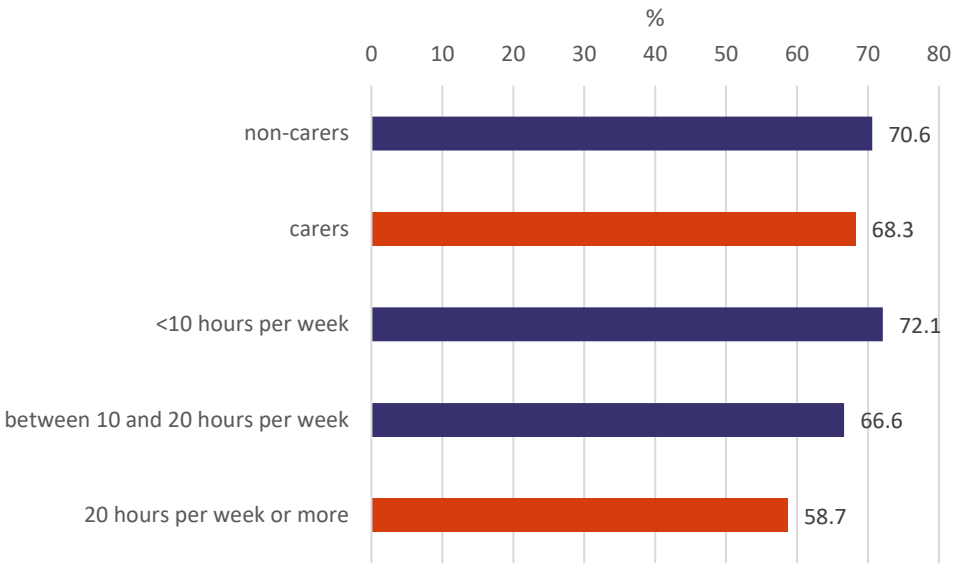
Figure 4.16. Share (%) of individuals not working but who would like to work, citing care responsibilities as the main reason for not seeking employment, 2022



Source: Labour Force Survey (LFS) microdata, authors' calculations.

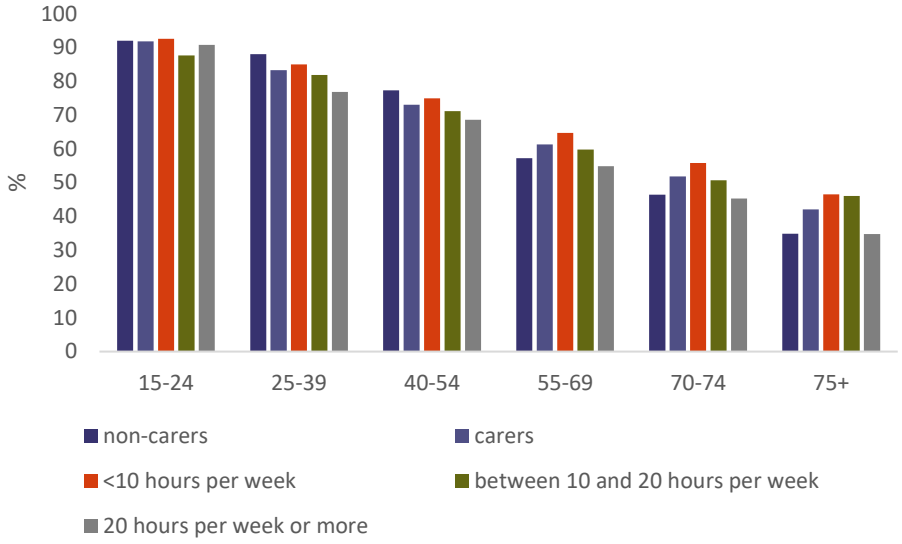
- For instance, those providing medium and high-intensity care report lower levels of self-assessed health, with fewer indicating that their health is excellent or very good compared to non-caregivers or those providing low-intensity care (Figures 4.17 and 4.18), with the effects being similar across the age distribution. A similar gradient can be observed in terms of mental well-being across Europe, with a higher prevalence of depressive symptoms amongst those providing more hours of care per week (Figure 4.19).
- Beyond labour market participation, informal caregivers' involvement in education and social insurance systems also warrants attention (Fevang et al., 2012; Crespo & Mira, 2014). For those who are employed, caregiving responsibilities often hinder work performance and limit their capacity to work effectively (Gautun & Hagen, 2010; Moussa, 2019). This can lead to long-term adverse effects on their income, educational achievements, and overall well-being. Since informal caregiving roles are predominantly filled by women, these activities exacerbate gender inequalities, contributing to wage disparities, higher poverty rates, and pension gaps between men and women across Europe (Fevang et al., 2012; Kotsadam, 2011).

Figure 4.17. Share of persons self-reporting excellent/very good health status by carer status, EU-26, 2019



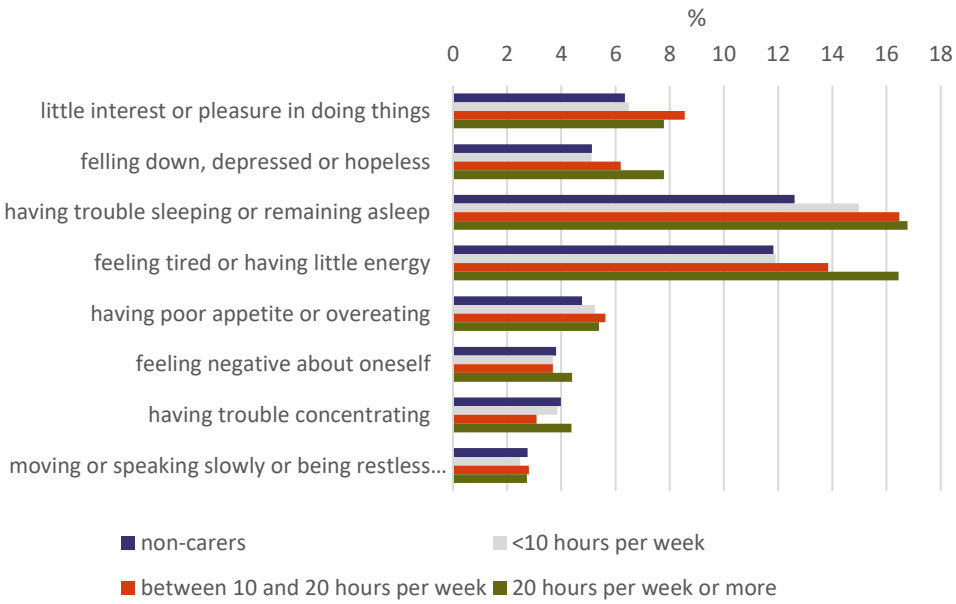
Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Figure 4.18. Share of persons self-reporting excellent/very good health status by carer status and age group, EU-26, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Figure 4.19. Share of persons having depressive symptoms more than half the days/nearly every day over the last 2 weeks by carer status, EU-26, 2019.



Source: authors' calculations based on EHIS microdata, wave 3 (2019), weighted analysis.

Chapter 5
Care workforce

- The LTC workforce can be defined as the economic activity sector focused on providing care and assistance services to individuals experiencing physical or mental frailty or disability over an extended period of time. While long-term care needs are more prevalent among older adults, people of all ages may, at some point in their lives, require care.

- LTC workers are employed in a variety of settings, including residential care units, day care units, and home care, and typically include nursing personnel, personal care workers, as well as other professionals such as physiotherapists, audiologists, and speech therapists. It is important to note that LTC workers can be trained specialists (e.g., licensed nurses with specialized LTC training), professionals without specialized training (e.g., licensed nurses without specific LTC qualifications), or untrained carers (OECD, 2020). Legal requirements regarding the qualifications of workers vary depending on the country and care setting.

- The typical definition of the LTC workforce refers to a professional relationship in which caregivers are financially compensated. For example, the OECD has often defined the LTC workforce as the group of "*paid* workers who provide care at home or in institutions" (e.g., OECD, 2023; OECD, 2021). In this section, we focus on the dominant definition, which excludes informal carers—who play a crucial role in meeting LTC needs globally. However, in terms of the care activities they perform and the intensity of their work, informal carers often provide services similar to those of formal carers, especially in cases where formal carers lack specialized training. While informal carers are excluded from the dominant definition, there is growing discourse around recognizing them as an integral part of the LTC workforce, advocating for their inclusion in policy discussions, financial support, and professional recognition.

- Measuring the workforce in LTC can be a challenging task, primarily due to ambiguities in defining the roles and responsibilities of workers within the sector. One key issue is the distinction between hands-on assistance with personal and domestic care needs and other professional activities found in LTC settings. For example, should a person preparing meals in a residential care unit—who does not directly interact with care recipients—be categorized as an LTC sector worker? Additionally, the roles of many workers in this sector often overlap with those in other sectors, particularly healthcare. An example is nursing personnel: some subgroups under the most relevant occupational codes may include nurses

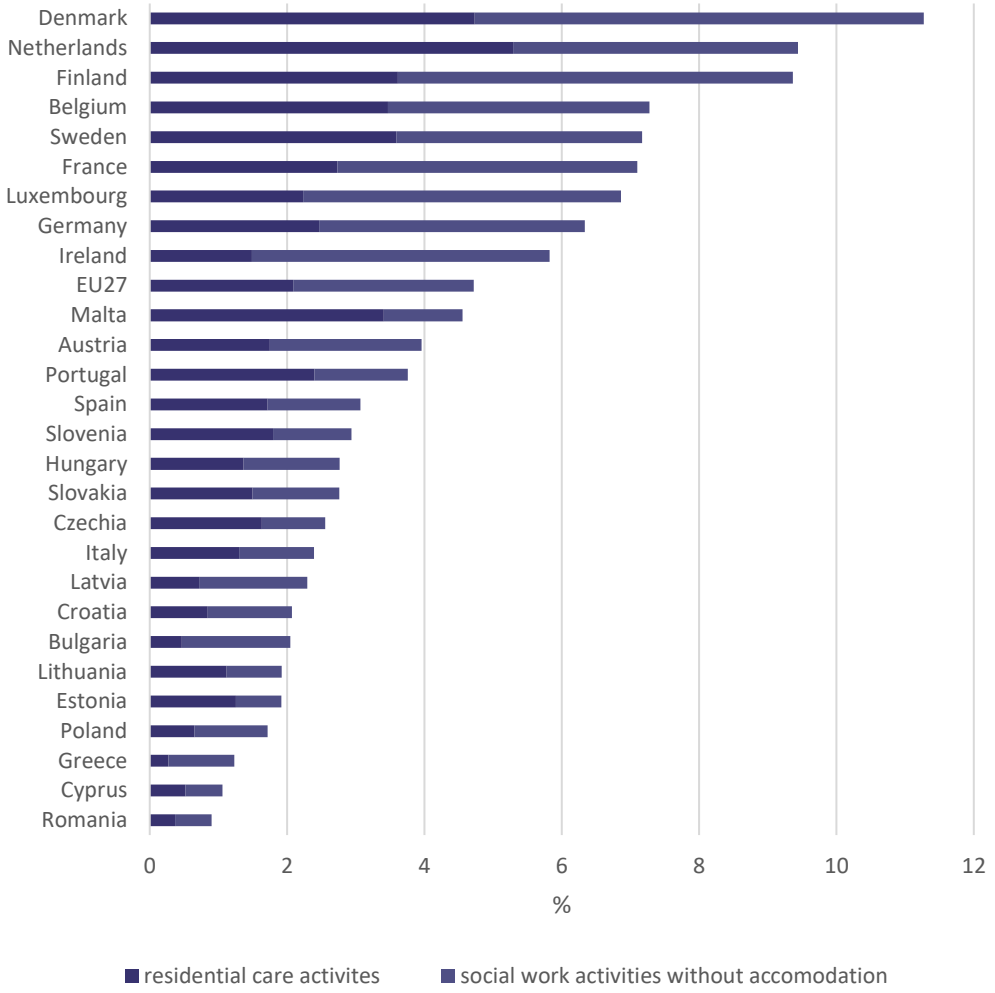
working in non-LTC settings, which complicates the classification of LTC workers (Eurofound, 2020).

- Measuring the LTC workforce is further complicated by cross-country differences in LTC systems, policies, and regulations. As a result, adhering to statistical guidelines can be challenging, and cross-country comparisons based on available data may lack robustness. Additionally, paid but undeclared carers, including migrant workers – who are common in home care across several European countries – are often underrepresented in both administrative records and survey data.

- In Eurostat's Labor Force Survey (LFS), individuals working in long-term care (LTC) are mainly categorized under the Statistical Classification of Economic Activities in the European Community (fr. Nomenclature statistique des Activités économiques dans la Communauté Européenne – NACE) codes 87 (residential care activities) and 88 (social work activities without accommodation). However, these codes may also include services beyond elderly and disability care, such as substance abuse care (under code 87) or child daycare and refugee services (under code 88). Additionally, personnel classified under healthcare (NACE code 86) may also contribute to LTC services. To account for these overlaps, the following figures present statistical information separately for residential care and social work activities—representing the primary sectors of LTC employment—and healthcare, both as a comparative reference and as a sector with intersecting roles.

- Keeping these limitations in mind, it is estimated that over 4 million people were employed in residential care activities and more than 5 million in social work activities without accommodation across the EU-27 in 2023 (Eurostat, LFS). Together, this represents 4.7% of the total EU-27 workforce. However, significant cross-country differences exist: these sectors accounted for around 10% of the total workforce in countries like Denmark, the Netherlands, and Finland, compared to just 1% in Romania, Cyprus, and Greece (Figure 5.1). These disparities are not driven by demand-side factors, such as variations in care needs across populations, but rather by supply-side dynamics and country-specific care provision patterns, including the balance between formal and informal care. As a result, nations with smaller formal workforces in these sectors may face higher levels of unmet needs and incur greater indirect costs due to reliance on informal care or undeclared labour.

Figure 5.1. Workers in residential care and social work without accommodation activities as a % of the total workforce, 2023



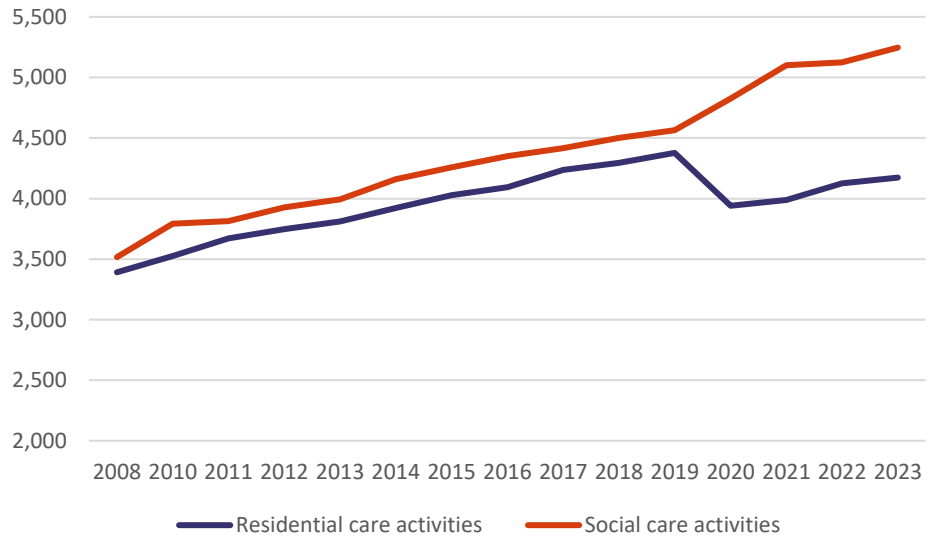
Source: Labor Force Survey, Eurostat.

- Trends over time show a steady increase in the labour force across both economic activity sectors, from 6.9 million people in 2008 to 9.4 million in 2023 across the EU (Figure 5.2). Employment in the residential care activities sector grew by 18.3%, while employment in social work activities without accommodation increased by 49.2%. According to LFS data, in some countries, employment in residential care activities has declined. However, this is not necessarily a sign of disinvestment in care services but rather may reflect a shift from residential to non-residential care. For instance, in Sweden, the number of individuals employed in residential care activities decreased by approximately 45,000 over this period, but it is well known that the country has for years been expanding its range and capacity of home-based care services.

