



Policy Roadmap Austria

InCARE Short Report

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**Supporting INclusive development of community-based
long-term CARE services through multi-stakeholder
participatory approaches**



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InCARE (Supporting Inclusive development of community-based long-term CARE services through multi-stakeholder participatory approaches) aims contribute to the design of a coordinated approach to the development of national long-term care policy and care services at local and regional level, by establishing socially innovative and participatory decision-making processes. We work with care users, care providers and policymakers in Spain, Austria and North Macedonia to design, implement and scale-up innovative care services.

More information on the project's website: <https://incare.euro.centre.org/>.



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Short Report

Introduction

This policy roadmap presents findings from the InCARE project, which has two aims: implementing socially innovative pilot projects in Austria, North Macedonia and Spain and contributing to the development of the long-term care systems in all three countries. To achieve the latter, InCARE has had policy partners involved in all three countries from the project application stage and throughout. The pilot projects themselves have certainly provided inputs in the process of developing the long-term care systems further. They were developed through a Theory of Change process which meant that the innovations were adapted to the local context with input from a variety of stakeholders. Beyond the pilot projects, InCARE also contributes to the evidence base for developing national long-term care systems further. This included three different elements: data collection through an online survey on attitudes, experiences and expectations of long-term care, analysis of the status quo through situational and SWOT analyses, and projections of future costs of long-term care based on the expected service use. This policy roadmap presents 11 recommendations for the future development of the long-term care system in Austria based on all these activities, including a detailed annex on the calculation of costs. The policy roadmaps for North Macedonia and Spain will be published as separate files.

Summary of findings from the InCARE survey for Austria

Based on results of the InCARE survey¹, there are substantial availability barriers and cost barriers to accessing care, particularly in rural areas and for lower income groups. The large share of care provided by informal carers, of whom a majority are women, affects their health, well-being and economic opportunities negatively. While informal caregivers often feel obligated to provide care, Austrians report a preference for enhancing formal care provision in the community, more involvement of the state in the provision and financing of care and expanded social protection for long-term care. Confidence in the ability of the long-term care system to address future needs and preferences is at low levels.

Short summary of the Austrian pilot project

The Austrian InCARE pilot project focused on strengthening local networks for older people with care needs to improve integrated care. The Austrian InCARE pilot project

- developed and implemented trainings for professional carers to better support informal carers;
- provided an impetus for improved clarity of supply structures through stakeholder workshops and an information fair;
- co-produced different events to reach individuals who currently do not use professional care support including a regular café for people with dementia and their informal carers;
- tested an adapted approach in consulting those with care needs;
- developed an easy to read management summary of terms and conditions of mobile care support;
- published a list of demands for the strengthening of mobile support structures; and
- implemented a range of activities to strengthen knowledge exchange locally, nationally and internationally.

¹ The InCARE survey is based on 404 responses in a convenience online sample in which older people, women and those with higher education degrees are over represented.

Challenges in the Austrian long-term care system

Four different challenges in the Austrian long-term care system were identified through the InCARE SWOT analysis. The care allowance, based on a needs assessment of hours of care needed, is not always sufficient for covering care expenses. Staff shortages put the long-term care system under pressure and exacerbate the strained working conditions in the sector. There are examples of quality standards and quality management for different care settings (e.g. voluntary national quality certificate for residential homes, visits to care allowance recipients). However, these could be scaled up. Despite initiatives to develop the system further, there is a lack of integration of health and social care services.

Facilitating and hindering factors for sustainability and potential scale-up of social innovations in the long-term care system

The Austrian long-term care system is characterized by a strong regionalisation and multi-level governance. This has both positive and negative consequences. On the positive side, the regionalisation allows to take the local context and needs of the local population better into account. It is easier to implement pilot projects and therefore there is more potential for experimenting with innovations. At the same time, using the potential of experiences with innovations relies on a culture of communication. These experiments have to be evaluated, adapted and, if appropriate, scaled up to learn from experiences in other regions. The disadvantages are linked to the lack of such a culture of communication. The project has shown that stakeholders are often acting within their scope of activities without considering links and interfaces with each other, be it in geographical terms or regarding users' needs. For instance, different stakeholders with counselling functions need to enhance their focus on users' needs, and bureaucratic procedures have shown potentials for more efficiency.


The Austrian pilot has also made visible that there are potentials of innovations by involving all relevant stakeholders and developing person-centred care approaches. These opportunities, however, cannot unfold if proposals for collaboration are not taken up and pilot projects are not scaled up. Another negative outcome of the regionalisation is that individuals with care needs are confronted with very different offers, rules and 'prices' (out-of-pocket payments) of care provision from region to region. Varying prices of similar services can be identified across Austria, though benefits such as the LTC allowance are standardised across the country, as well as the overarching legal framework. Multi-level governance has the advantage that there are responsibilities for different aspects of long-term care on different levels, but the disadvantage is that, for example, innovations are not easily taken up because different stakeholders hesitate to carry the costs of the implementation of new services as these could also be covered by other levels or stakeholders.

During the lifetime of InCARE, it must be noted that the COVID-19 pandemic had significant impact on policy development in the area of long-term care. As one side effect, 'community nursing' was piloted with funding from the EU's Recovery and Resilience Facility. This new context facilitated new opportunities for networking and helped in terms of raising awareness on gaps in the service chains, e.g. at the interfaces between hospitals and post-rehabilitation support, or between primary care and home care services.

Undoubtedly, the pandemic accelerated the predicted care crisis. The publication of the findings of the Austrian Task Force on care provision in January 2021 built on an extensive pre-Covid 19 participatory process. It is a practical guideline with valuable recommendations for future reforms.

Summary of the projections

A key aspect to carry out reforms and expand person-centred services that are delivered in a more integrated way will depend on the financial and human resources needed to satisfy the growing demand of long-term care over the next decades. This study provides evidence that if rates of care dependency remain constant into the future, population ageing and changes in household composition will result in a substantial increase in the demand for care, both formal and informal. The higher life expectancy



enjoyed by men will contribute to this increase in demand for care, as well as the growth in the population of the oldest old with highest care needs, especially among older women.

To keep up with the projected increase in demand for care services, a substantial increase in public LTC expenditure will be required, independent of the scenario. To maintain the current rates of care services, an additional 3,7 billion euros will be needed annually by 2035, alongside an increase of nearly 28.000 additional LTC workers. Most of this increased in expenditure would be spent on residential care and the LTC cash benefit. LTC spending will comprise an increasingly larger share of GDP, which raises concerns about the fiscal sustainability of care. Given difficulties recruiting and retaining with the LTC sector, it will likely be a challenge to increase the size of the LTC workforce in the future to meet future demand. These findings are emphasizing the need for action now to ensure the LTC system is able to address care needs in the future.

Estimating alternative scenarios suggests that only investing in the prevention and delay of care needs would contribute to substantially reducing this additional expenditure needed per year to 2,7 billion euros. Projecting alternative scenarios where the state invests in home care-based services would also be costly, comparable to that for residential care, yet more in line with the preferences of Austrians, as identified in the InCARE survey. Reduced reliance on informal carers in future would also place more financial burden on the state. Live-in care would remain a financially sustainable option for addressing additional demand for care in future, but measures must be taken to ensure a certain standard and suitable working conditions for live-in carers. In all scenarios, wages for care workers comprise the majority of costs of care. Increasing wages permanently would substantially increase public expenditure on LTC, although must be considered as an option for combatting challenges with recruitment and retention of care workers.

Recommendations

Taking into consideration the findings above, we suggest the following recommendations.

Public debate:

- **Developing the public debate about care further, involving those with care needs and their informal carers (e.g. right to good quality care).** Higher level discussions are needed to discuss the intended direction of the care system moving forward, taking into consideration the sustainability of the system, current issues, and aspirations of stakeholders. These discussions also need to include normative considerations in terms of the roles and responsibilities expected of families and informal carers versus the state and the financial obligations care users and their families have to cover care costs. Moreover, the public debate on care should be developed further to strengthen the understanding of the complexity and opportunities inherent in well-developed long-term care systems.