- These recent trends, combined with projections of rising LTC expenditure across all European member-states by 2070 (European Commission, 2024 Ageing Report), suggest that the LTC workforce will likely continue its upward trajectory

in the medium and long term. However, staff shortages are already reported in many EU countries, and it is crucial that workforce expansion is sufficient to meet the rising LTC needs driven by demographic ageing. A key factor will be the ability to attract workers to the sector by improving both their earnings and working conditions.

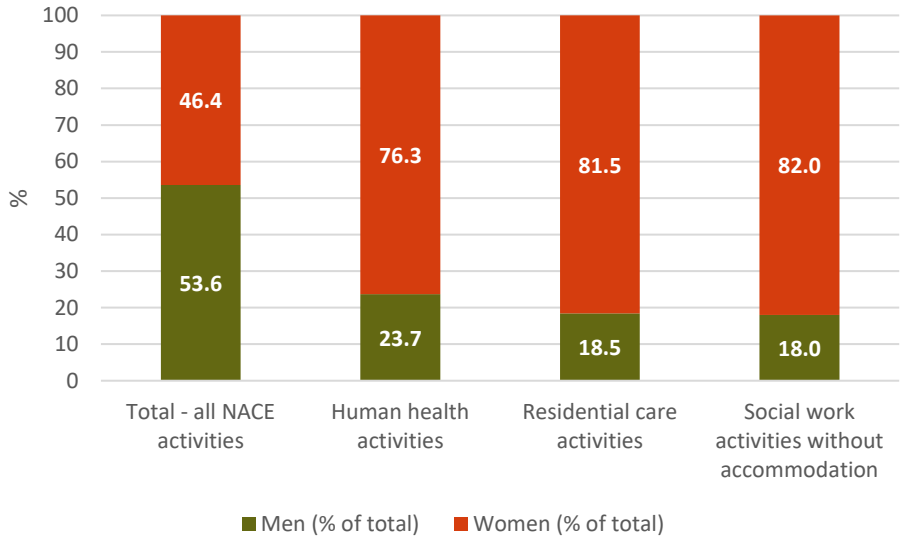
Figure 5.2. Number of persons employed under the residential care services sector and the social care services without accommodation sector (thousands), EU-27, 2008-2023



Source: Labor Force Survey, Eurostat.

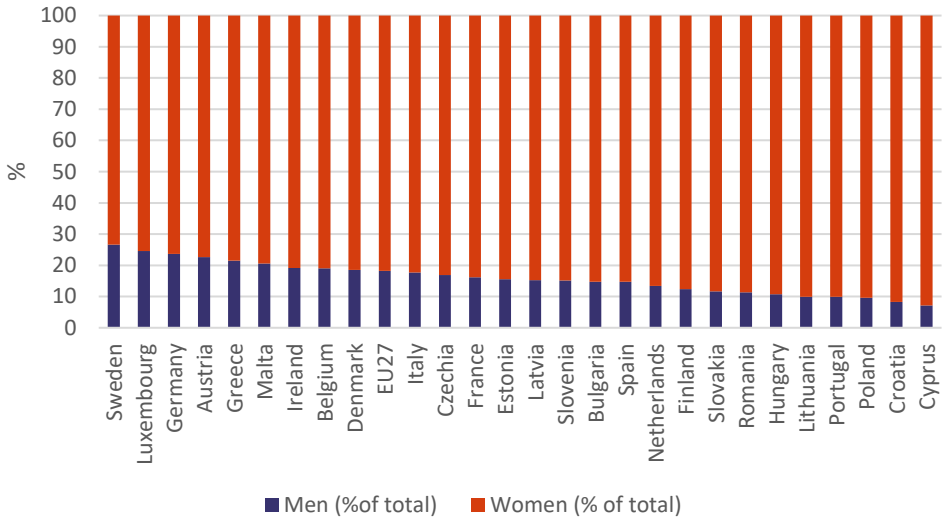
- The most prominent demographic characteristic of the long-term care (LTC) workforce is gender. LTC work is predominantly a female-dominated field, exemplifying gender-based sectoral segregation in the labour market. While women remain underrepresented in the overall EU workforce – participating at lower rates compared to men – over 80% of LTC workers across Europe are female (Figure 5.3). This gender disparity, though comparable to imbalances seen in the healthcare sector, is even more pronounced. Addressing these gender imbalances by improving earnings and working conditions for LTC workers could help reduce the overall gender wage and pension gaps, thereby contributing to broader gender equality.

Figure 5.3. Persons employed in the total economy, healthcare and LTC-related sectors by gender (% of total, in each sector), EU-27, 2022



Source: Labor Force Survey, Eurostat.

Figure 5.4. Persons employed in the residential care services sector and the social care services without accommodation sector by gender (% of total), 2022



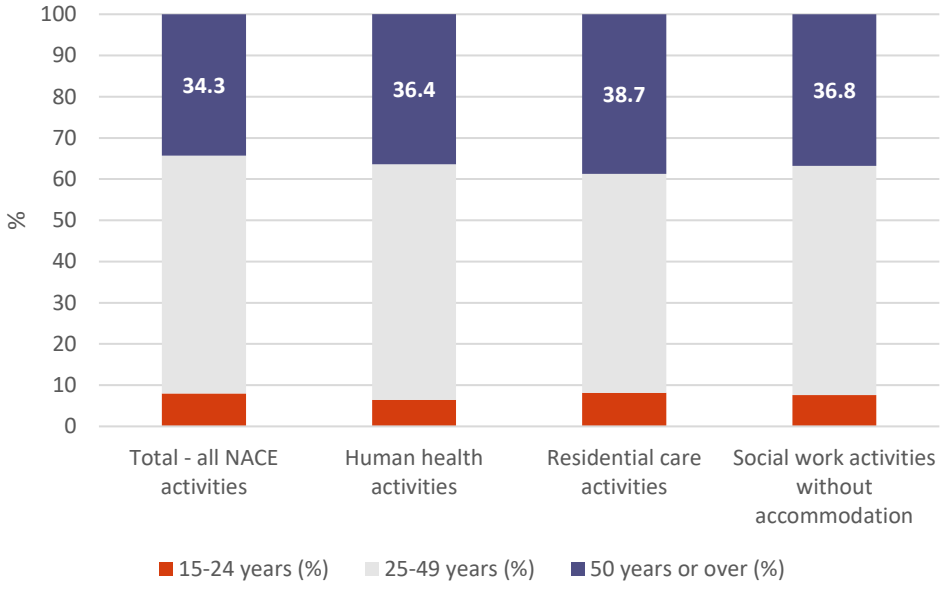
Source: Labor Force Survey, Eurostat.

- Indeed, LTC work is, for the most part, financially unattractive. Low earnings in the sector have been identified as a key factor behind problems in recruitment and retention (OECD, 2023). In certain countries or settings, LTC work also concerns precarious jobs with little to no security. Across Europe, a considerable proportion of the LTC workforce has earnings below the national average, although there are exceptions for specialized personnel such as specialist nurses and therapists

(Eurofound, 2020; OECD, 2020). In privately funded domestic care settings, where the care receiver or their family also serve as the employer, pay is particularly low. This type of work is also highly unregulated. Many workers receive informal compensation, leaving them without social security coverage, which increases their vulnerability vis-à-vis poverty and social exclusion both in younger and older age.

- Additionally, LTC workers tend to be older than the average workforce participant (Figure 5.5). This demographic trend may pose challenges for their physical and mental well-being, given the demands of their profession.

Figure 5.5. Persons employed in the total economy, healthcare and LTC-related sectors by age group (% of total), EU-27, 2022

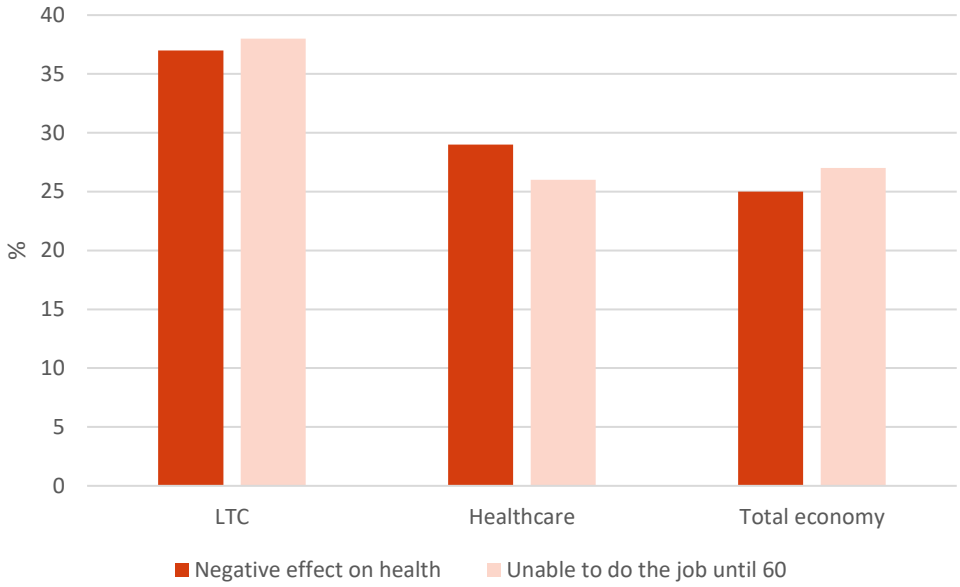


Source: Labor Force Survey, Eurostat.

- LTC work can be very rewarding. It involves enabling other human beings to perform daily functions that are essential for their well-being and, in many cases, necessary for their survival. These services not only improve the quality of life for those in need but may also provide a sense of fulfilment and purpose for the caregivers themselves. At the same time, however, LTC work can incur significant demands on workers, often subjecting them to high physical and mental strain (Schultz and Sherwood, 2005; Schultz et al., 1995; Vitaliano, 20023). In terms of physical health, one significant risk is posed by infectious diseases, to which care recipients are typically more vulnerable. The physical burden of lifting individuals poses another substantial risk to their health and well-being, as do irregular working hours and disrupted sleep schedules. A significant portion of LTC workers (37%) believe their job negatively impacts their health, a higher rate compared to healthcare (29%) and the overall workforce (25%) (Figure 5.6). Additionally, a

relatively large share of LTC workers doubt their ability to continue working until the age of 60. These may be attributed to the demanding nature of shift work as well as physical and emotional strain.

Figure 5.6. Self-assessed impact of the job on health, EU27 and the UK, 2015 (%)



Source: Eurofound analysis of European Working Conditions Surveys (EWCS) data, 2020.

- LTC workers have indeed been found to face increased health risks stemming from the physical and psychological strain inherent in their work and working conditions, which can spill over into their personal and family lives (Cejalvo et al., 2021; Savage and Bailey, 2004). Mental health challenges are especially pronounced for live-in carers. Surveys indicate that individuals providing care report lower physical and mental health outcomes compared to the general population and face a high risk of social exclusion (Greenwood et al., 2018). Despite the personal fulfilment workers may find in their roles, there is often a lack of broader social recognition for their invaluable contribution to society (Eurofound, 2020; OECD, 2021).
- Migrant workers are not over-represented in the formal LTC sector; in fact, their participation rates are close to those for the entire economy, accounting for approximately 8% of the respective workforce (Eurofound, 2020). However, migrant live-in carers can provide a large share of LTC in some countries, such as Austria and Germany. In most countries, live-in care is not regulated (Leichsenring et al., 2022). In Southern European countries like Italy, Spain, and Greece, unregulated migrant labour is prevalent in the domestic live-in care subsector. A significant portion of this work remains undeclared and unprotected, exposing workers to precarious conditions and limited social protection (Eurofound, 2020).

- Self-employed individuals are also an exception in LTC (ibid). However, these statistics do not account for undeclared LTC labour supply, especially in the case of home and live-in carers, which can be a significant LTC provision channel in several EU countries. According to a recent study by the European Labour Authority (Guzi et al., 2021), it is estimated that there were 6.8 million undeclared workers in the personal and household services (PHS) sector in the EU-27 in 2019, the majority of which were non-EU migrants. Out of these 8.6 million individuals, 2.1 million worked in the broader care sector.

Chapter 6
Expenditure on LTC

- Recording and monitoring long-term care (LTC) expenditure on an intertemporal and cross-country basis is crucial for understanding and ensuring the adequacy of LTC financing. With demographic ageing accelerating, analysing spending trends and public provision becomes increasingly important for policymakers. Comprehensive expenditure data not only helps evaluate the extent of efficiency and equity in the sector but also guides future resource allocation to meet the growing needs of an ageing population.

- The System of Health Accounts (SHA), developed by the OECD in the late 1990s, serves as the primary reporting tool and internationally comparable source for LTC expenditure data. Within the SHA framework, LTC expenditure captures spending incurred both at LTC institutions[2] and at home and is comprised of two main components: 'LTC health' and 'LTC social'. The former includes spending on nursing care, personal care services (assistance with Activities of Daily Living - ADLs), as well as palliative care. The latter primarily consists of expenditure related to assistance with Instrumental Activities of Daily Living (IADLs).[3]

- Despite significant efforts in recent years to improve reporting procedures for LTC expenditure in the context of the SHA, the OECD continues to cite several limitations and challenges. Recognizing these issues is important to ensure ongoing improvements in data collection across participating countries and to help explain some of the cross-country differences reflected in spending data breakdowns.

- One such limitation concerns the detailed classification of public LTC expenditure data: in some countries, the social component of LTC spending is either missing or implicitly included under health LTC (OECD, 2023). This is indicative of the difficulty in conceptually distinguishing between healthcare and LTC, not only in terms of financial reporting but also from the perspectives of policy design and actual service provision. LTC financing and provision tend to be highly fragmented

2 Long-term care institutions refer to nursing and residential care facilities that provide accommodation and long-term care as a package (OECD, 2023).

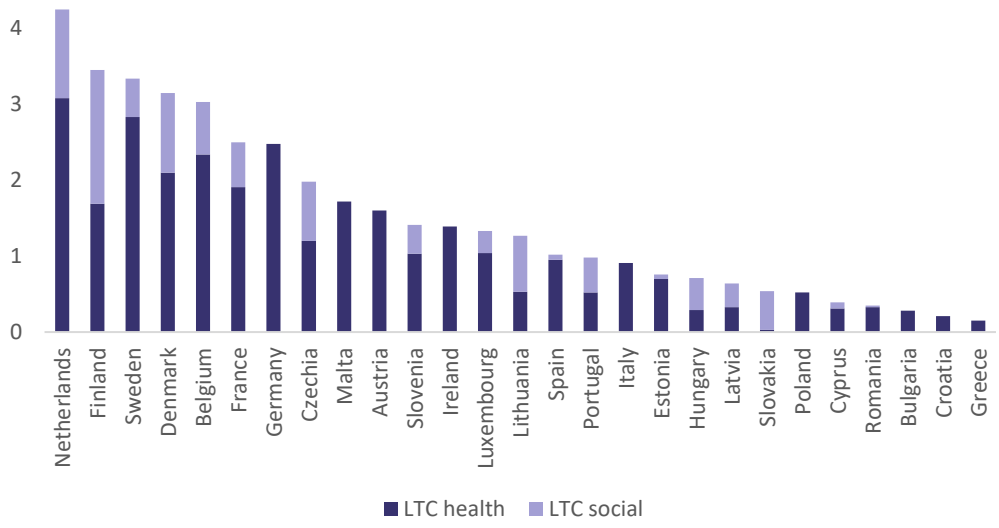
3 Activities of Daily Living (ADLs) are basic functions or self-care tasks typically learnt in early childhood. These include (i) walking, (ii) feeding oneself, (iv) dressing and grooming oneself, (v) going to the toilet, (vi) bathing, (vii) moving one's body position and standing up. Instrumental Activities of Daily Living (IADLs) are more complex tasks typically learnt in later childhood or adolescence. They include (i) managing finances, (ii) managing transportation, (iii) shopping and preparing a meal, (iv) housekeeping, (v) managing communication and (vi) managing medication.

at the national level: different entities have jurisdiction over different care programs. Furthermore, LTC has also been historically a low-priority policy area, which has had an impact on the collection of relevant statistical information (European Commission, 2024).

- Despite these limitations, data on the total level of public spending can be considered broadly reliable and robust allowing the monitoring of spending trends, as well as international benchmarking across Europe. In fact, the level of public LTC expenditure in each country can be seen as an indication of awareness and preparedness to invest in the sector and to proactively address challenges associated with ageing.