Development of new and expansion of existing services:

- **Developing a culture of communication which uses the advantages of the current structure (strong regionalisation and multi-level governance), improving learning from experiments**
A variety of stakeholders are positioned to contribute to a culture of communication which encourages sharing of information and learning from experiments. This would require shaping an environment where stakeholders want to share what they have learned through their own experiences. Further investment in knowledge exchange and efforts to strengthen sustainability could turn the strong regionalisation and multi-level governance into an advantage.
- **Involvement of stakeholders including those with (future) care needs and informal carers in the development of services.** The preferences and needs of individuals with care needs should be a paramount consideration in the process of planning and development of care systems and services. As care services are designed to address the care needs of users themselves and to contribute to improving their quality of life, it is essential that care users' voices are incorporated in the design and development of services.
- **Improvement of local networking.** Local actors have substantial technical and practical experience and are best placed to understand the functioning and structure of the local system, opportunities in place, current challenges, and the needs of care users in the community. In practice, many local care providers are implementing innovative solutions, albeit with little recognition or mechanisms for raising awareness of their efforts. At the same time, working silos minimize the possibility for collaboration and for making care processes more efficient for care users. Increasing opportunities for networking at the local level can be beneficial in facilitating the exchange of best practices, better tailoring the structure of the system locally to care needs, and in making care processes more efficient.
- **Funding research projects to develop long-term care systems further.** InCARE demonstrated how research projects can make a meaningful intervention in long-term care systems locally, providing the resources to identify unmet needs and future potential for improving the wellbeing of people with care needs and their carers. Research funding allows to work across existing provision structures and organisations. International collaborations such as InCARE further provide a suitable environment to reflect upon the local experiences.

Addressing future needs in terms of financing long-term care:

- **Invest in prevention.** Investing in measures for prevention and delaying the onset of care needs can reduce the demand for care in the long run, therefore alleviating public LTC expenditure. Efforts to improve health and reduce the onset of chronic diseases over time could reduce the number of adults with care needs by 14%, leading to a reduction in LTC expenditure by 13%, relative to anticipated increases by 2035.
- **Target residential care to those with the highest care needs and replace additional demand with community care.** Given that replacing residential care with care in the community can be just as costly, investing in community care is still preferable as it allows individuals to remain longer in the community, in line with a majority of the population's preferences. Keeping the current number of residential care spots constant until 2035 (~89.000) would result in 20% less expenditure in 2035 than if the number of spots continued to grow. The general trend towards de-institutionalisation requires a balanced mix of regional planning, case and care management, and an evidence-based governance of supply and demand.
- **Invest in support measures and further financial/social protection measures for informal carers.** As informal care comprises a key role in care for older people and saves the state money, investing in additional support measures and in respite services can help to ensure that informal carers remain available to provide care and are supported in future. However, a public debate is needed about the distribution of responsibilities between public support in terms of services and benefits in kind, and the role of informal carers, both with a view to reducing (gender) inequalities and to balancing employment opportunities and informal care. If the availability of working-age informal carers were to decrease by 27%, this would cost the state an additional 2 billion per year by 2035.
- **Anticipate the potential reduction in availability of informal care and invest in alternative services, both residential care and community care.** In absence of the widespread availability of informal care, contingent planning in the form of investing in alternative services can ensure that there are no unmet needs for care in future. The further professionalisation of LTC is also necessary to address the rising number of complex care situations (people with multimorbidity, dementia etc.). The expansion of existing services to cover additional need for care would cost an additional 5 billion annually by 2035 if informal care remained constant, or 7 billion if the availability of informal care decreased. These would require nearly 62.000 residential care and 20.000 home care spots in the former case, and around 66.500 residential care and 28.500 home care spots in the latter.
- **Invest in ensuring live-in care is viable (and ethical).** Given the cost-effective nature (in terms of reduced public expenditure) of live-in care for people with higher care dependency, live-in care remains a key component in ensuring financial sustainability of the LTC system in Austria. Investing in measures that ensure the appropriate treatment of live-in carers and suitable working conditions can ensure that live-in care remains viable in the future. However, a public debate is needed, if live-in care should remain an important pillar of the Austrian LTC system in light of the precarious working conditions experienced by live-in carers and perpetual care drain that it contributes to.
- **Increase wages as a way to retain and recruit care workers.** While wage increases can be costly for the public budget, some form of increase will likely be needed to recruit and retain the necessary level of care workers to meet future demand for LTC. However, wages alone are not the only way to attract care workers. Organisational issues and the improvement of labour conditions will be necessary to improve the retention of care workers. This also entails strategies to establish new types of skills-and-grade-mixes among the LTC workforce, including appropriate education and training.

Technical Annex

InCARE: Projection care needs and use of services in 2035

Description of the model

The aim of this study was to project the anticipated costs of LTC expenditure and required LTC workforce in future and to simulate alternative scenarios. The results presented in this report are based on a cell-based projection model using a combination of micro-, administrative and national statistics data. The baseline model maps different levels of care dependency (i.e. cash benefit levels) onto service use for LTC services in Austria according to various care-relevant characteristics (i.e. age, gender, size of household, urban/rural living, and wealth). A combination of LTC services and benefits are included, from residential care to community-based care, whether in one's own home (mobile care, support for daily living activities, 24-hour care²), or in a community-based setting outside of one's home (daycare centres, respite care, alternative living arrangements, case- and care-management), and the LTC cash benefit (*Pflegegeld*). As a key component of care in Austria, informal care is also included in the model. The projections for 2035 account for demographic changes assuming a high population ageing scenario, as well as anticipated household compositional changes.

Table 1 highlights the data sources used to develop the baseline, projection, and alternative scenarios.

TABLE 1: DATA SOURCES USED TO DEVELOP THE MODEL

Data Source	Information used	Purpose(s)
Pflegegeldatenbank	Number of care benefit beneficiaries according to care level, age and gender.	To simulate the distribution of LTC cash benefits by care level, age and gender for our baseline population.
SHARE wave 8 (2019)	Information on population aged 65+, including age, gender, household composition, living in an urban vs. rural area, wealth distribution, informal care receipt and receipt of mobile care services.	1) To link the Pflegegeld data with other characteristics; to disaggregate our baseline population according to these different characteristics; 2) To calculate probabilities of using mobile care services and receiving informal care.
Statistik Austria	1) Population information by age, gender, household composition and urban/rural living (2019); 2) Population projections for 2035 by: age and gender, and then by household composition.	1) To ensure distribution of baseline population according to different characteristics was consistent with SHARE data; 2) To project changes in the population from 2019 to 2035.
Pflegedienstleistungsstatistik	1) Number of care service users for each type of LTC service by care benefit level, gender and age; 2) Number of care workers per LTC service; 3) Total public expenditure per LTC service.	1) To model the distribution of LTC service users according to care benefit level; 2) To model the number of care workers needed to carry out the LTC service for people aged 65+; 3) To model the total public expenditure for each LTC service and average cost per person for people aged 65+.
PECUNIA RUC Compendium	Costs for day centres and informal care cost (replacement cost).	To calculate totals costs of day centre, informal care for population.

The baseline model takes the distribution of LTC cash beneficiaries according to level (Pflegegeldatenbank) and disaggregates individuals based on different care-relevant characteristics (SHARE wave 8). Statistik Austria data, where possible, is used to verify that the model population is representative of adults aged 65+. Data on the type of care services used according to LTC cash benefit

² This type of care is internationally called live-in care. In Austria the terms 24-hour care and personal support (*Personenbetreuung*) are widely used.

level (Pflegedienstleistungsstatistiks) is mapped onto the model population. Average costs of services are calculated and the number of care workers required for each type of service is also calculated based on the Pflegedienstleistungsstatistiks. Some costs (i.e. day centres and informal care) are used from the PECUNIA RUC Compendium for Austria. This forms the baseline model and aims to represent LTC services and benefits as provided in 2019.

The projection year is calculated using Statistik Austria data on the projected population according to age, gender and household composition. This strictly assumes that the population distribution changes only in regards to these 3 characteristics. In this future baseline, the probability of having care needs is assumed to remain constant, as are the probabilities of belonging to certain wealth and urban/rural groups. Table 2 describes the different scenarios, how they are implemented, and the assumptions they require.

TABLE 2: DESCRIPTION OF THE BASELINE, PROJECTION AND ALTERNATIVE SCENARIOS OF THE MODEL

Description/Technical details	Assumptions
Baseline (2019)	
Care needs, receipt of the LTC cash benefit, use of LTC services and receipt of informal care are distributed according to data available for 2019.	The probability of service use according to cash benefit level is the same across all other characteristics (i.e. age, gender, wealth, etc.).
Projection baseline (2035)	
Population ageing and demographic change increase the number of older adults and their living situation. The number of older adults requiring care services increases. The availability of informal care decreases among middle-aged carers, but increases among older persons as the result of increased life expectancy and cohabitation.	The probability of having care needs and using care services remains the same as in 2019. The probability of receiving informal care remains the same as in 2019, although demographic change leads to changes in the composition of the age of informal carers.
Scenario 1: Reduction of care	
Need for care reduces over time as the result of reductions in the incidence or prevalence of chronic conditions.	The prevalence of care needs would decrease based on age-specific transition rates calculated in Kingston et al (2018) according to four groups of needs: high, medium, low and no dependency.
Scenario 2: Reduction in availability of informal care	
The availability of informal care decreases even further than anticipated in the baseline situation as the result of middle-aged individuals having difficulties conciliating work with family life. This gap in informal care is replaced by a combination of residential care, home care and community-based services according to the distribution of needs and probability of different types of service use.	The availability of younger carers (under 60 years old) remains constant from 2019 onward as the result of work and family obligations.
Scenario 3: Residential care spots remain constant from 2019 onward.	
Residential care spots remain constant until 2035, while the remainder of individuals with high care dependency that would need residential care receive a bundle of care services at home and in the community equal in intensity to what they would receive in residential care.	Probability of using residential care is distributed the same as in 2019. Residential care can be substituted by a high intensity of home care and informal care, and other community-based services.
Scenario 4: Use of 24-hour care remains constant	
24-hour care users remain constant until 2035, while additional individuals that would have used 24-hour care in 2035 instead receive an equivalent number of hours of home care services and informal care to compensate.	Probability of using 24-hour care is distributed the same as in 2019. 24-hour care can be substituted by a high intensity of home care and informal care, and other community-based services.
Scenario 5: Increase in wages of LTC workers from 2023 onward	
Increase in wages of LTC workers from 2023 onward in line with the current measures for 2023	The salary bonus for care worker envisioned for 2023 and 2024 remain in place permanently. All

and 2024. LTC workers receive an additional month of pay starting in 2023 except this pay increase remains moving forward.	care workers, regardless of role or number of hours, receive an additional months' worth of salary.
All scenarios	
GDP grows in line with projection rates estimated by a combination of sources (European Central Bank for 2019-2022, Austrian National Bank for 2023-2025, European Commission's 2021 Ageing Report for 2026-2035)	
Unit costs of care grow in line with labour productivity, given that most costs of care are labour costs. Same sources as those for GDP growth.	

Results

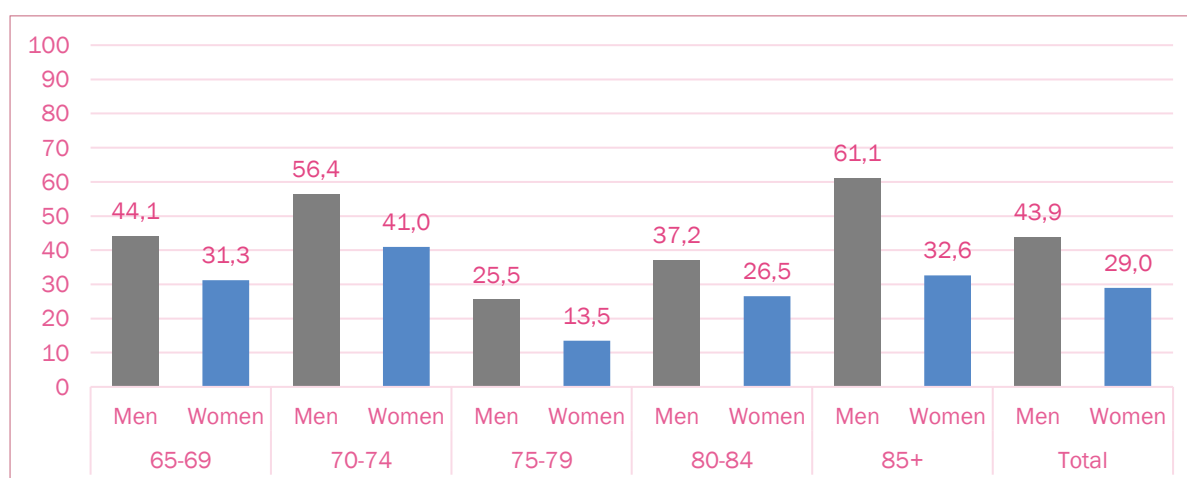
Projection of population with different care needs

As anticipated, increasing life expectancy and population ageing in Austria will lead to significantly larger absolute number of older adults by 2035 (**Table 3**). The population of adults aged 65 and older will increase by 35.3% from nearly 1.8 million in 2019 to over 2.4 million in 2035, while the population aged 85 and older will increase even faster by 42.2, from 267.000 in 2019 to nearly 380.000 in 2035. As care use is concentrated amongst the oldest age groups, this increase in the "oldest old" is particularly concerning. Given the rising share of older adults anticipated until 2035, this will put substantial pressure on the financing and provision of LTC. An initial example of this is the increase in Pflegegeld beneficiaries aged 65+, which can act as a proxy for the overall demand for care given that eligibility is based on requiring care for a list of particular care activities. Alongside the rising population of older adults, Pflegegeld beneficiaries (65+) will increase by 34.3% from around 406.000 to over 545.000 by 2035.

TABLE 3: CENTRAL BASE-CASE PROJECTED NUMBERS OF OLDER PEOPLE, THOSE WITH CARE NEEDS, AND SERVICE RECIPIENTS, 2019 TO 2035

	2019	2035	% increase from 2019 to 2035
Individuals aged 65+	1.782.715	2.412.805	35.3
Individuals aged 85+	266.961	379.495	42.2
Number of LTC cash beneficiaries (65+)	406.134	545.641	34.3

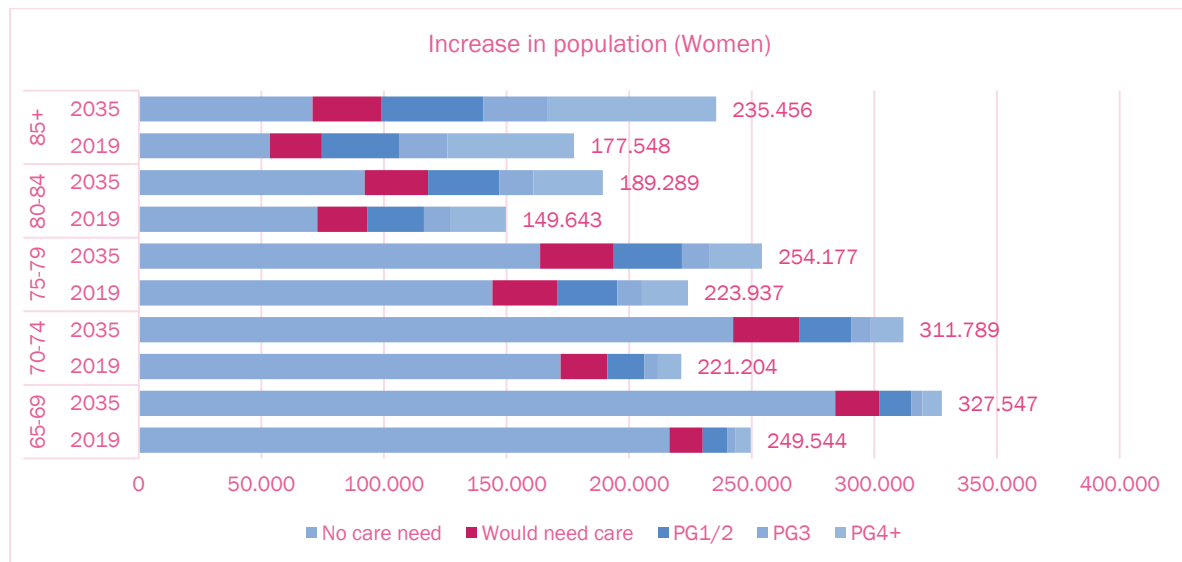
FIGURE 1: CHANGE IN POPULATION BY GENDER AND AGE GROUPS (% CHANGE FROM 2019 TO 2035)



The increasing life expectancy of men and larger share of men living to older age will result in the male population growing at a faster rate than for women (Figure 1). The largest increase in population will be seen for men aged 85+ and 70-74, where the population of men aged 85+ will grow substantially at over 61% relative to 2019, followed by an over 56% increase for men aged 70-74. Amongst women, the largest increase in population will be seen amongst those 70-74 at 41%.

However, while increases in the male population will be larger in relative terms, the population of older women will increase significantly in absolute terms across each age category. **Figure 2** presents the distribution of care needs for women across age groups. A large part of this absolute increase will be comprised of women with higher care needs that will require some form of care services. The share of individuals with Pflegegeld level 4 or higher, a proxy for high/intense care needs, will especially increase for the oldest age group (85+), suggesting a higher demand for care amongst older women.