- Public LTC expenditure across the EU varies significantly, reflecting different approaches to funding and care provision. In fact, current LTC spending in many European countries may not be sufficient to meet both present needs and future demand (European Commission, 2024). In 2021, total (health plus social) public LTC spending ranged from 4.1% of GDP in the Netherlands to just 0.1% in Greece (Figure 6.1). Countries with relatively high public spending on LTC include Finland (notably with a strong social component), Sweden, and Denmark. On the other hand, public spending is particularly low in countries such as Croatia, Cyprus, and the Slovak Republic. Overall, at least 13 EU countries reported public LTC expenditure below 1% of GDP in 2021, highlighting a significant opportunity for fiscal expansion in this sector.

Figure 6.1. Public LTC expenditure as a % of GPD, 2021 (by component)

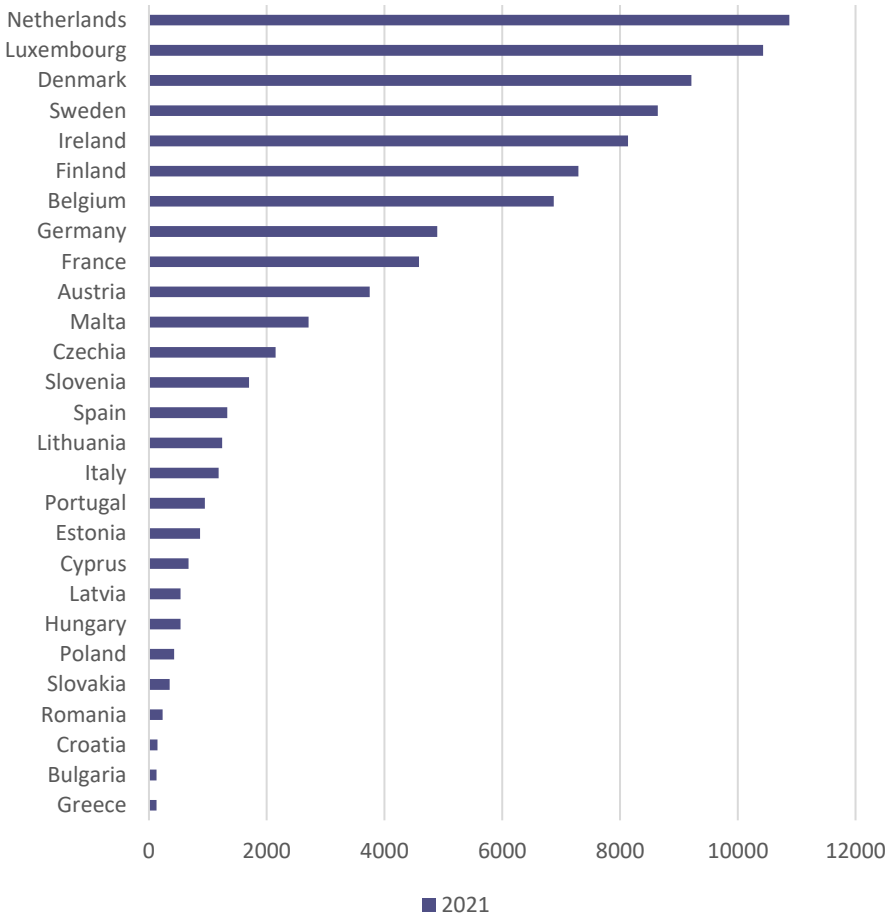


Source: Eurostat, SHA.

- Examining LTC expenditure per capita in comparative terms requires adjusting for the population's age composition in each country. In 2021, public LTC expenditure

per inhabitant aged 65 and over ranged from €10,874 in the Netherlands to €127 in Greece (Figure 6.2). Other countries with high public LTC expenditure per capita include Luxembourg, Denmark, and Sweden. In contrast, Bulgaria, Croatia, and Romania, after Greece, have the lowest public per capita spending on LTC in the EU.

Figure 6.2. Annual public LTC expenditure per inhabitant aged 65+, 2021



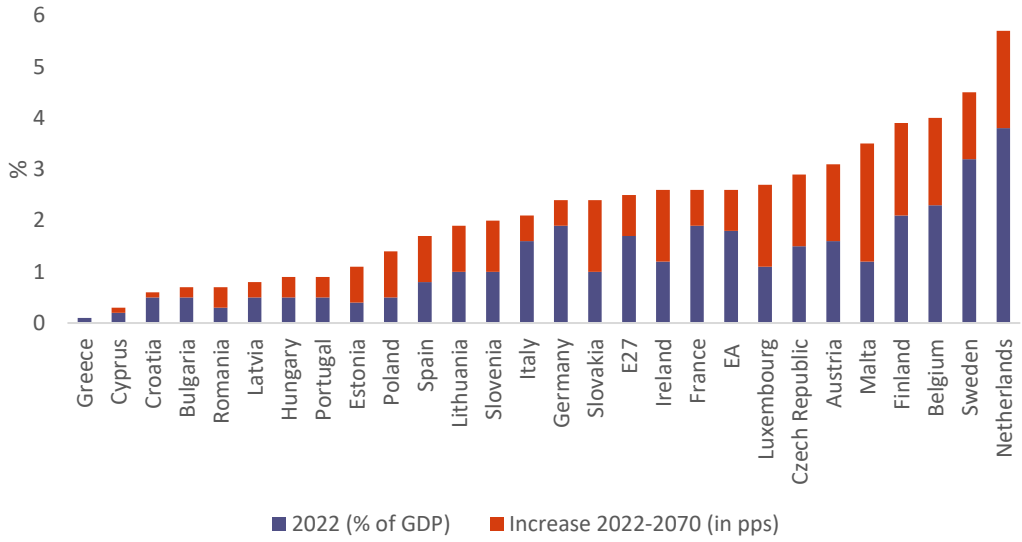
Source: Eurostat and authors' calculations.

- LTC spending was the healthcare sub-category with the highest growth rate before the pandemic (OECD, 2023). Since the pandemic, LTC spending has grown at a slower pace compared to overall health spending but the upward trajectory of LTC spending is expected to continue over the medium and long term (European Commission, 2024).
- Population ageing is the primary driver behind the projected increases in LTC spending. Demand for LTC is expected to rise, while the supply of informal care is likely to decline due to changes in household composition, family formation and female labour market participation. Non-demographic determinants contributing to upward spending pressures include higher public demand driven by improved

living standards across the EU, workforce shortages in the sector, and the impact of public health emergences (European Commission, 2024).

- According to the baseline scenario of the European Commission's 2024 Ageing Report (European Commission, 2024), public LTC spending is projected to increase in all 27 EU countries by 2070 (Figure 6.3).

Figure 6.3. Baseline – projected public expenditure on LTC (2022-2070, % of GDP)



Source: European Commission, 2024.

- It is important to note that the baseline scenario relies on a "no policy change" assumption, meaning it only considers currently legislated measures and excludes potential future policy changes. This assumption helps explain why countries with already low public expenditure on LTC are projected to see smaller increases under the baseline. In contrast, countries with higher current levels of LTC spending, such as the Netherlands, Sweden, Belgium, and Finland, are projected to experience more substantial increases. These projections shift when different policies and changes in cost and coverage are considered under alternative scenarios.[4]

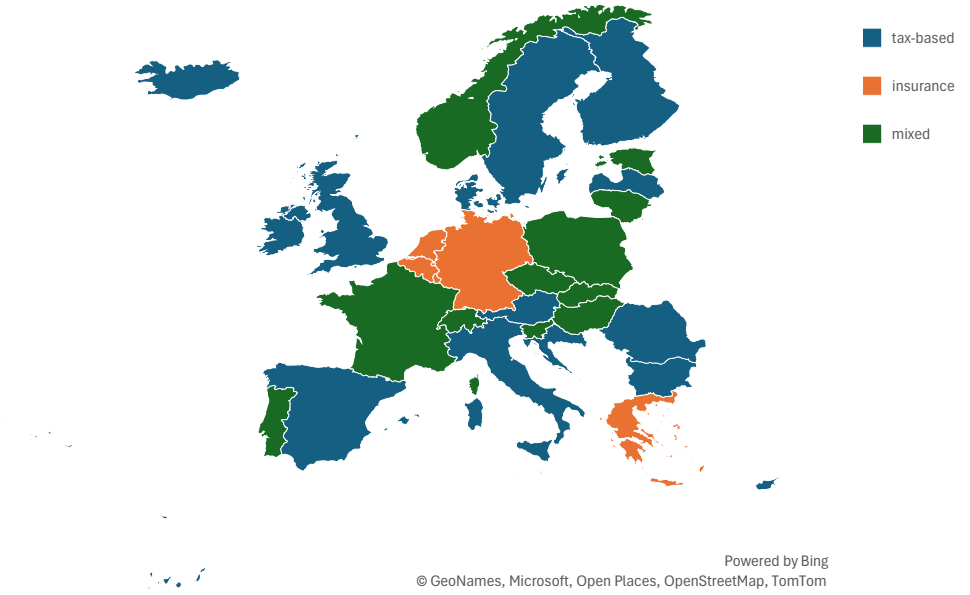
- The Ageing Report focuses on formal care that is financed, at least partially, by the public sector. It does not include formal care that is fully privately funded, nor does it account for informal care provided free of charge by relatives, friends or others. However, the projections consider various parameters of individual LTC

4 Alternative scenarios include the "no healthy ageing scenario" (which assumes that increased life expectancy will not be accompanied by increases in the health status of older individuals), the "healthy ageing scenario" (which does the opposite), the "coverage convergence scenario" (which assumes an expansion in the provision of LTC due to increased demand), the "cost convergence scenario" (which explores the impact of increased demand on the unit costs of LTC) and, the "risk scenario" (which is a combination of the last two scenarios).

systems, including the financing structure and mix. For example, whether a country relies more heavily on formal or informal care can influence public LTC expenditure and is therefore factored in the microsimulations used to produce the projections.

- Across the EU, various types of public LTC financing exist (Figure 6.4). Countries such as Germany, the Netherlands, Belgium, and Greece primarily use an insurance-based system (according to the Bismarck system of health financing), whereas Finland, Sweden, and Austria utilize predominantly a tax-based system (according to the Beveridge system of health financing). Mixed systems are found in France, Portugal, and other countries.

Figure 6.4. Systems of LTC financing across Europe



Sources: ESPN (Hornich, 2018; Pavolini, 2021).

- Although very illustrative from a macro perspective, such classifications do not account for differences in the level of public provision between countries, which can be very profound. For instance, in Greece, social insurance covers a limited range of benefits within the "health LTC" category, primarily for insured individuals with chronic conditions. Social programs, such as home care or day care centres for the elderly, are currently limited and co-financed by European funds. Moreover, these classifications should be viewed dynamically rather than statically, as LTC systems across individual countries are continuously evolving to meet emerging care needs.

Table 6.1. Systems of LTC financing across Europe

Country	Financing	Country	Financing
Austria	tax-based	**Latvia**	tax-based
Belgium	insurance	**Liechtenstein**	mixed
Bulgaria	tax-based	**Lithuania**	mixed
Croatia	tax-based	**Luxembourg**	insurance
Cyprus	tax-based	**Malta**	mixed
Czechia	mixed	**Netherlands**	insurance
Denmark	tax-based	**Norway**	mixed
Estonia	mixed	**Poland**	mixed
Finland	tax-based	**Portugal**	mixed
France	mixed	**Romania**	tax-based
Germany	insurance	**Slovakia**	mixed
Greece	insurance	**Slovenia**	mixed
Hungary	mixed	**Spain**	tax-based
Iceland	tax-based	**Sweden**	tax-based
Ireland	tax-based	**Switzerland**	mixed
Italy	tax-based	**UK**	tax-based

Sources: ESPN (Hornich, 2018; Pavolini, 2021).

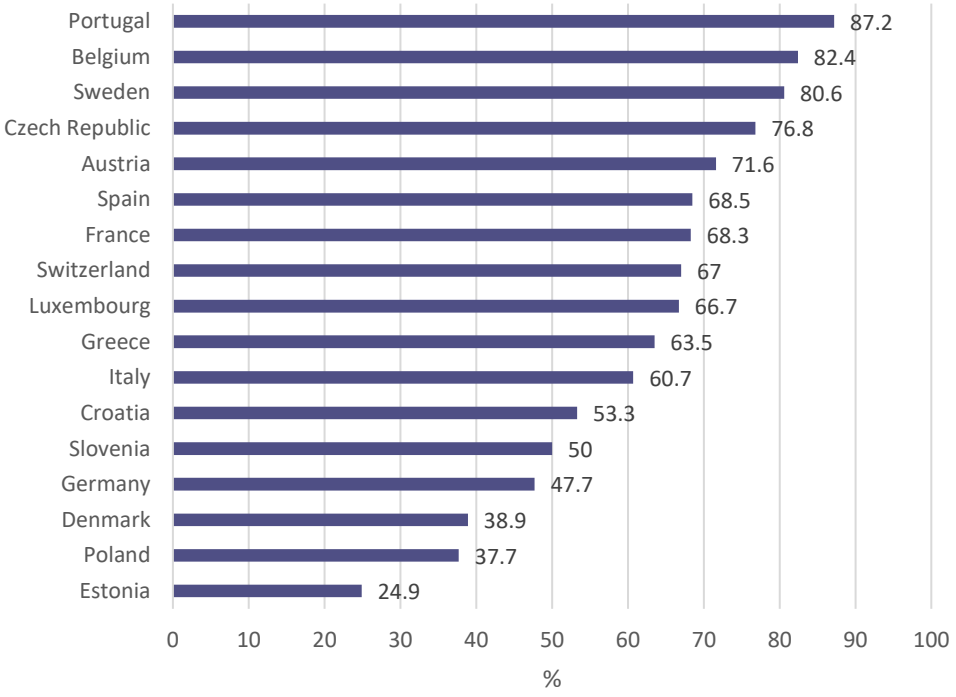
- Overall, data on public LTC expenditure are more easily available than data regarding private payments. Notably, a significant limitation of the System of Health Accounts is that various elements of private LTC expenditure may not be fully captured. Although countries are encouraged to use supplementary sources to estimate the out-of-pocket (OOP) burden of LTC for households, OOP payments for LTC may be insufficiently recorded at the national level.

- This issue could be partially attributed to the fact that, in several countries, a significant proportion of OOP expenditure for LTC involves paid but informal labour (i.e., undeclared to the tax and social insurance authorities) labour. As a result, there is a higher likelihood of underreporting or misreporting these expenses in administrative records and surveys. Another challenge is that information on private LTC expenditure in national household budget surveys is not always fully harmonized.

- Despite these caveats, an analysis of microdata from the Survey on Health, Ageing and Retirement in Europe (SHARE) reveals significant variation in the burden of

household out-of-pocket (OOP) payments for long-term care across EU countries (Figure 6.5). For instance, in 2015, 25% of home care users aged 50 and over in Estonia contributed out-of-pocket to their care costs, compared to 87% in Portugal.

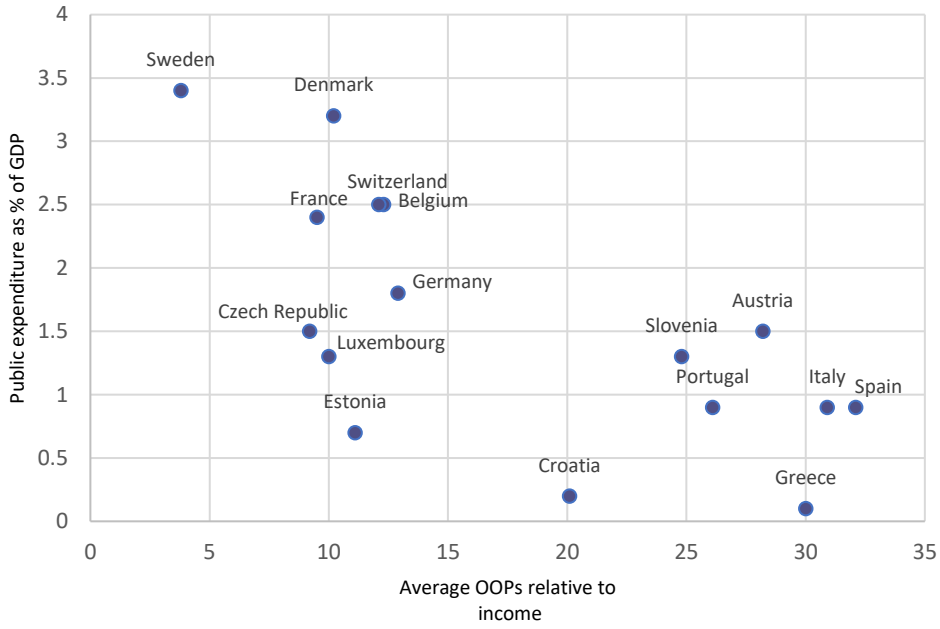
Figure 6.5. Share of home care users contributing out-of-pocket to their costs in %, 2015



Source: authors' calculations using SHARE microdata (wave 6).