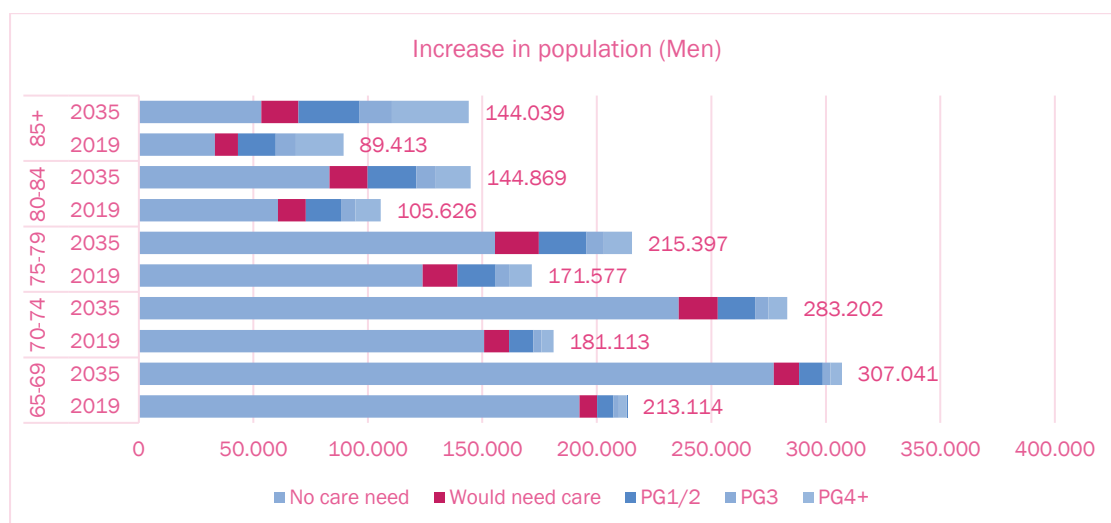
FIGURE 2: ABSOLUTE NUMBER OF OLDER WOMEN BY AGE AND CARE DEPENDENCY LEVEL, 2019 AND 2035



Note: PG= Pflegegeld. 'Would need care' category refers to those with minor care needs but that do not receive services covered by the public system.

As similarly seen with women, the absolute population of older men will also substantially increase as the result of gains in life expectancy, with a particularly pronounced increase in the 65-69 and 70-74 age categories (**Figure 3**). This increase in the older male population will also be accompanied by an increase in demand for care, given the large increase in older men receiving higher levels of Pflegegeld (levels 4+), particularly amongst the oldest age categories.

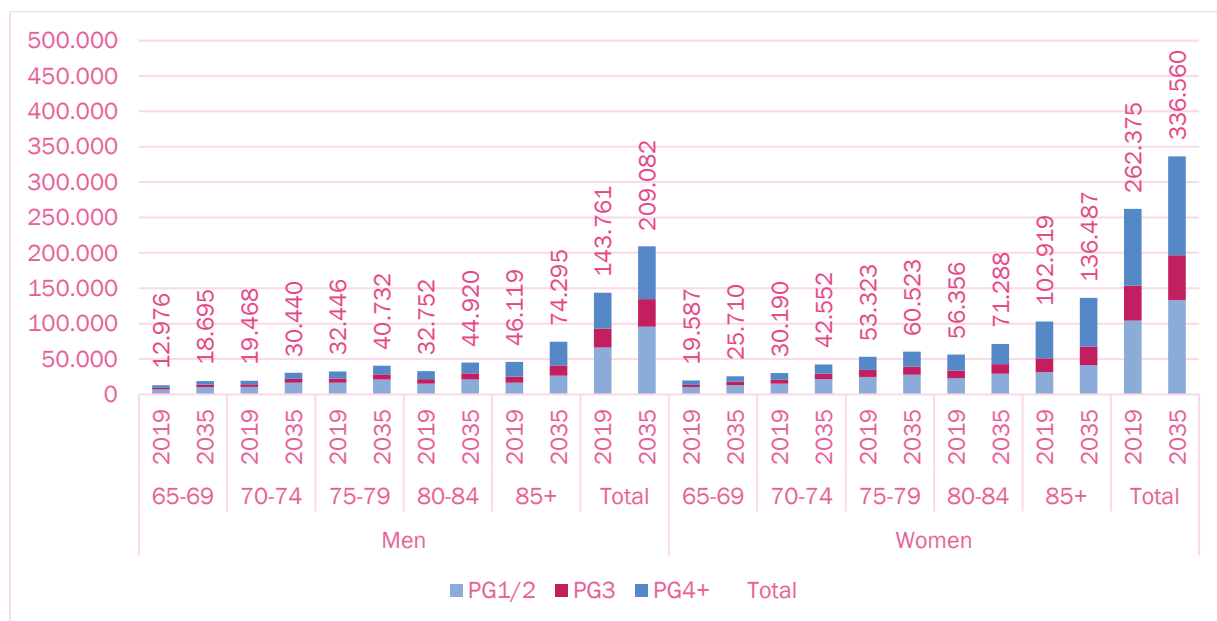
FIGURE 3: ABSOLUTE NUMBER OF OLDER MEN BY AGE AND CARE DEPENDENCY LEVEL, 2019 AND 2035



Note: PG= Pflegegeld. 'Would need care' category refers to those with minor care needs but that do not receive services covered by the public system.

Figure 4 showcases the increase in women and men receiving Pflegegeld across age categories and by level of benefit to provide an overall estimation of the increase in demand for care. By 2035, an additional 74.185 women will receive the Pflegegeld and require care each year, an increase of 28%.

FIGURE 4: PROJECTED INCREASE IN INDIVIDUALS REQUIRING CARE BY AGE, GENDER AND LEVEL OF CARE DEPENDENCY (PG)



There will be an even larger relative increase in the number of men with care needs, with this increase in care needs concentrated among older age groups (Figure 4). Around 65,321 additional men will require care by 2035 as compared to 2019, resulting in an increase in demand for care of 45%.

Figure 5 presents the percentage change in individuals with care needs by gender and age category from 2019 to 2035, which further substantiates that the increase in care needs for both men and women are concentrated most within the 70-74 and 85+ age categories. The percentage increase in care needs for men aged 85+ will be around 61%, and around 56% for men aged 70-74. For women, the largest increase will be seen among the 70-74 age category (41%), followed by around 33% for women aged 85+. The increase in care needs amongst those aged 65-69 will also be quite substantial, highlighting that more individuals will spend a greater share of their later years in poorer health and with care needs.

FIGURE 5: % INCREASE IN INDIVIDUALS WITH CARE NEEDS BY GENDER AND AGE (2019-2035)

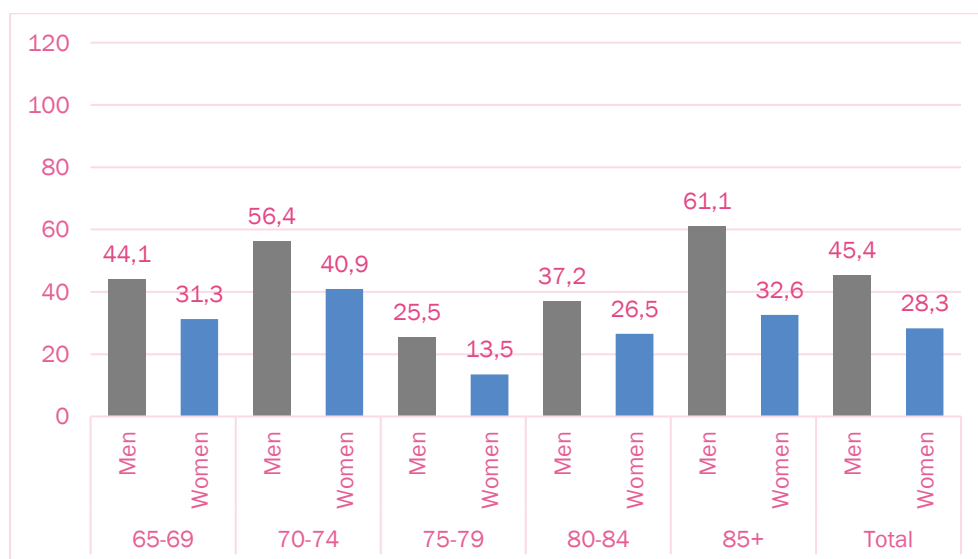


Table 4 presents changes in the absolute number of care recipients according to different types of care if the rate of care use remains constant until 2035. The largest increase in care recipients will be for residential care at 35.2%, with over 31,000 additional individuals requiring residential care annually by 2035. Informal care will also continue to be a key component of care, increasing by 47.6% from 2019 to 2035, if the probability of receiving informal care remains constant. An additional approximate

152.000 individuals would receive informal care annually in 2035 relative to 2019. Home-based care will also witness a large increase (21%) in recipients, with nearly 34.000 additional individuals requiring it per year by 2035 as compared to 2019. Similarly, recipients of other types of care services (i.e. alternative forms of living, case- and care-management, day care, and respite care), will increase by 35.9% by 2035. We additionally look at individuals with minor care needs but that do not receive publicly financed services and do not receive Pflegegeld, either because they pay completely out-of-pocket, they receive informal care, or have unmet care needs. These number of individuals receiving care outside the confines of the publicly financed system would increase by 33.2% to around 209.000 in 2035.