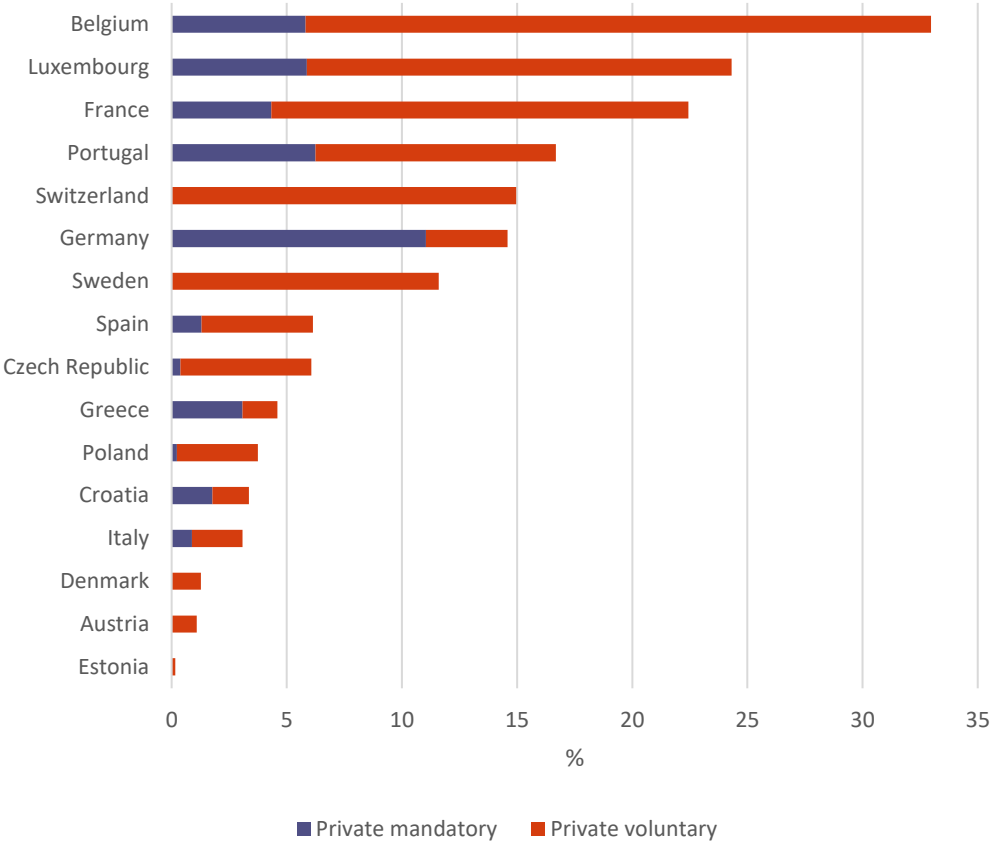
- These differences in the out-of-pocket (OOP) burden largely reflect differences in public financing and provision. Countries with relatively high levels of LTC spending as a percentage of GDP exhibit lower levels of OOP payments and vice-versa (Figure 6.6). In countries where public financing and provision are inadequate, the burden on households can be substantial, potentially leading to very high expenses relative to household income (similar to the notion of 'catastrophic expenses' for healthcare services).
- Private insurance for LTC is also quite scarce across Europe (Figure 6.7), rendering households prone to high financial burdens. Suspected reasons include market immaturity resulting in limited product offerings, as well as alternative arrangements such as strong public systems or strong traditions of family-provided care – depending on the country. In view of rapid ageing, increasing costs, and weakening familial networks, private insurance for LTC can be expected to become gradually more prevalent across Europe.

Figure 6.6. Public expenditure as % of GDP vs. OOP payments for home care as % of household net income, 2015



Source: authors' calculations using SHARE microdata (wave 6) for OOPPs and OECD.

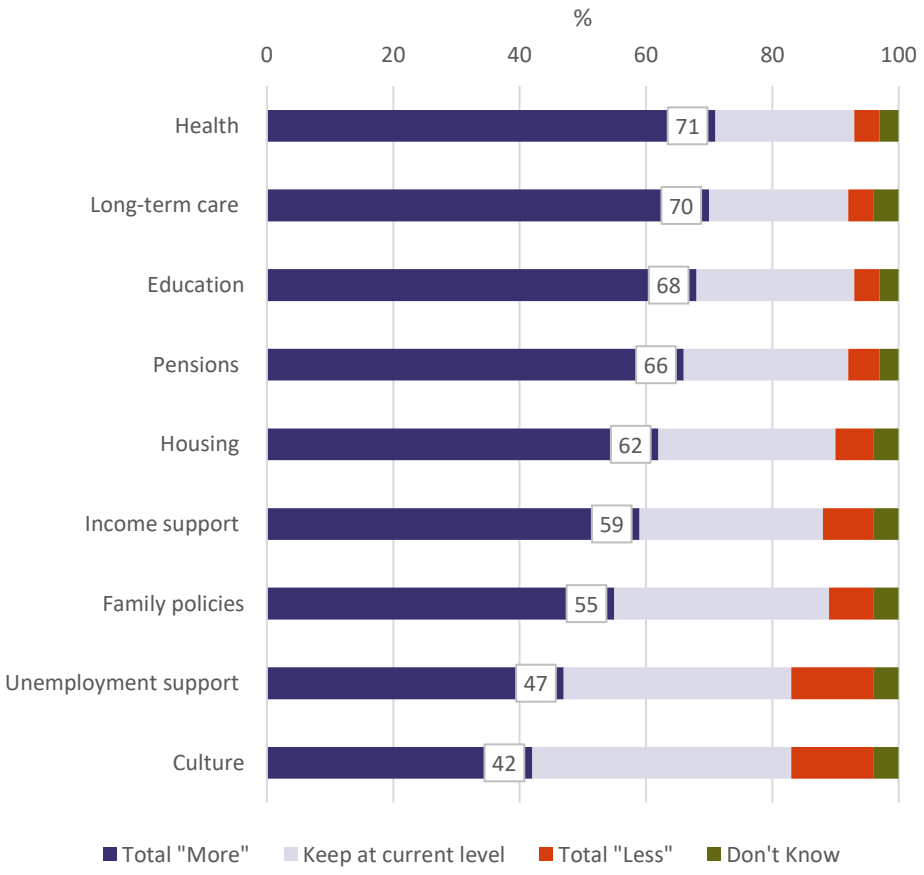
Figure 6.7. Respondents (%) with private LTC insurance, 2015



Source: authors' calculations using SHARE microdata (wave 6).

- It is also important to note that LTC spending recording in the context of the SHA leads to an underestimation of the total private burden when looking at it from a strict 'public versus private expenditure' perspective. In countries where a large proportion of care is provided by informal (unpaid) caregivers, there are significant indirect or 'opportunity' costs in terms of the caregivers' employability, lifelong income, health, and general well-being when caregiving is intensive. In that sense, substitution effects for the costs between the public sector and households would only be partially captured - even if household OOP payments were fully recorded in the relevant data.

Figure 6.8. Attitudes towards public spending in the EU27 (% of individuals that would like the government to spend less, spend the same, or spend more in the respective areas), 2022

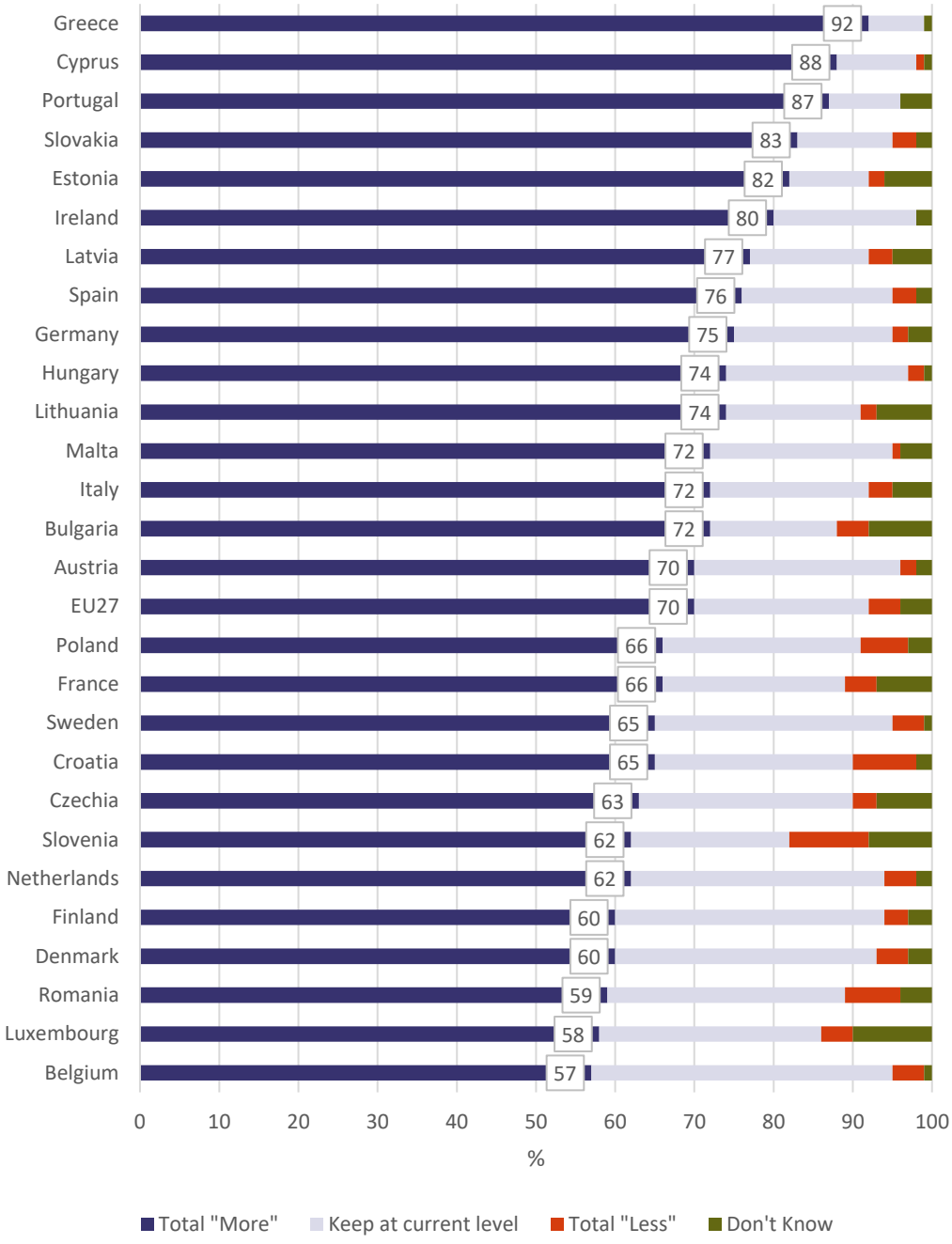


Source: Special Eurobarometer 529: Fairness, inequality and intergenerational mobility.

- In fact, healthcare and long-term care are the two social policy areas where EU citizens would like government spending to increase. The 2022 Special Eurobarometer survey indicates that 70% of respondents across the EU favour greater government expenditure in these areas, even if it would require financing through higher taxes and social security contributions (Figure 6.8). Health and LTC rank as the top two priorities not only on the EU average but also across nearly all

individual EU countries. The proportion of individuals that would like their government to spend "totally more" on LTC varies from 92% in Greece to 57% in Belgium, reflecting, among other factors, differing levels of financing and provision gaps across the EU (Figure 6.9).

Figure 6.9. Attitudes towards public spending in the EU27 (% of individuals that would like the government to spend less, spend the same, or spend more in the respective areas) by country, 2022



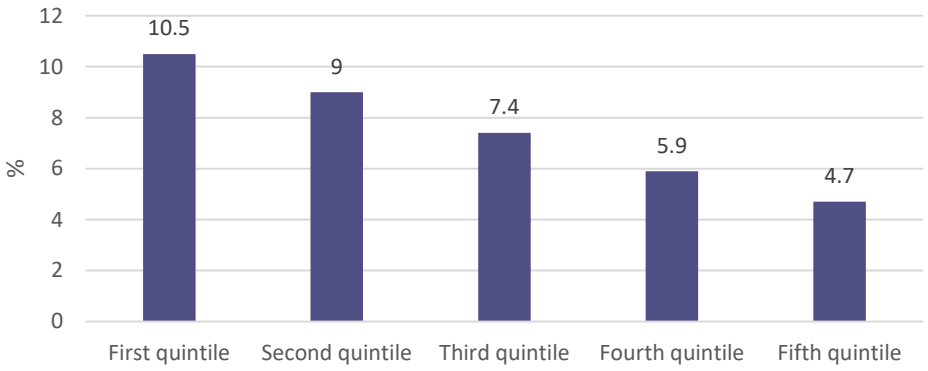
Source: Special Eurobarometer 529: Fairness, inequality and intergenerational mobility.

- There are several reasons why expanding LTC spending closely aligns with the preferences and needs of European citizens. Increased public investment in LTC enhances the quality of life for the elderly and their caregivers by improving their mental, physical, and financial well-being and facilitating their fuller economic and social participation.
- From a macroeconomic perspective, the benefits are equally compelling. Boosting LTC investment, in conjunction with enhanced investments in primary healthcare, can significantly reduce the strain on healthcare systems by preventing a substantial number of avoidable acute care admissions, thus lowering economic and social costs. It can stimulate economic growth by creating more jobs and improving job security and working conditions for those employed in the LTC sector, both formally and informally. Addressing workforce challenges in LTC enhances the overall effectiveness of care provision, creating a positive feedback loop that benefits care recipients, providers, and society as a whole.

Chapter 7
Inequalities and barriers in LTC

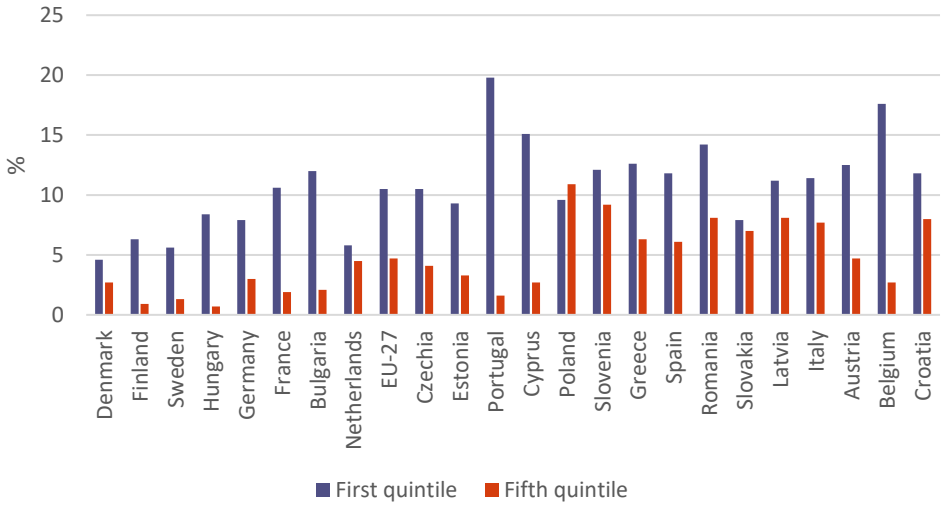
- Inequalities in long-term care (LTC) can be defined in ways similar to health inequalities. The literature on health inequalities typically focuses on three key dimensions: inequalities in access or use of services, inequalities in payments, and inequalities in health outcomes themselves (O' Donnell, 2008). These inequalities are often examined based on demographic factors (such as gender and age) and socioeconomic characteristics (such as income, education, migrant status, and geographic location).
- In the context of LTC, most of these dimensions are equally relevant. For instance, inequalities can be assessed in the prevalence of care needs, access to or use of care services, and the burden of out-of-pocket payments, disaggregated by gender, migrant background, or socioeconomic status, among other factors. This chapter presents selected figures and indicators that highlight some of these inequalities, focusing on specific aspects rather than attempting an exhaustive analysis of this very broad area. Cross-country comparisons of unmet needs for LTC at the aggregate level are also presented.
- Starting with inequalities in care needs, an income gradient can be observed across EU countries, with care needs decreasing as income levels increase among individuals aged 65 and older (Figures 7.1 and 7.2). This relationship may also involve reverse causality, which is usually more pronounced in the context of LTC compared to healthcare. Individuals with higher care needs often face a reduction in income due to the inability to work or the increased financial burden of care, especially in cases where formal services are required.

Figure 7.1. Self-reported severe difficulty with both personal care and household activities (Total Activities of Daily Living – TADL) by income quintile, EU-27, ages 65+, 2019



Source: Eurostat, EHIS.

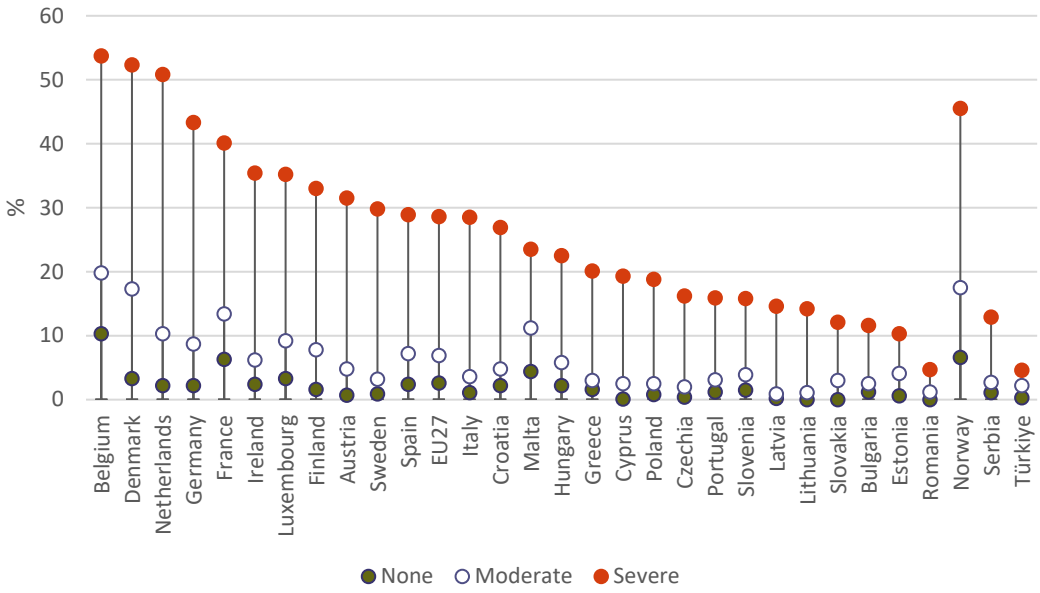
Figure 7.2. Self-reported severe difficulty with both personal care and household activities (Total Activities of Daily Living – TADL), q1 vs q5, ages 65+, 2019



Source: Eurostat, EHIS. Note: Data for Ireland, Lithuania, Luxembourg and Malta were dropped because of low reliability.

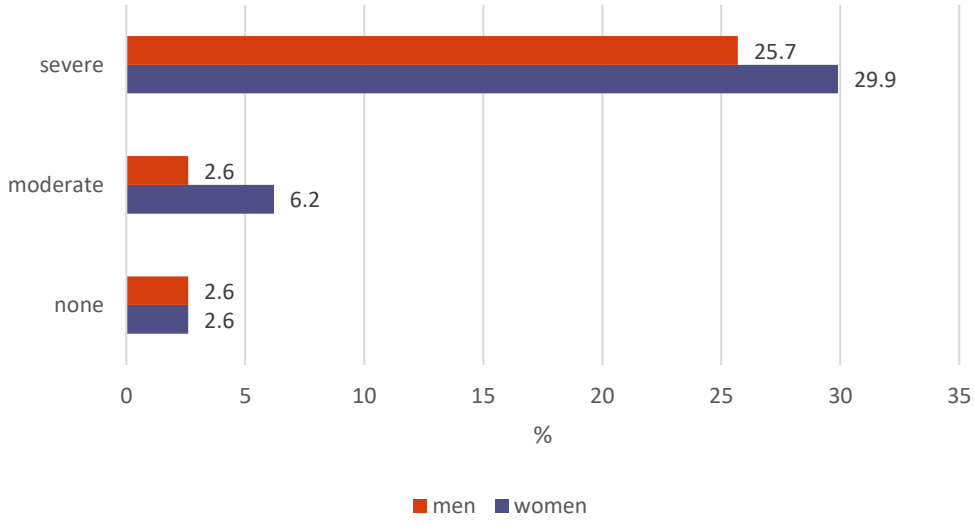
- In terms of home care use, approximately 30% of individuals aged 65 or older who experience severe difficulties with personal or household activities used home care services across the EU in 2019 (Figure 7.3). However, this percentage varies significantly between countries, ranging from 54% in Belgium to just 5% in Romania. Among those with moderate difficulties in the same age group, only 4% reported using home care services in the same year. Additionally, women report higher rates of home care use compared to men, particularly among those with moderate and severe difficulties with personal and household activities (Figure 7.4).

Figure 7.3. Self-reported use of home care services by level of difficulty with personal care or household activities, ages 65+, 2019



Source: Eurostat, EHIS.

Figure 7.4. Self-reported use of home care services by level of difficulty with personal care or household activities by gender (EU27), ages 65+, 2019

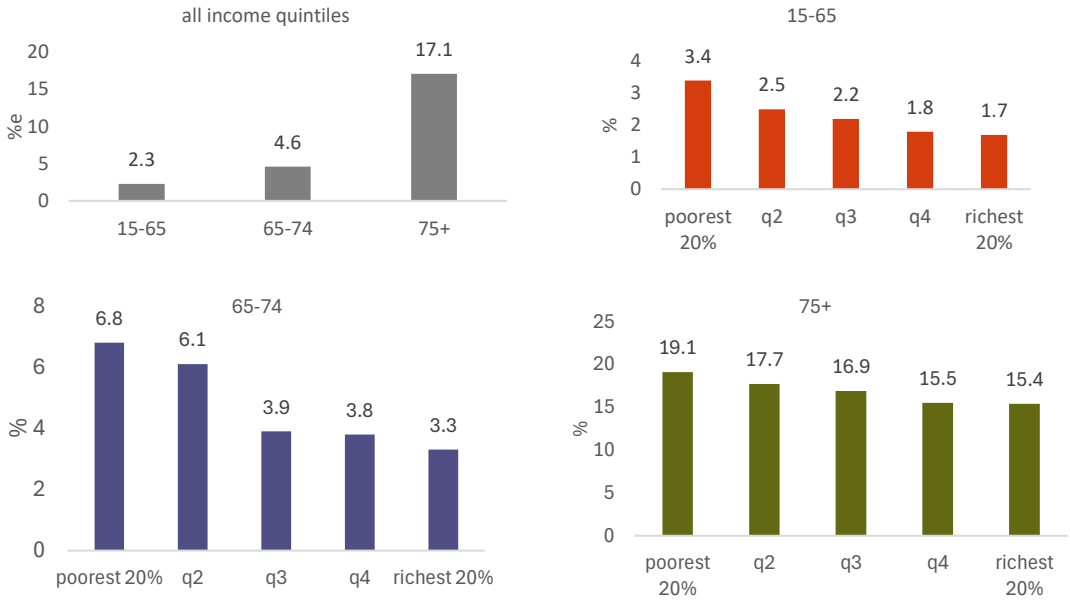


Source: Eurostat, EHIS.

- Across all age groups, a discernible “pro-poor” gradient in the utilization of home care services is evident in most EU countries and across the EU (Figure 7.5). This suggests that individuals in lower income quintiles tend to utilize home care services more frequently than those in higher income brackets. Similar inverse gradients are also observed in relation to education levels. While this finding may seem counterintuitive at first, it can be explained by reverse causality and the higher care needs identified earlier. In this context, rather than a lack of income

directly driving increased home care use, it is physical limitations in conjunction with higher care needs, reduced labour market participation, and ultimately lower income levels that drive higher home care utilization.

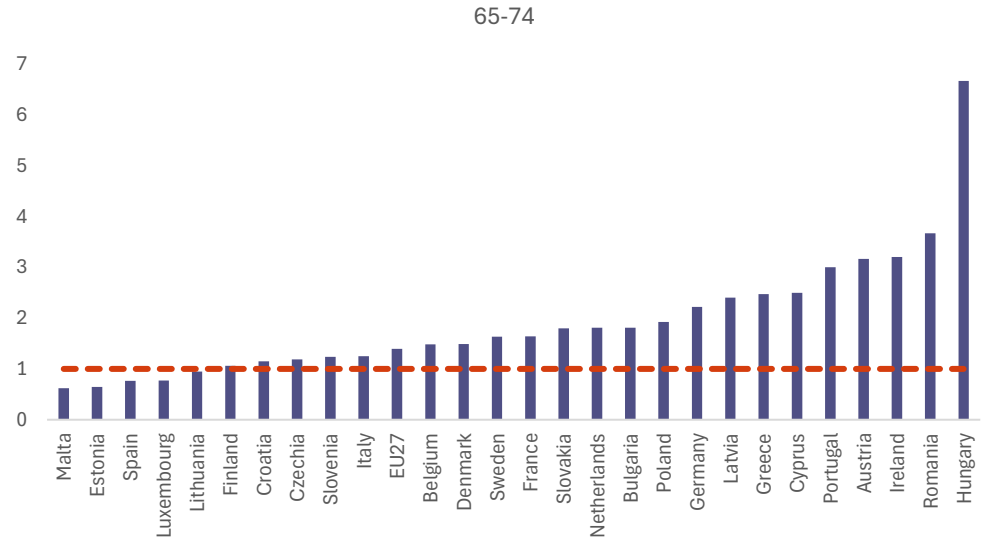
Figure 7.5. Age and income gradients in the use of home care, EU27, 2019



Source: Eurostat, EHIS.

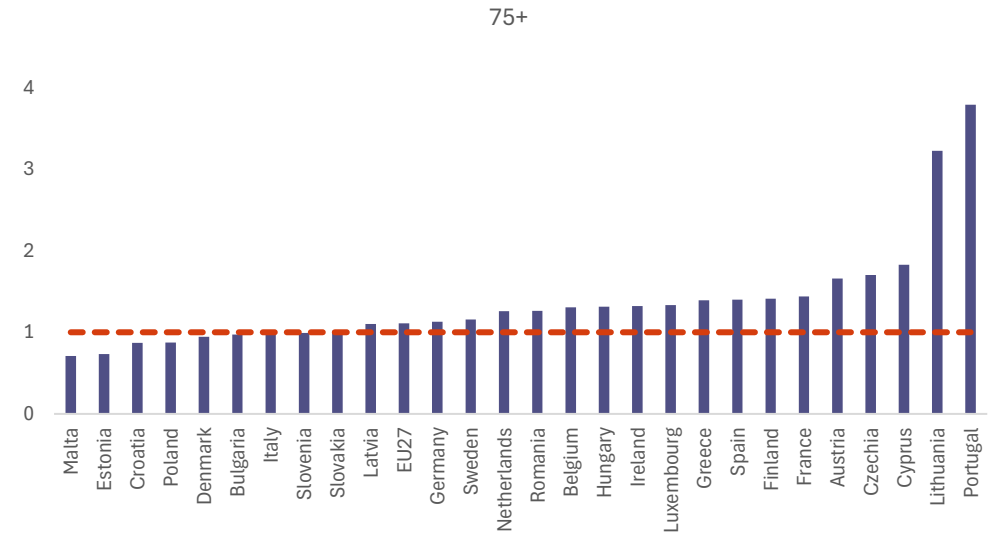
- A straightforward way to assess inequality in the distribution of home care use across income quintiles is to calculate frequency ratios between the lowest and highest income categories (known as the q1/q5 approach - shown in Figure 7.6). Values above 1 indicate that individuals in the lowest 20% of the income distribution use more home care services compared to those in the top 20%. For individuals in the 65-74 age group, this pattern holds true for all EU countries except Malta, Estonia, Spain, and Luxembourg, where home care use is more frequent among those in the top income quintile than in the bottom.
- Looking at the 75+ age group, frequency ratios decrease, and for most countries, they are closer to 1 (Figure 7.7). This suggests a more equal allocation of home care use between the first and the fifth income quintile, suggesting that, in even older age, home care becomes a necessity for individuals across the income distribution.

Figure 7.6. Frequency ratios (q1/q5) in the use of home care within the 65-74 age group, 2019



Source*:* Eurostat and authors' calculations.

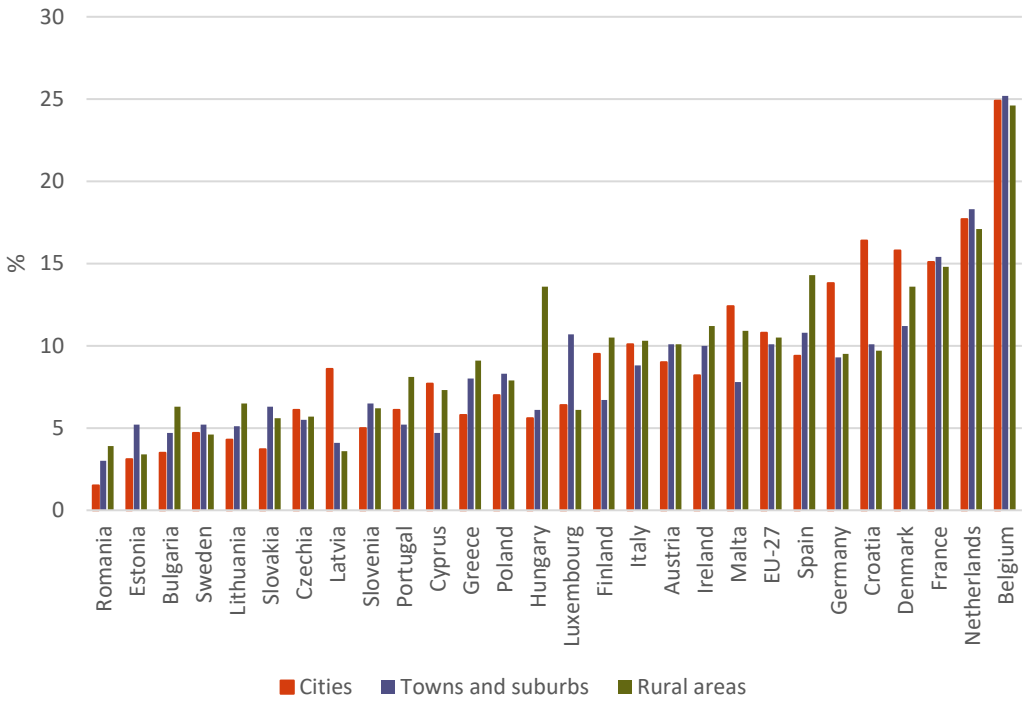
Figure 7.7. Frequency ratios (q1/q5) in the use of home care within the 75+ age group, 2019



Source: Eurostat and authors' calculations.

- At the same time, self-reported use of home care services by degree of urbanization shows relatively low variability at the aggregate EU level. Among individuals aged 65 and above, 10.8% reported using home care services in cities, 10.1% in towns and suburbs, and 10.1% in rural areas (Figure 7.8). However, in several EU countries, the use of home care is more prevalent among the rural population. This could be attributed to the higher concentration of older individuals within the 65+ age group in rural areas in these countries.