TABLE 4: CENTRAL BASE-CASE PROJECTED INCREASE IN INDIVIDUALS RECEIVING DIFFERENT TYPES OF CARE SERVICES, 2019 TO 2035

	2019	2035	% increase from 2019 to 2035
Recipients of residential care	89,311	120,761	35.2
Recipients of informal care (PG beneficiaries)	319,675	471,775	47.6
Recipients of home-based care*	160,506	194,213	21.0
Recipients of other care services**	107,774	146,452	35.9
Number of individuals with care needs but no publicly provided services***	156,838	208,896	33.2

Note: *Home-based care refers to mobile care, daily support with living, and 24-hour care. **Other care services refer to alternative forms of living, case- and care-management, day care, and respite care. ***Individuals who have minor forms of care needs but that either pay for mobile care entirely out of pocket, receive informal care, or don't receive any care at all.

The increased demand for care services as a result of these demographic changes will have a substantial impact on public expenditure (Table 5).

TABLE 5: CENTRAL BASE-CASE PROJECTED INCREASE IN EXPENDITURE AND LTC WORKFORCE, 2019 TO 2035

	2019	2035		2035 (sensitivity analysis)	
		Base assumption	% increase from 2019 to 2035	Sensitivity analysis: +0.5 p.p.	Sensitivity analysis: -0.5 p.p.
Public expenditure	6.5B	10.2B	56.9	10.7B	9.7B
Total LTC workers	109,113	135,874	24.5	-	-
Expenditure as % of GDP	1.23	1.95		2.05	1.85
% of public expenditure on home-based care*	8.9	8.0		-	-
% of public expenditure on residential care	48.7	49.3		-	-
% of public expenditure on other care services**	1.1	1.2		-	-
% of public expenditure on PG	41.3	41.5		-	-

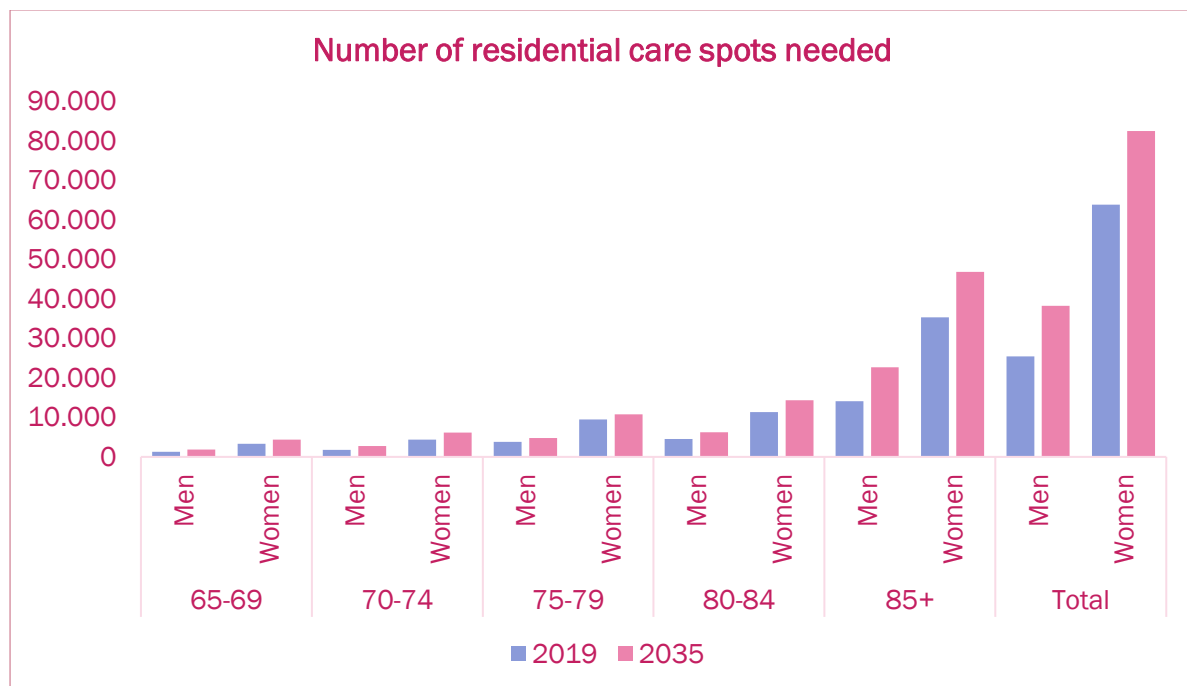
Note: *Home-based care refers to mobile care, daily support with living, and 24-hour care. **Other care services refer to alternative forms of living, case- and care-management, day care, and respite care. Base assumption of costs assumes that the costs of care services increase proportional to the increase in labour productivity. Sensitivity analyses assume that the increase in labour productivity is 0.5 p.p. higher or lower than the projected base rate.

Annual public expenditure will increase by about 56.9% from 2019 to 2035, requiring nearly 4 billion additional euros annually by 2035. Public LTC spending as a percentage of GDP would increase from 1.23% in 2019 to 1.95% in 2035. This substantial increase of LTC expenditure as a share of GDP is due to the expectation that the costs of care services (i.e. labour productivity) will increase more than the increase in GDP until 2035. Sensitivity analyses carried out that assume the growth of the costs of care services is 0.5 p.p. higher or lower than our base assumption places public expenditure between 9.7 and 10.7 billion euros, or between 1.85% to 2.05% of GDP. In terms of demand for LTC workers to

carry out the projected level of services required, an additional 26.761 LTC workers will be needed, an increase of 24.5% from 2019.

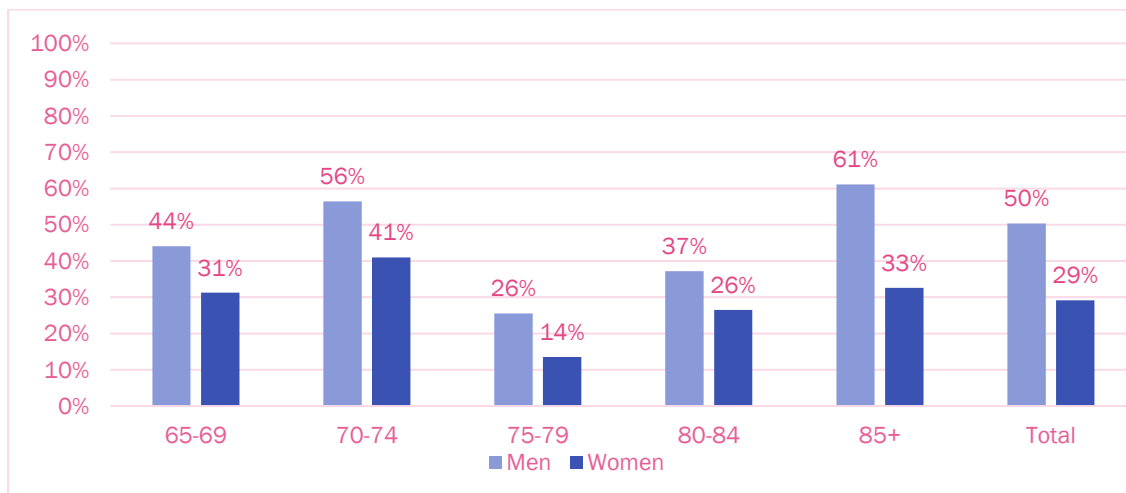
This substantial increase in public LTC expenditure will be the result of costly services, namely the increase in residential care use. While public expenditure towards each type of care will increase in absolute terms, the share they comprise of the total LTC expenditure will marginally change. While residential care comprised 48.7% of overall public LTC expenditure on older adults in 2019, this will increase to 49.3% of total expenditure in 2035. The next most costly component of public expenditure will be on Pflegegeld at 41.5% in 2035, around the same as in 2019. The share of public expenditure towards home-based care will decrease to 8.0% from 8.9% in 2019, while the share of public expenditure towards other types of care services will remain around the same, due to their more marginal use and cost compared to other services.