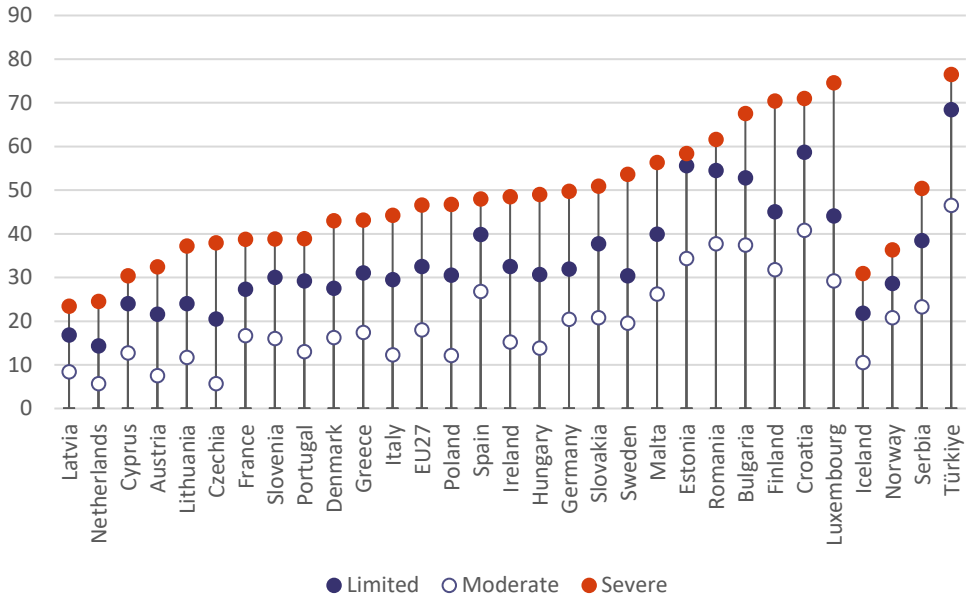
Figure 7.8. Self-reported use of home care services by degree of urbanisation, ages 65+, 2019



Source: Eurostat, EHIS.

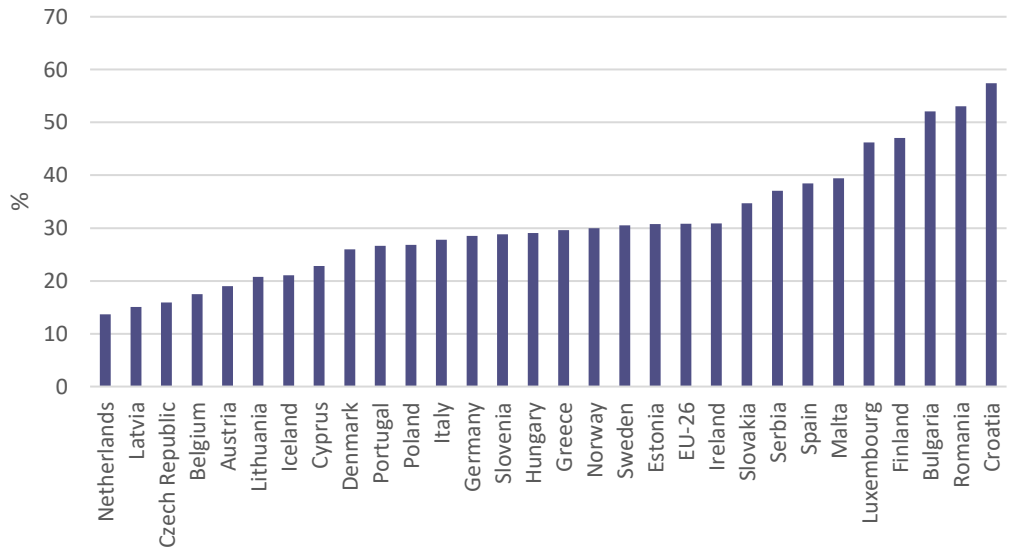
- The level of self-reported unmet needs for assistance among older individuals varies across countries and according to the level of difficulty they experience. In all EU countries, the proportion of unmet needs increases with the severity of the difficulty. At the aggregate EU level, among those with severe difficulties, approximately 47% report unmet needs, compared to 33% among those with moderate difficulty and 18% among those with limited difficulty (Figure 7.9). Unmet needs for assistance also exhibit cross-country variation, with differences depending on the type of assistance required (Figures 7.10 and 7.11). Country rankings and performance levels vary between unmet needs for personal care and domestic care activities, with the Netherlands and Latvia being the top performers across these indicators.

Figure 7.9. Self-reported unmet need for assistance by level of difficulty with personal care or household activities, ages 65+, 2019



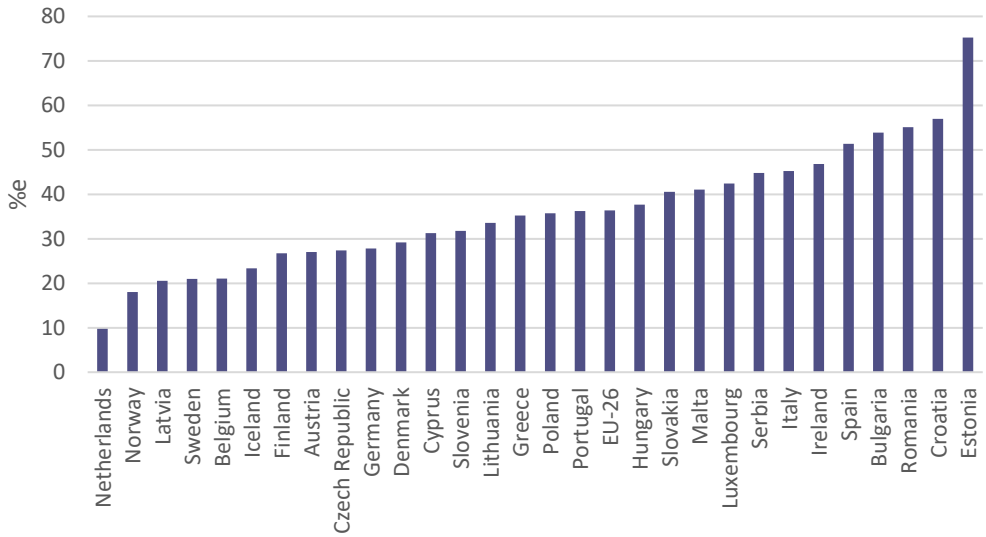
Source: Eurostat, EHIS.

Figure 7.10. Share of respondents needing help/ more help with at least one personal care activity, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019). Note: personal care activities include feeding oneself, getting in and out of a bed or chair, dressing and undressing, using toilets, bathing or showering.

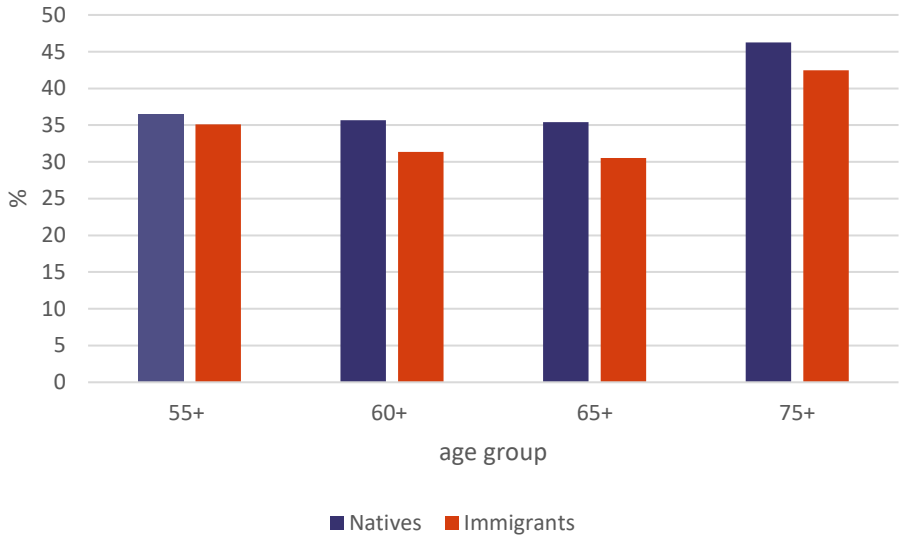
Figure 7.11. Share of respondents needing help/ more help with at least one domestic activity, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019). Note: domestic activities include preparing meals, using the telephone, shopping, managing medication, light or occasional housework, taking care of finances and everyday administrative tasks.

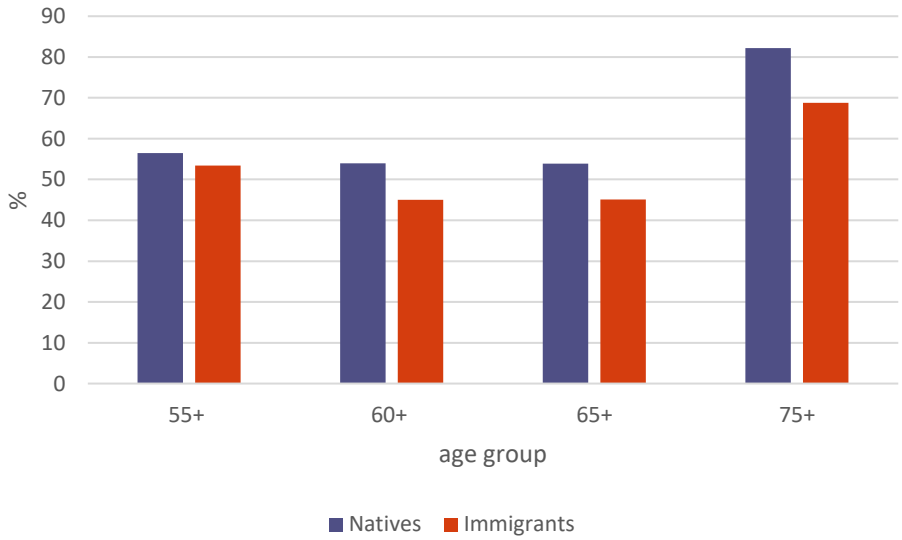
- Another important yet under-investigated area is inequalities in long-term care (LTC) based on migrant status. While there has been a growing body of research focusing on migrant workers in LTC (e.g., Leichsenring et al., 2022; Eurofound, 2020), inequalities experienced by care recipients with migrant backgrounds remain insufficiently explored. One limiting factor is sample size, even in large European surveys. Assessing inequalities in unmet needs or the use of LTC based on migrant status requires data splits by care needs, age, and migrant status, which reduces the sample size significantly and limits the robustness of cross-country comparisons. In Figures 7.12 and 7.13, the pooled EU sample is used to measure differences between natives and migrants in self-reported unmet need for personal care and the use of help for personal care, respectively. Interestingly, respondents born outside the survey country report unmet needs to a lesser extent compared to native respondents. However, they also report significantly lower levels of use of help with such activities. This paradox may be attributed to cultural factors and warrants further exploration in future research.

Figure 7.12. Share of respondents needing help/ more help with at least one personal care activity, by immigrant status, EU-26, 2019



Source: authors' calculations based on EHIS microdata, wave 3 (2019). Note: personal care activities include feeding oneself, getting in and out of a bed or chair, dressing and undressing, using toilets, bathing or showering.

Figure 7.13. Share of respondents usually receiving help with at least one personal care activity, by immigrant status, EU-26, 2019

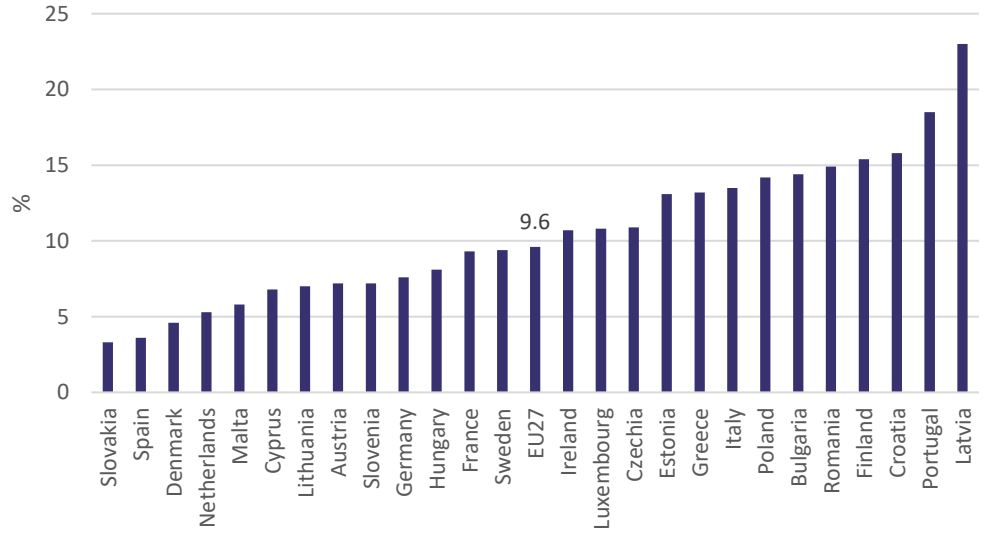


Source: authors' calculations based on EHIS microdata, wave 3 (2019). Note: personal care activities include feeding oneself, getting in and out of a bed or chair, dressing and undressing, using toilets, bathing or showering.

- Finally, when examining LTC within the broader context of healthcare provision and healthy ageing, it is important to consider unmet healthcare needs due to financial constraints among individuals aged 65 and above who are facing activity limitations. In 2019, approximately 10% of the EU population aged 65 and over

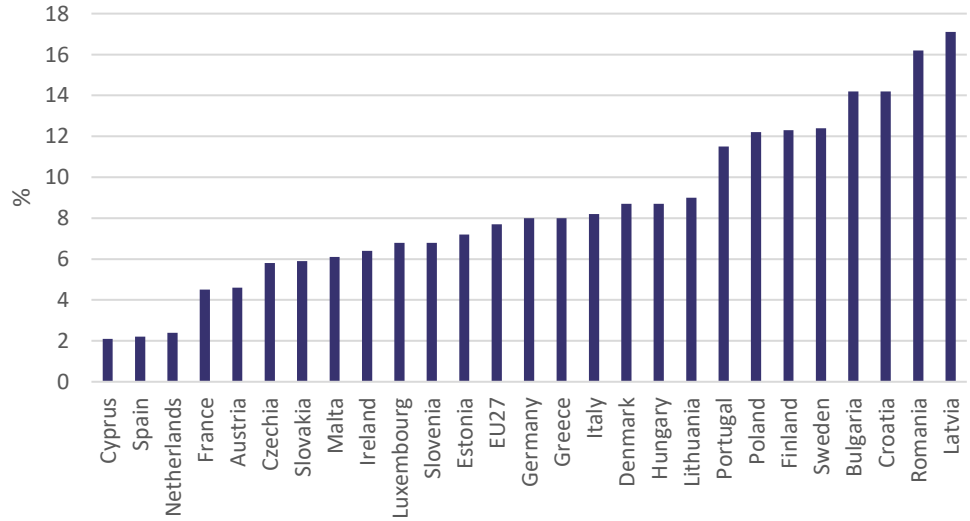
with activity limitations reported being unable to access medical care due to financial reasons (Figure 7.14). In the same group, 8% reported being unable to access prescribed medication (Figure 7.15), while unmet needs for dental care and mental health services were reported by approximately 16% and 6%, respectively (Figures 7.16 and 7.17). These unmet healthcare needs showed considerable variation across the EU, with some countries reporting unmet needs in this population subgroup as high as 17% to 40%, depending on the specific indicator.

Figure 7.14. Self-reported unmet needs for medical care due to financial reasons amongst individuals aged 65+ and facing activity limitations (some or severe), 2019



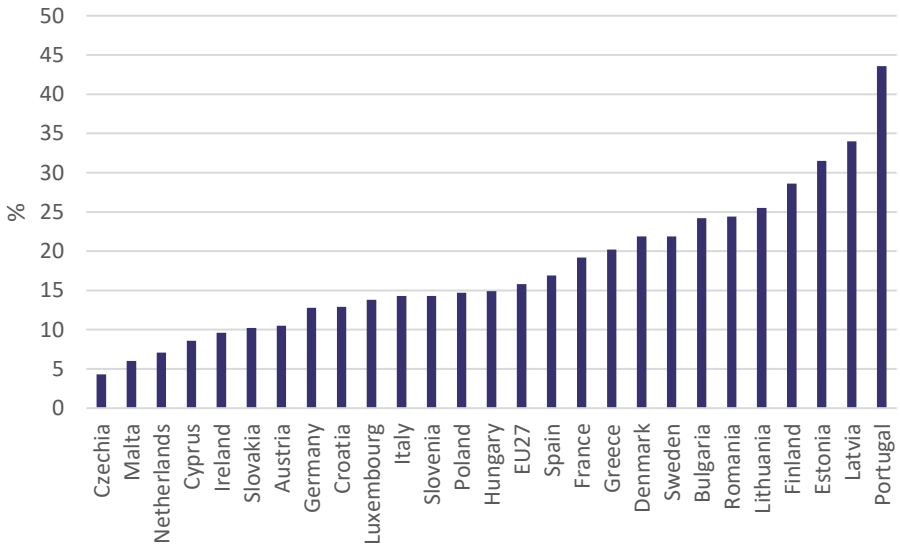
Source: Eurostat.

Figure 7.15. Self-reported unmet needs for prescribed medicines due to financial reasons amongst individuals aged 65+ and facing activity limitations (some or severe), 2019



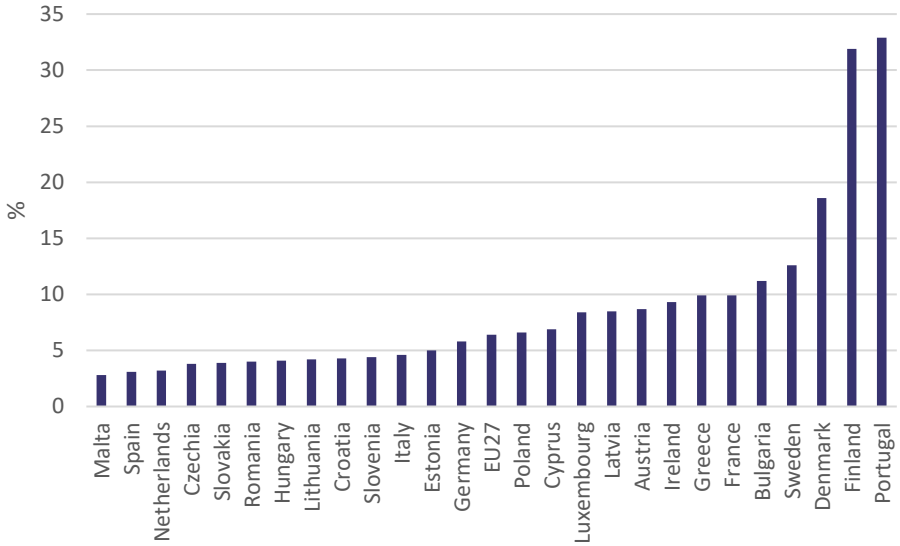
Source: Eurostat.

Figure 7.16. Self-reported unmet needs for dental care due to financial reasons amongst individuals aged 65+ and facing activity limitations (some or severe), 2019



Source: Eurostat.

Figure 7.17. Self-reported unmet needs for mental health care due to financial reasons amongst individuals aged 65+ and facing activity limitations (some or severe), 2019



Source: Eurostat.

Chapter 8
Climate change, ageing and LTC

- Climate change, ageing, and long-term care (LTC) are closely interconnected, particularly as the impacts of climate change disproportionately affect vulnerable populations, including older people. As global temperatures rise and extreme weather events become more frequent, health and care needs increase, revealing significant socioeconomic disparities. Examining these issues is crucial for developing effective policies that ensure the resilience and well-being of the entire population in the face of climate change.

- There are many different aspects and dimensions to climate change. According to a simple but comprehensive definition (OECD, 2021), the phenomenon refers to the “significant and lasting changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. While climate change can occur naturally, recent changes are primarily driven by human activities, particularly the burning of fossil fuels, deforestation, and industrial processes."

- Two main factors stemming from this definition significantly influence the health and care needs of populations. The first is climate change itself, which leads to an increased frequency of extreme weather events, such as heatwaves and floods. The second is the deterioration of the quality of essential resources, including air, water, and natural spaces, which are vital for maintaining a healthy life. Together, these factors heighten health-related risks and increase the demand for health and care services.

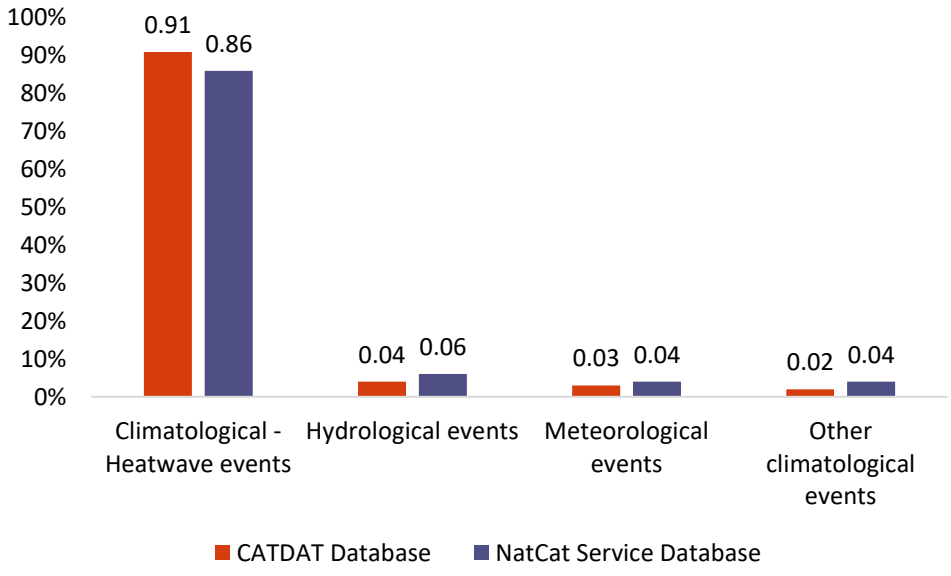
- While climate change poses a challenge to everyone, the degree of vulnerability to it varies based on individual physiological and socioeconomic characteristics. Young children, older adults, pregnant women, outdoor workers, individuals with chronic illnesses, and those with limited access to socioeconomic resources are identified as particularly vulnerable groups (Ganzleben & Kaźmierczak, 2020; WHO, 2021a).

- Individuals with long-term care needs, especially older individuals, are particularly susceptible to the effects of heat and pollutants due to pre-existing chronic conditions and generally poorer health status (WHO, 2021a). Among them, high temperatures significantly increase the risk of fatal heat exhaustion and heatstroke. Additionally, conditions such as Parkinson’s and Alzheimer’s can impair their ability to regulate body temperature (Eggenberger et al., 2021; Simoni et al., 2015). Medications commonly taken by older adults may also induce dehydration, dizziness, and other complications, further diminishing their capacity

to cope with extreme heat (Puga et al., 2019; Shoair et al., 2011). These vulnerabilities are exacerbated for individuals with reduced mobility, frailty, and social isolation (Koppe et al., 2004; Semenza et al., 1999).

- Although consistent reporting of heat-related mortality in Europe is lacking, it is estimated that approximately 90% of fatalities caused by weather and climate events in the broader European region over the past 40 years (1980–2020) are attributed to heatwaves (Figure 8.1). Despite the challenges in projecting the deterioration in mortality and morbidity due to climate change across Europe, it is expected that population ageing will be a crucial driver for heat- (and cold-) related deaths in the future (Chen et al., 2024). Studies conducted in individual countries indicate that individuals aged 75 and over face a higher all-cause mortality risk to changes in 1°C in seasonal mean temperature, while those aged 85 and above bear a greater burden of temperature-related mortality compared to the 65–84 age group (Figueido et al., 2024, Petkova et al., 2014). Furthermore, climate change has been linked with other health-related risks, including the emergence or resurgence of communicable diseases, such as the West Nile virus, in recent years (Semenza et al., 2022; Van de Vuurst & Escobar, 2023).

Figure 8.1. Fatalities associated with natural disasters and catastrophes in EEA member countries in the period 1980-202

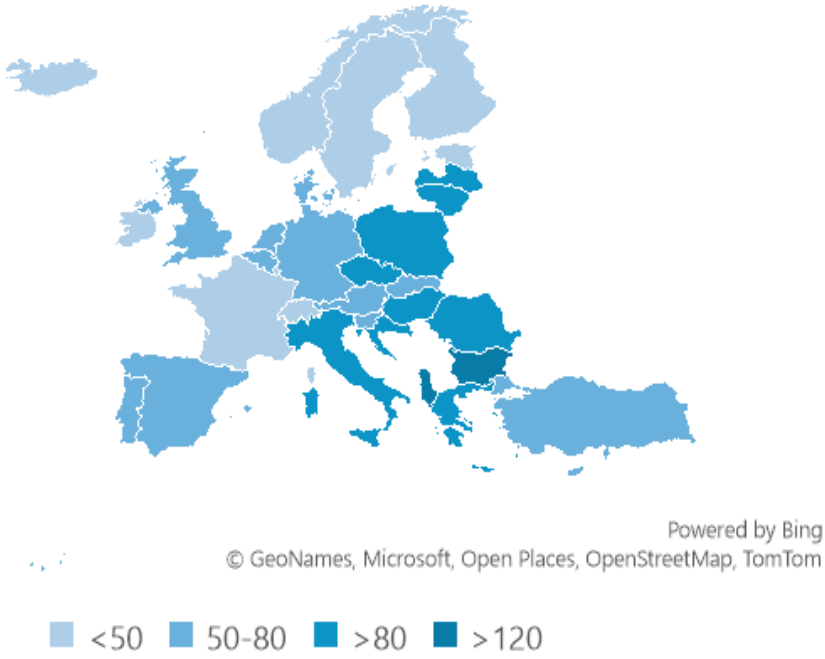


Source: European Environment Agency (EEA), 2022.

- In addition to changes in climate and average temperature, air pollution also increases the risk of morbidity and premature deaths, particularly from respiratory diseases, lung cancer, cardiovascular conditions, and other related illnesses (OECD, 2021b). As with heat, pre-existing conditions can worsen with

exposure to environmental pollutants,[5] increasing the vulnerability of older individuals and other people with care needs. According to estimates, exposure to the key air pollutant known as fine particulate matter (PM2.5)[6], was the factor responsible for the premature death of more than 300 thousand people across the EU in 2019 (EEA, 2021). Mortality rates were the highest in Central and Eastern European countries and significantly above the EU average. Conversely, Nordic countries and Ireland had the lowest rates (Figure 8.2). Despite the high mortality burden from air pollution in many countries, reduced emissions of PM2.5 and other key pollutants from transport and energy have improved air quality in Europe, resulting in fewer deaths (EEA, 2021). From 2009 to 2019, premature death rates due to PM2.5 declined by over 20% on average across the EU (Figure 8.3).

Figure 8.2. Premature deaths due to air pollution PM2.5, 2019



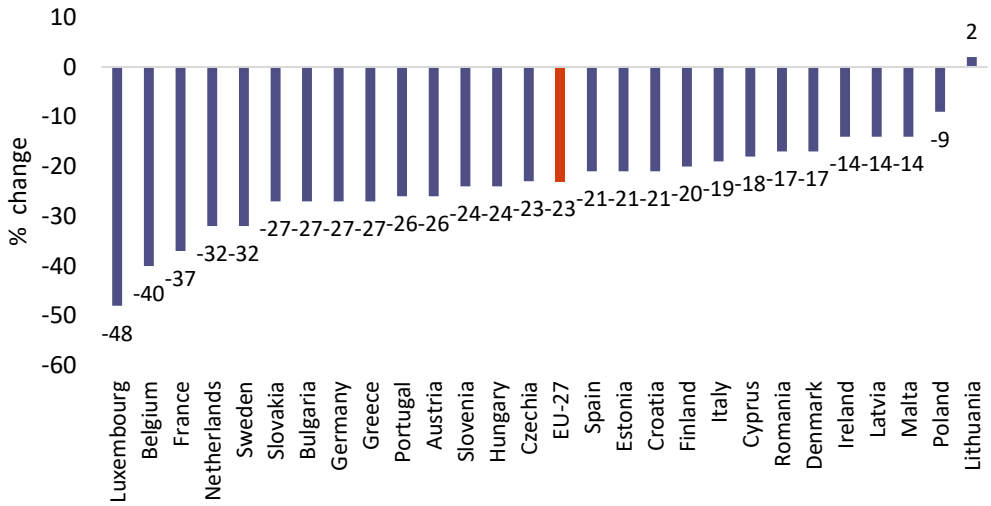
Source: OECD, 2022; González Ortiz et al., 2021.

5 Air pollution and climate change are closely linked because many air pollutants, like carbon dioxide (CO2) and methane (CH4), are also greenhouse gases that contribute to global warming, while others, like particulate matter, result from the same fossil fuel combustion processes that drive climate change.

6 Fine particulate matter (PM) consists of tiny solid or liquid particles, such as dust, smoke, soot, pollen, and soil, that are released into the air primarily through fuel combustion activities. PM2.5 specifically refers to particles that are less than 2.5 micrometres in diameter, which can easily infiltrate deep into the respiratory system. Exposure to PM2.5 is associated with various health problems, including diseases and fatalities related to the heart, lungs, and neurological or metabolic systems.

- In addition to causing premature deaths, air pollution contributes significantly to illness and long-term health conditions, which not only leads to personal hardship, but also places a heavy financial burden on healthcare systems. According to the European Environmental Agency (EEA), in 2019, PM2.5 exposure was responsible for 175,702 years lived with disability (YLDs) due to chronic obstructive pulmonary disease across 30 European countries (EEA, 2022). Nitrogen dioxide (NO2) exposure in 31 European countries accounted for 175,070 YLDs from Type 2 diabetes. Additionally, in 23 European countries, 12,253 hospitalizations were recorded due to lower respiratory infections caused by acute ozone exposure.

Figure 8.3. Change (%) in premature deaths due to air pollution (PM2.5) from 2009-2019



Source: OECD, 2022; González Ortiz et al., 2021.

- A significant and often overlooked intersection is that of climate change and gender – especially in the context of ageing and LTC. When considering the link between climate change and care needs, women are, and will increasingly be, disproportionately impacted. Despite having a longer life expectancy than men, women generally experience higher morbidity rates throughout their lives (e.g., Patwardhan et al., 2024). One reason for this is that women are more likely to seek medical attention and use health services, leading to more diagnoses. Additionally, their longer life expectancy contributes to a greater prevalence of age-related conditions.
- Another set of factors contributing to increased morbidity among women relates to social determinants of health, such as lower socioeconomic status and social isolation. Women are significantly more likely to live alone in old age. Although the gap between older men and women living alone is narrowing, men tend to remarry more frequently after divorce or widowhood. This higher rate of isolation

makes older women particularly vulnerable to the health risks posed by climate change. Studies show that women experience higher morbidity rates during and after environmental and natural disasters compared to men, and they often face greater challenges in recovery and survival (Erman et al., 2021; Peterson, 2007). The negative impacts are especially severe in impoverished regions affected by such disasters. A notable example is the 2004 Indonesian tsunami, which resulted in the deaths of four times as many women as men (MacDonald, 2005). Compared to men, women and children are over 14 times more likely to be killed by climate-fuelled disasters (Care-CCRP, 2020).

- Elsewhere in the report, it was highlighted how women play a critical role in the LTC sector, both formally and informally.[7] Despite their crucial contributions, women remain underrepresented in decision-making processes related to climate change and environmental policy in most EU countries (EIGE, 2024). This imbalance is problematic, as women caregivers are directly affected by the increasing care needs driven by climate change, yet they have limited influence over the policies designed to mitigate or adapt to these challenges. Elevating women's voices in environmental decision-making could help address the intersection of climate change and long-term care more effectively, ensuring that caregiving perspectives are considered in climate adaptation strategies.

7 In addition, an increasing number of studies revealing the gender disparity in emissions responsible for climate change. For instance, a study from Sweden has shown that men's consumption patterns led to 16% higher greenhouse emissions than those of women (Carlsson Kanyama et al., 2021). Another study from Spain has linked the proportion of women in the household with lower carbon intensity (Osorio et al., 2024).

Chapter 9
Technology, Ageing and LTC

- This section examines the intersection of technology, ageing, and long-term care (LTC) – a topic of growing importance amidst the ongoing technological revolution, often referred to as the Fourth Industrial Revolution. This era is characterized by the rapid integration of advanced technologies such as artificial intelligence (AI) and robotics into various sectors.