FIGURE 6: RESIDENTIAL CARE RECIPIENTS BY AGE AND GENDER



Error! Reference source not found. further substantiates where the largest changes in residential care use would be in 2035 according to age and gender. As residential care tends to be used by those with higher care needs, it's rational that an increase in the number of older adults with high care needs (Pflegegeld level 4 and higher in this case) would result in an increase in residential care. The expansion of residential care use in 2035 can be explained by the significant increase in users of the oldest age category (85+), who tend to comprise the largest share of residential care users. The use of residential care by men also increases substantially from 2019 to 2035, particularly amongst the older age groups, although less in absolute terms than with women. Although the population of older men cohabitating with spouses will increase in 2035, therefore leading to an increased availability of spousal care, there will still be a large absolute number of older women living alone that will require residential care upon developing severe care needs. Given the large absolute increase in residential care use among men, in relative terms, this will translate to a 50% increase in residential care use (Figure 7), with much of this increase taking place among 85+ year old men. For women, the relative increase compared to 2019 will be as high as 41% among those aged 70-74. While the relative increase for men will be quite substantial, this will still comprise a smaller overall proportion of residential care users in 2035, given that men will be more likely to live with a spouse or in a multi-person household and therefore receive other forms of care.

FIGURE 7: % CHANGE IN RESIDENTIAL CARE RECIPIENTS BY AGE AND GENDER (2019-2035)



Demographic changes, including trends related to the changing size of households, will also have an impact on the type of care used. The increased number of men surviving into older age will translate into increased spousal cohabitation or multi-person households, with fewer older women living alone. This provides further opportunities for receiving informal care from a spouse in older age, for both men and women. As a result, receipt of informal care will also increase substantially if the current rates and patterns of care persist until 2035 (Figure 8). However, these increases will be concentrated among older men more so than for women. Collectively, informal care receipt will increase by around 34% for men, with these increases distributed across age categories but largest among men aged 70-74 (Figure 9Error! Reference source not found.). The increase in informal care receipt will only be 9% for women, with this increase concentrated among women 65-69 and 70-74. In some cases, the change in informal care receipt for women will be extremely marginal (such as among women 85+). This latter finding is the result of more older women entering residential care.

FIGURE 8: INFORMAL CARE RECIPIENTS BY AGE, GENDER AND HOUSEHOLD TYPE

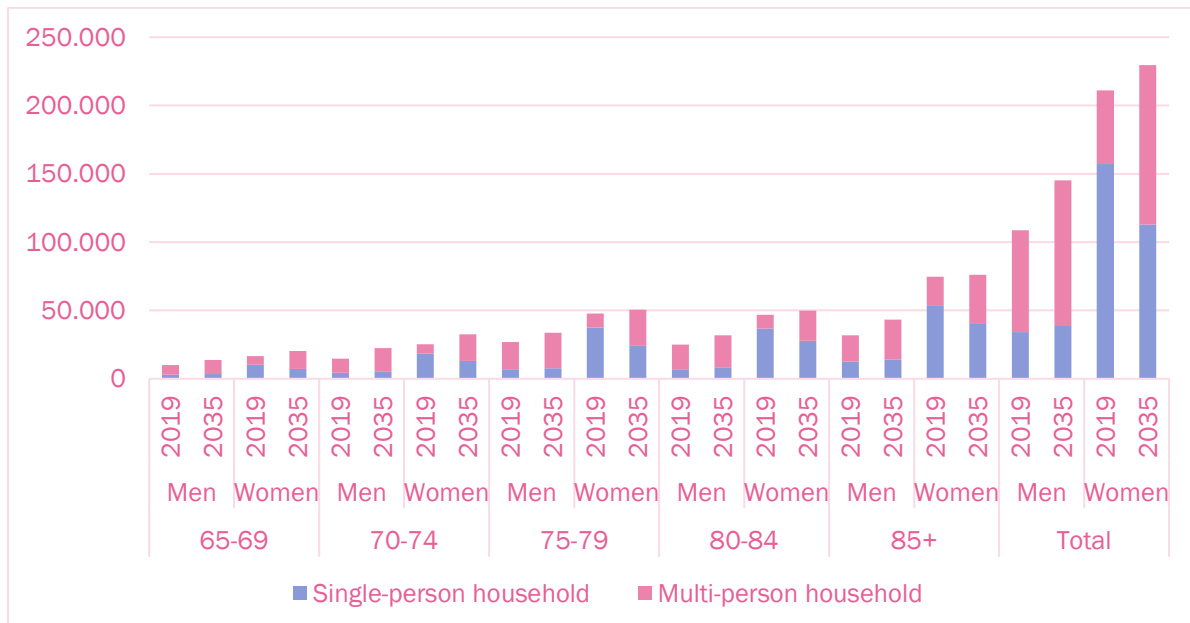
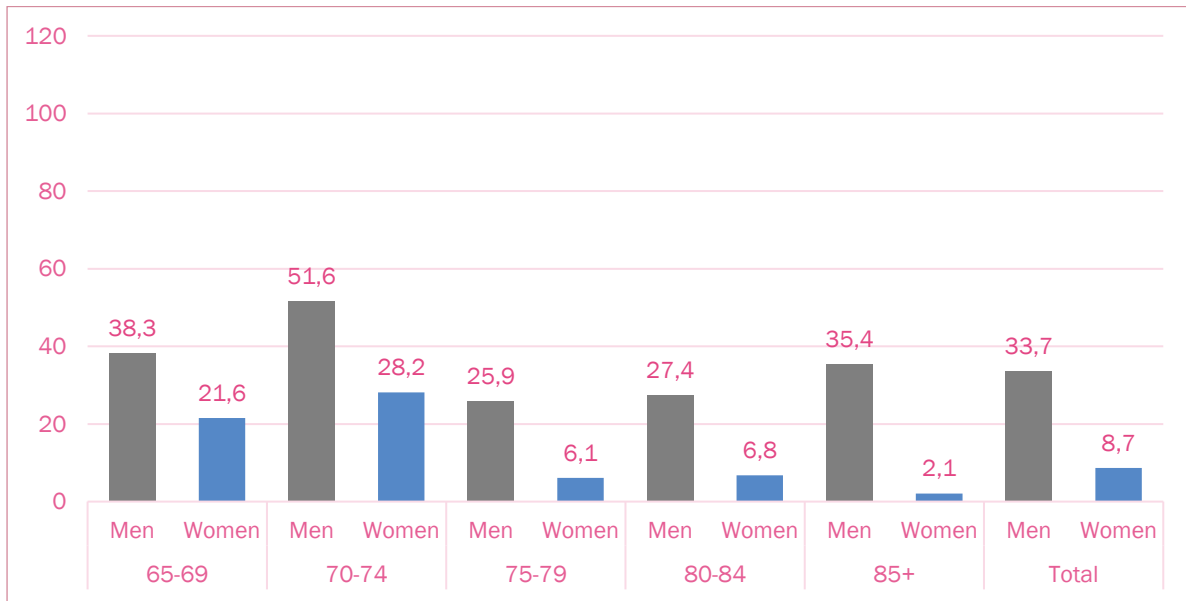


FIGURE 9: % CHANGE IN INFORMAL CARE RECIPIENTS BY AGE AND GENDER (2019-2035)



Alternative scenarios

We modeled five alternative future scenarios, designed based on inputs from survey results, a Theory of Change workshop, and discussions with stakeholders. As a reminder, we considered the following five scenarios:

- Scenario 1: Reduction in rate of care needs over time.
- Scenario 2: Reduction in availability of informal care.
- Scenario 3: Residential care spots remain constant.
- Scenario 4: Use of 24-hour care remains constant.
- Scenario 5: Increase in wages of LTC workers from 2023 onward in line with the current measures for 2023 and 2024.

Error! Not a valid bookmark self-reference. highlights the difference in number of adults with care needs in a scenario of reduced care dependency over time as the result of the prevalence of disability reducing over time, as the result of general improvements in health. The number of total women with care needs would be 12.4% less than in the 2035 base year. Similarly, the number of men with care needs would be 15.4% less than if the rate of care needs remained constant. A decrease of these magnitudes would translate into a sizeable difference in demand for care and subsequent expenditure, which we highlight below.

FIGURE 10: CHANGE IN NUMBER OF CARE DEPENDENT INDIVIDUALS IN A SCENARIO OF REDUCED CARE DEPENDENCY (SCENARIO 1)

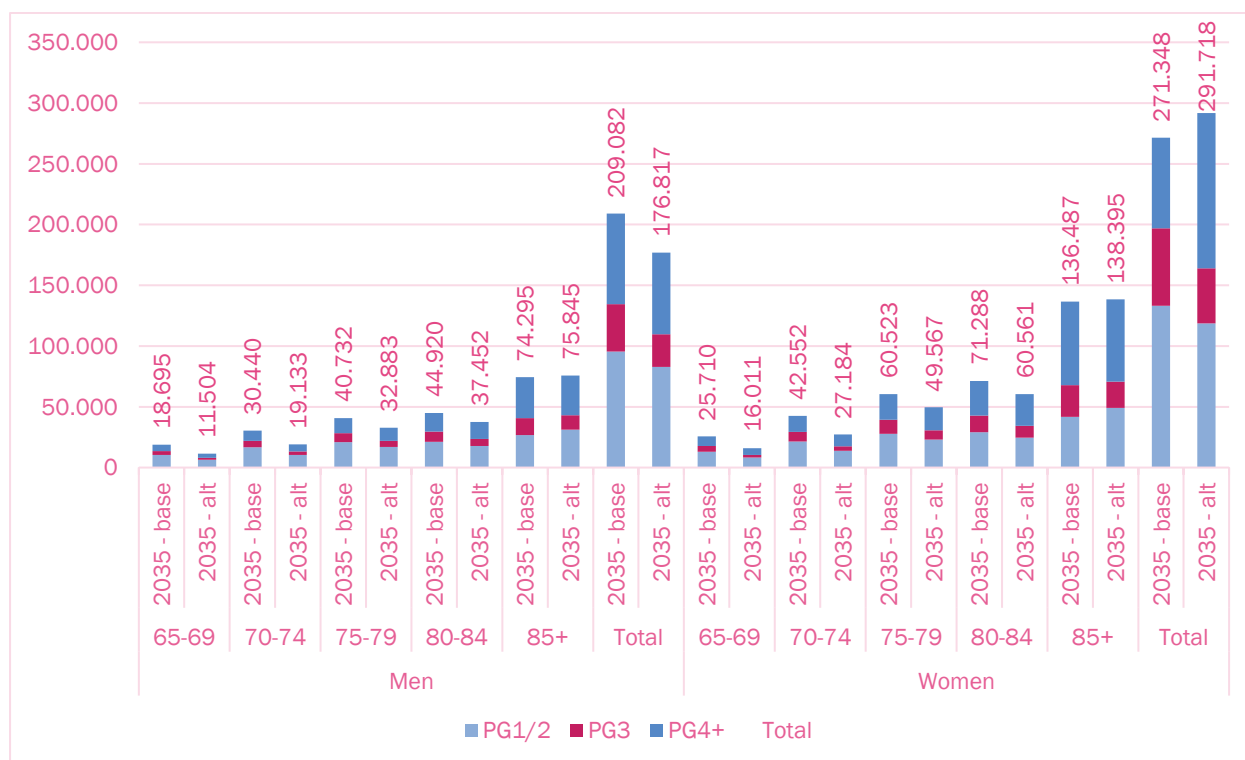


Table 6 highlights the public expenditure that would be needed in each alternative scenario. Scenarios 1 and 2 highlight alternative future scenarios given plausible assumptions about the changes in demand and supply of care. These scenarios make assumptions about the change in rates of care needs and the reduced availability of informal care respectively. If the rate of care dependency reduces over time as the result of increased prevention efforts to delay care needs (Scenario 1), the amount of public expenditure needed in 2035 would be about 1.3 billion less than the 2035 base scenario. Still, public expenditure would comprise 1.94% of GDP at 10.2 billion, a 58% increase in public expenditure. Approximately 20,000 additional LTC workers would be needed in 2035 relative to 2019.

A large body of literature suggests that informal care may become less available in future given rising labour market participation rates among women and declines in fertility. If informal care was to become less available as the result of difficulties for middle-aged individuals to reconcile work with care responsibilities, public expenditure in Austria would have to increase significantly to fill the care gaps

through home-care services. Public expenditure would rise to 13.4 billion by 2035, nearly 2 billion more than the 2035 baseline scenario. Public LTC expenditure would comprise 2.56% of GDP and would be an increase of 107.8% relative to 2019. Over 189.000 LTC workers would be required to carry out the necessary level of care services. Of all the alternative scenarios, this would constitute the costliest in terms of financing and care workforce, which highlights the important role that informal care plays in helping to keep public LTC expenditure down.

TABLE 6: EXPENDITURE AND LTC WORKFORCE ACROSS SCENARIOS

	Expenditure (euros)	Expenditure as % of GDP	Increase in expenditure relative to 2019	LTC workforce
<i>Baseline year (2019)</i>				
	6.5B	1.23	-	109,113
<i>Central base-case: constant rates of care dependency and service use</i>				
	10.2B	1.95	58.3	135,874
<i>Scenario 1: Rates of care dependency reduce over time</i>				
	9.1B	1.73	40.4	119,901
<i>Scenario 2: Reduced availability of informal care, replaced by home care services</i>				
	12.2B	2.32	88.7	176,869
<i>Scenario 3: Keeping residential care spots constant and instead increasing home care</i>				
	10.0B	1.9	54.9	149,357
<i>Scenario 4: Holding 24-hour care constant and replacing additional demand with other home- and community-based services</i>				
	10.7B	2.04	65.7	136,640
<i>Scenario 5: Increase in wages of LTC workers (2023 onward)</i>				
	10.7B	2.02	64.5	135,874

The remaining scenarios constitute different policy options in terms of how to meet the additional demand for care in 2035. Keeping residential care spots constant and increasing home care services to cover the remaining demand for care (Scenario 3) would amount to 10.5 billion in public expenditure annually by 2035, 4 billion more than in 2019, but a billion less than the 2035 base scenario. Public LTC expenditure would be an increase of around 62% relative to 2019, constituting 1.99% of GDP, and would require around 160.000 LTC workers. This scenario would constitute the smallest increase in public expenditure and workforce out of the alternative policy scenarios.

While 24-hour care remains a large component of the Austrian LTC system, it may not be a sustainable option to rely on in future. If the number of beneficiaries of 24-hour remained constant until 2035 and was used by those with the highest needs wishing to remain at home, while additional demand is replaced with an equivalent intensive bundle of home- and community-based services, public LTC expenditure would rise to 11.9B per year, an annual increase of nearly 85% compared to 2019. Expenditure would comprise 2.27% of GDP and would require over 147.000 LTC workers.

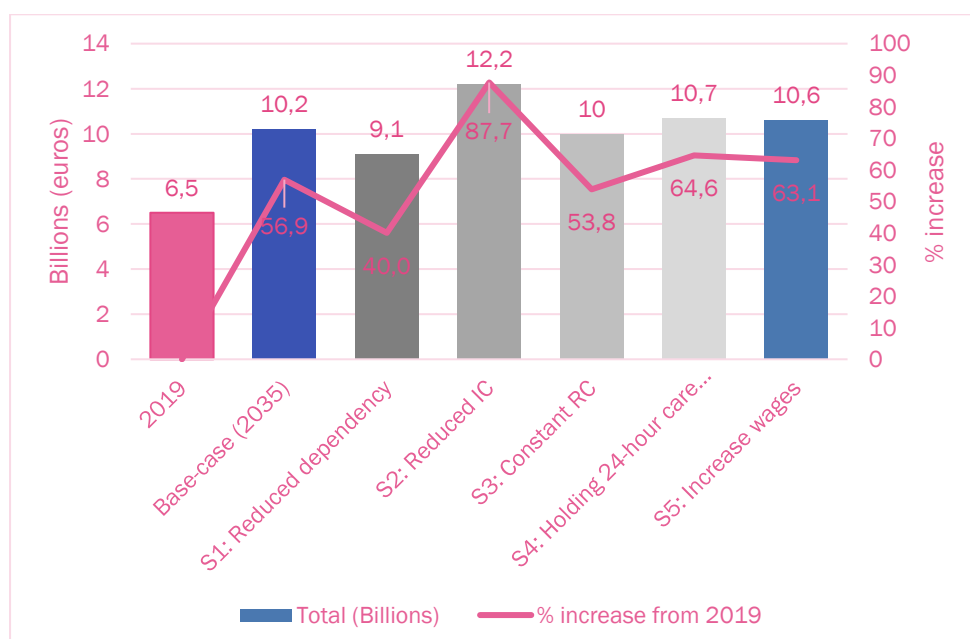
Finally, in Austria, there is a planned wage bonus for LTC workers in 2023 and 2024, equivalent to one month of pay. If this wage bonus was to be made into a permanent pay increase from 2023 onward, public LTC expenditure would increase by 85% to 12 billion euros annually in 2035. This would represent 2.28% of GDP and would require the same number of LTC workers as in the 2035 base scenario.

Table 7 presents sensitivity analyses of the projected costs for each scenario if the costs of care services (based on labour productivity) vary 0.5 p.p. from the baseline scenario.