- This intersection is particularly relevant today, as these technologies hold the potential to transform the provision, accessibility and quality of care. While much attention has been devoted to digitisation and digitalisation in healthcare – evidenced by the proliferation of concepts like eHealth (electronic health) and mHealth (mobile health) – digital technologies are increasingly making inroads into the field of LTC. As these innovations continue to evolve, their role in LTC is expected to expand further in the coming years (e.g., Leite et al., 2023).

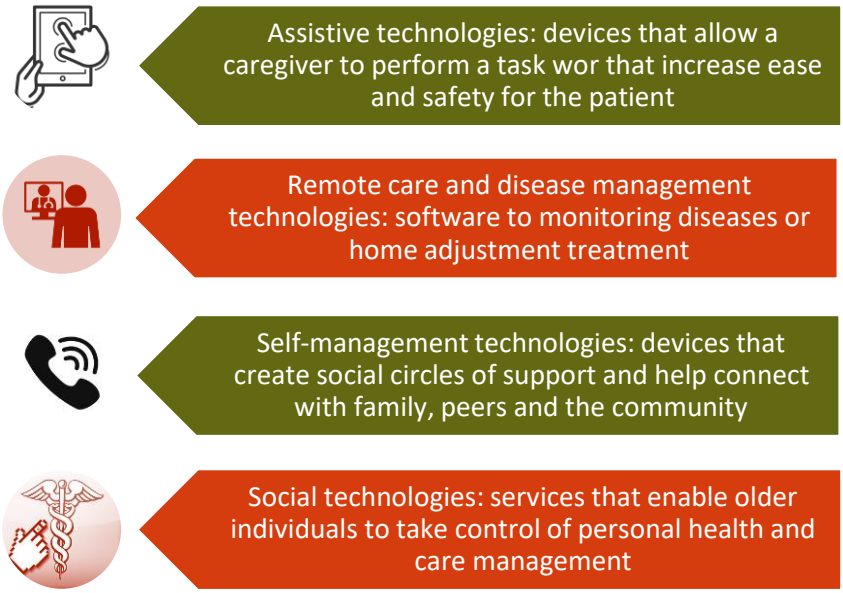
- Three key issues stand out as critical to this discussion: (i) the types, uses, merits and limitations of these technologies, (ii) the digital skills of care workers and care recipients, enabling them to effectively utilize new tools, and (iii) the ethical considerations surrounding the growing integration of technology in the long-term care sector.

- Technologies with potential applications in the LTC sector span a broad spectrum, ranging from basic, widely accessible tools already in use – such as smartphones, alarm systems, sensors, and expanded internet connectivity – to advanced systems that can transform care delivery, including assistive technologies that enhance mobility or support daily living, as well as robots designed for companionship or caregiving.

- According to the OECD (2020), technologies supporting the broader care sector can be grouped into four main categories: (i) assistive technologies, such as devices that help caregivers perform tasks more easily or increase patient safety; (ii) remote care and disease management technologies, which facilitate monitoring and care from a distance; (iii) self-management technologies, which help older adults maintain social connections and link with formal and informal caregivers, including family and community members; and (iv) social or telehealth technologies, which empower older persons to take greater control of their personal health and care management (Figure 9.1). These technologies vary

significantly in scope and complexity, reflecting the diverse needs, settings and resources within the sector.[8]

Figure 9.1. Categories of technology available to support LTC provision



Source: OECD, 2020 (based on a long-term care questionnaire and interviews conducted in 2018).

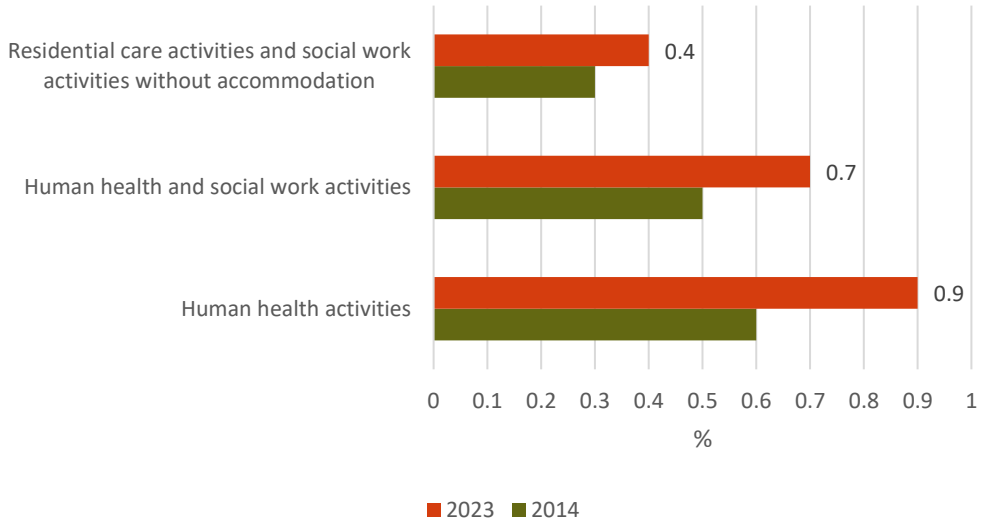
- The adoption of digital technologies in the long-term care sector carries significant implications for both care providers and recipients. For providers, there is a growing recognition at the EU level of the importance of digital skills among health and care professionals. In response to this, a broad coalition of LTC service providers, social partners, and education and training organizations, supported by the European Commission, launched the Skills Partnership for Long-Term Care. This initiative aims to train at least 60% of long-term care professionals annually in areas like digitalization and person-centred care by 2030. By achieving this target, an estimated 3.8 million LTC workers would receive training each year, equipping them with the competencies needed to effectively incorporate new technologies into their practice (European Commission, 2023).
- The importance of digital skills in the LTC sector is further highlighted by a 2016 survey conducted by the European Health Parliament, an interest group of healthcare professionals. The survey revealed that 79% of health and care professionals believed that eHealth and mHealth technologies had already or

8 According to an alternative categorisation (Leite et al., 2023), digital technologies in LTC can be divided between three generations: (i) established digital technologies (e.g., electronic patient records, mainstream technology, GPS systems etc.), (ii) next generation digital technologies (such as smart homes, voice assistants and service robots) and, (iii) potential future digital technologies (including virtual and augmented reality technologies, AI-based technologies or autonomous robots).

would soon significantly impact their careers. However, despite this awareness, 61% of respondents reported never having received formal training in digital skills, exposing a critical gap in their preparedness for the ongoing digital transformation in healthcare and long-term care settings (European Health Parliament, 2016). In response to this gap, the European Federation of Nurses Associations has consistently advocated increased investment in training nurses in digital skills and modernizing curricula to meet the evolving demands of digitalization in care (European Federation of Nurses Associations, 2019, 2024).

- Moreover, data indicate that ICT professionals are underrepresented in the health and care sectors. As of 2023, only around 2% of ICT professionals were employed in health and care sectors across the EU, marking only a modest increase from 1.4% nearly a decade earlier (Figure 9.2). Out of a total of 40 sectors included in the classification, these sectors occupied three of the bottom five spots in the ranking, alongside accommodation services and the agriculture sector. This low percentage reflects both the limited capacity for automation within the LTC sector and the relatively recent adoption of digital and other technologies in this field.

Figure 9.2. Employed ICT specialists by NACE Rev. 2 activity (% of total)

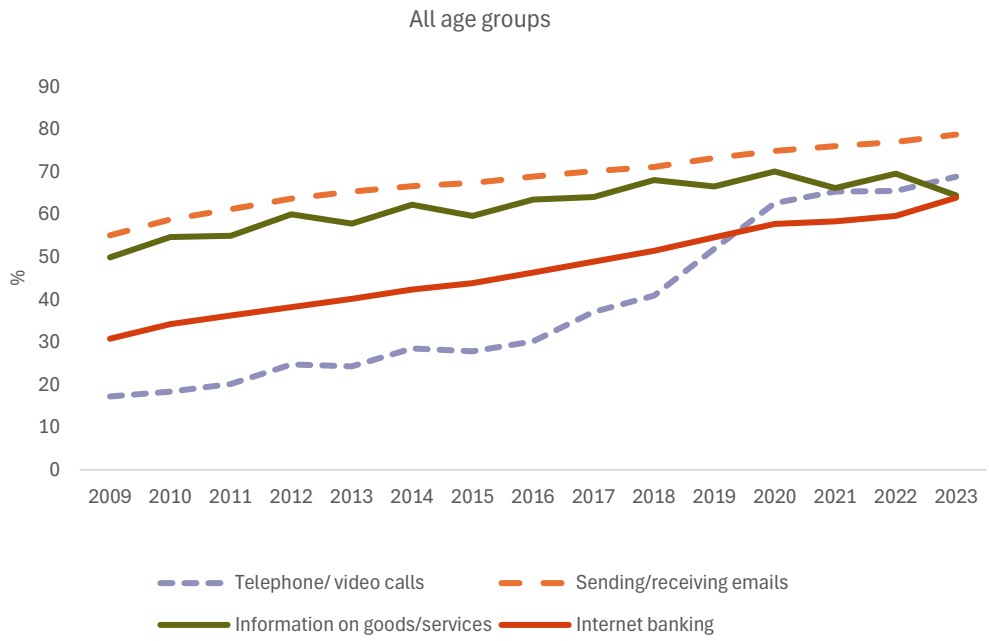


Source: Eurostat.

- In this context, digital skills are becoming increasingly important. For older individuals, their ability to engage with digital tools has the potential to enhance their well-being, particularly by enabling their independent living at home and increasing their autonomy in their everyday lives. Digital literacy can improve access to health and long-term care by enabling health self-monitoring and facilitating timely access to necessary. It also has the potential to help them maintain meaningful connections with family and caregivers and help them reduce social isolation (Sen et al., 2022).

- Despite their significant role in realising these benefits, a substantial gap persists. Data indicates that approximately 60% of persons aged 65-74 lack the ability to use the Internet for basic tasks, such as searching for information on goods or services, internet banking, or making telephone and video calls. Additionally, about 50% of individuals in the same age group do not use the Internet to communicate via email (Figure 9.3).[9]
- Despite these challenges, it is encouraging to note that digital skills among older adults have expanded rapidly over the last decade. Initiatives aimed at increasing digital literacy, along with the growing availability of user-friendly technologies, have contributed to this trend. As older individuals continue to develop their digital skills, the potential for technology to facilitate independent living and improve their overall quality of life becomes an increasingly attainable goal.

Figure 9.3. Internet use by age in the EU27 (individuals in all age groups vs. individuals aged 65-74), 2009-2023



Source: Eurostat.

9 To ensure accessibility, it is important that in parallel to digital pathways, services are also available for those who do not have digital skills.

Figure 9.4. Internet use: making an appointment with a practitioner via a website (% of individuals aged 65-74), 2012 and 2022

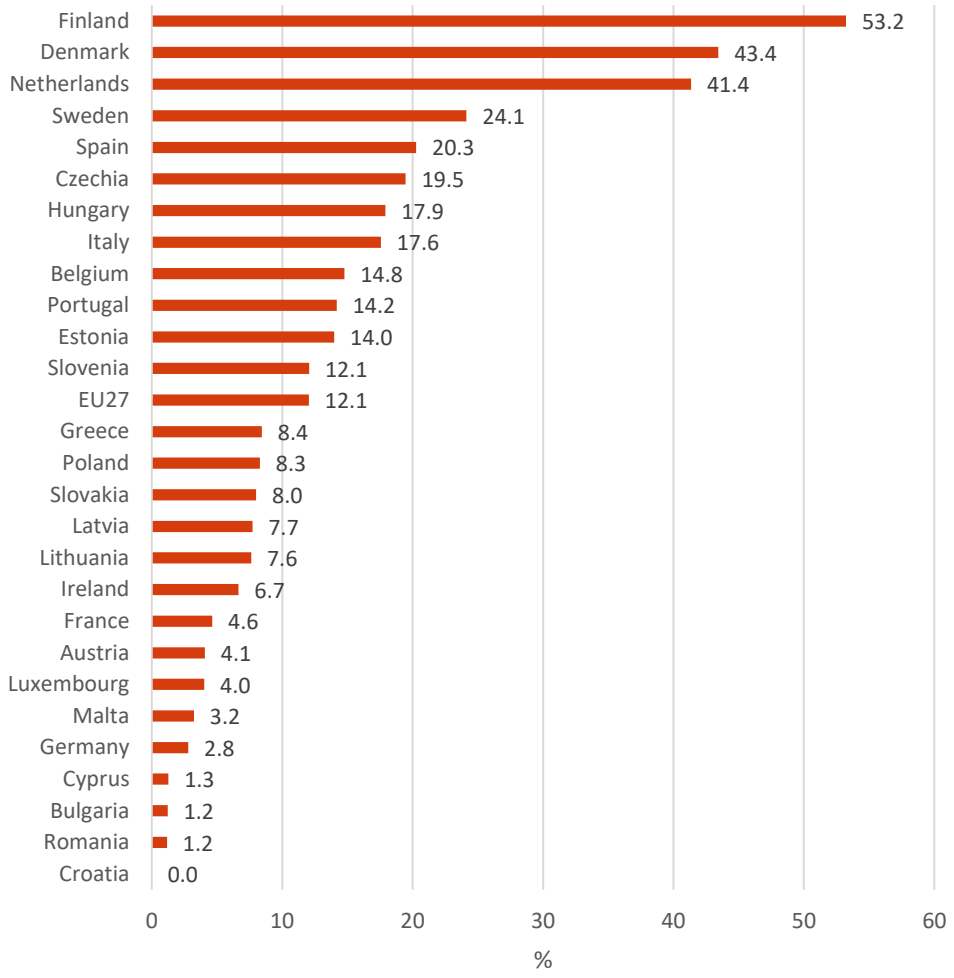
Source: Eurostat.

Figure 9.5. Internet use: seeking health information (% of individuals aged 65-74), 2013 and 2023

Source: Eurostat.

- Similarly, the data reflects that only 12% of individuals in the same age group utilized the Internet to access health services via web applications, opting for this method over traditional visits to healthcare providers (Figure 9.6). This statistic is again lower compared to 18% of the total population. E-access for health services varies significantly by country, with rates dropping below 1% in Croatia and reaching 53% in Finland. Such findings underscore the need for targeted efforts to enhance digital health literacy among older adults, ensuring they can take full advantage of the benefits that technology offers in managing their health and accessing care services.

Figure 9.6. Internet use: for other health services via a website or app instead of having to go to the hospital or visit a doctor (% of individuals aged 65-74), 2022



Source: Eurostat.

- Barriers to the use of digital technologies in LTC include a lack of funding (Braeseke et al., 2020), limited oversight of available technologies due to continuous technology development (Freedman et al., 2005) and a lack of integration between providers (Lolich et al., 2019). Concerns about depersonalisation of care among professionals have also been expressed (Lohlich et al., 2019). The lack of digital skills and the age structure of the LTC workforce may also contribute to the slow adoption of digital technologies (OECD, 2020), and workers without digital skills may be discouraged from joining the care workforce if digital skills are required (Koch, 2021).

- While the integration of digital technologies in the LTC sector offers numerous benefits, it is crucial to acknowledge potential disadvantages, risks, and ethical considerations that must be addressed. First, there is currently limited information on research and development in this area, with available data primarily derived from industry surveys. Simultaneously, there is a growing

recognition that development processes must be inclusive, considering the needs, well-being, and safety of all individuals involved. Existing research includes studies on participatory technology development involving care professionals (e.g., Vaalburg et al., 2024).

- Accessibility and cost-effectiveness are critical concerns, especially as a paradigm shift could exacerbate socioeconomic and health inequalities between those who can afford these technologies and those who cannot. While digital solutions are widely acknowledged as potential tools to address staff shortages in the sector, poorly designed technologies can increase staff workloads, worsen labour conditions, and reduce both efficiency and quality of care (Kaihlanen et al., 2023; Nadav et al., 2021).
- Though automated technologies are unlikely to entirely replace human care due to the personal and human-centred nature of LTC work, it is essential to consider the reasons behind the workforce's reluctance to embrace new tools, as well as the transitional costs in terms of time and resources. Additionally, there remains a risk of increasing social isolation among care recipients (Chen and Schultz, 2016) and altering the core values of care, which emphasize empathy and personal connection (Frennert, 2009). Many aspects of care cannot be “taken over” by technology and addressing these practical and ethical concerns is vital to ensure that technological advancements in LTC enhance care delivery and quality without compromising its essential human elements.

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