TABLE 7: SENSITIVITY ANALYSES OF PROJECTED COSTS BY SCENARIO

	Projected central-case		Sensitivity analyses			
	Expenditure (euros)	Expenditure as % of GDP	+0.5pp in productivity rate		-0.5pp in productivity rate	
			Expenditure (euros)	Expenditure as % of GDP	Expenditure (euros)	Expenditure as % of GDP
<i>Baseline year (2019)</i>	6.5B	1,23	-	-	-	-
<i>Central base-case: constant rates of care dependency and service use</i>	10.2B	1.95	10.8B	2.05	9.7B	1.85
<i>Scenario 1: Rates of care dependency reduce over time</i>	9.1B	1.73	11.7B	2,23	10.6B	2,02
<i>Scenario 2: Reduced availability of informal care, replaced by home care services</i>	12.2B	2.32	12.8B	2.44	11.6B	2.21
<i>Scenario 3: Keeping residential care spots constant and instead increasing home care</i>	10.0B	1.9	10.5B	2.00	9.5	1.81
<i>Scenario 4: Holding 24-hour care constant and replacing additional demand with other home- and other community-based services</i>	10.7B	2.04	11.3B	2.14	10.2	1.94
<i>Scenario 5: Increase in wages of LTC workers (2023 onward)</i>	10.6B	2.02	11.2B	2.13	10.1B	1.93

Of all the scenarios concerning assumptions about the demand and supply of care, public LTC expenditure would increase the most if the availability of informal care decreased and was replaced by home care services, as evidenced by Figure 11. In terms of the alternative policy scenarios, holding 24-hour care constant (Scenario 4) or increasing wages in the LTC sector (Scenario 5) would be equally costly and would be a marginal increase to the 2035 base scenario. Keeping residential care spots constant and covering additional demand through home care services would be less costly relative to the 2035 base scenario, however it's important to note that this does not capture investment needed to expand home care service infrastructure.

FIGURE 11: CHANGES TO PUBLIC LTC EXPENDITURE BY SCENARIO, ABSOLUTE AND % CHANGE COMPARED TO 2019


A larger number of LTC workers will be required in all scenarios in 2035 given the anticipated increase in demand for formal care services. As the wages of LTC workers comprise the majority of the costs of care, this goes hand in hand with public expenditure. The increase in required LTC workers would be highest in Scenario 2 if informal care was to become less available and instead replaced by formal services, representing over a 70% increase compared to 2019 (Figure 12). This scenario would require an additional 40.035 care workers relative to the 2035 base scenario. Most of the remaining alternative scenarios would also require more LTC workers than the 2035 baseline case. Keeping residential care places constant and replacing additional care with homecare services would require around 13.549 more LTC workers in 2035 relative to the baseline. Similarly, but to a much lesser extent, replacing additional demand for 24-hour care through home care would require an additional 1.251 LTC workers. On the other hand, reducing the rate of care needs would relieve the additional need for LTC workers by nearly 17.000 compared to the 2035 baseline. If the rate of care needs decreased by 2035, this would result in the smallest increase in required LTC workers out of all scenarios, requiring an additional 31.000 workers relative to 2019.

FIGURE 12: LTC WORKERS REQUIRED ACROSS SCENARIOS

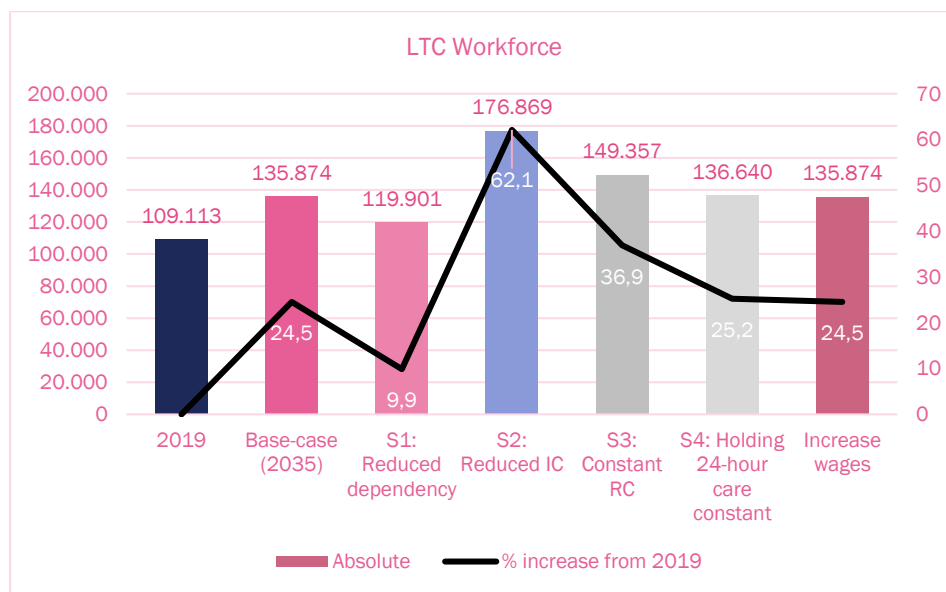
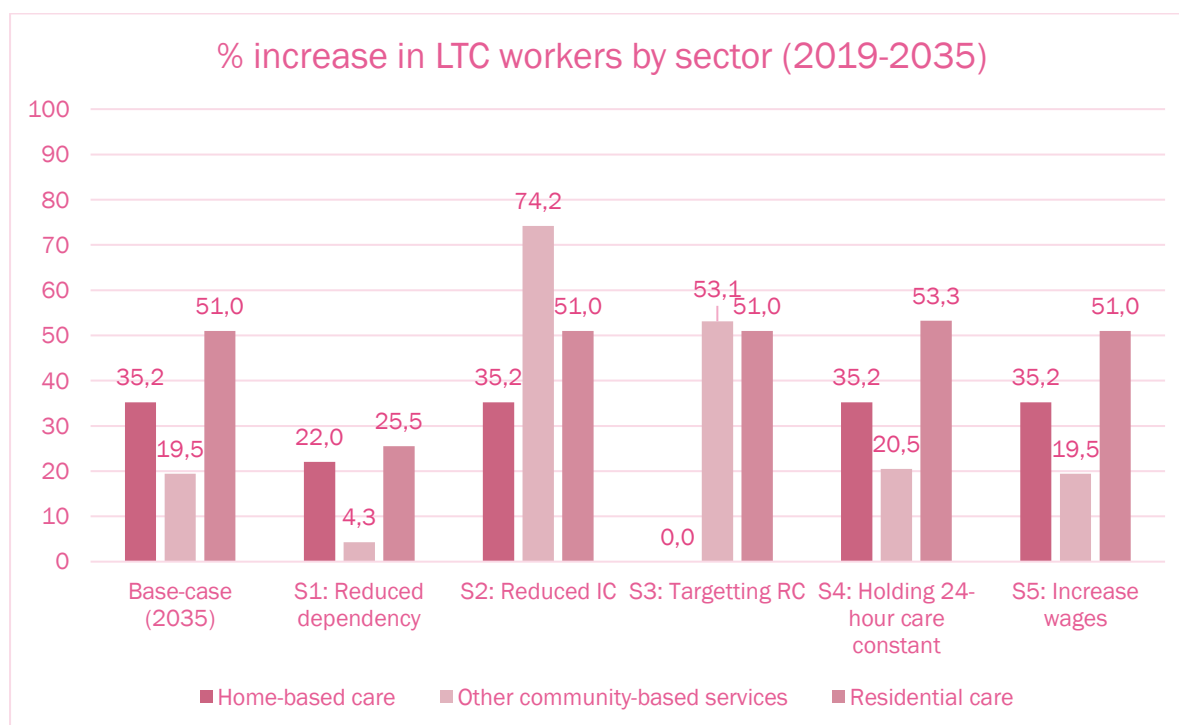


Table 8 highlights how care workers would be distributed across care settings. In all scenarios, the majority of LTC workers would be providing home-based care, although this would be highest in Scenario 2 if informal care was to become less available, followed by Scenario 3 if residential care was kept constant and additional care needs were met through home care services. The number of LTC workers in residential care would be highest in scenario 2 if the availability of informal care decreased. Figure 13 additionally highlights where the increase in LTC workers would be most drastic. In all scenario, the increase in residential care workers would see the largest increase, followed by other types of care in the community (outside of the home setting), and less so for homecare. The exception to this is in Scenario 3 with residential care spots remaining constant, as homecare would need to significantly increase to keep up with demand. Similarly, the increase in LTC workers in homecare settings would need to increase to cover additional demand for care if informal care was to become less available (Scenario 2).

TABLE 8: LTC WORKERS REQUIRED ACROSS SCENARIOS ACCORDING TO SECTOR

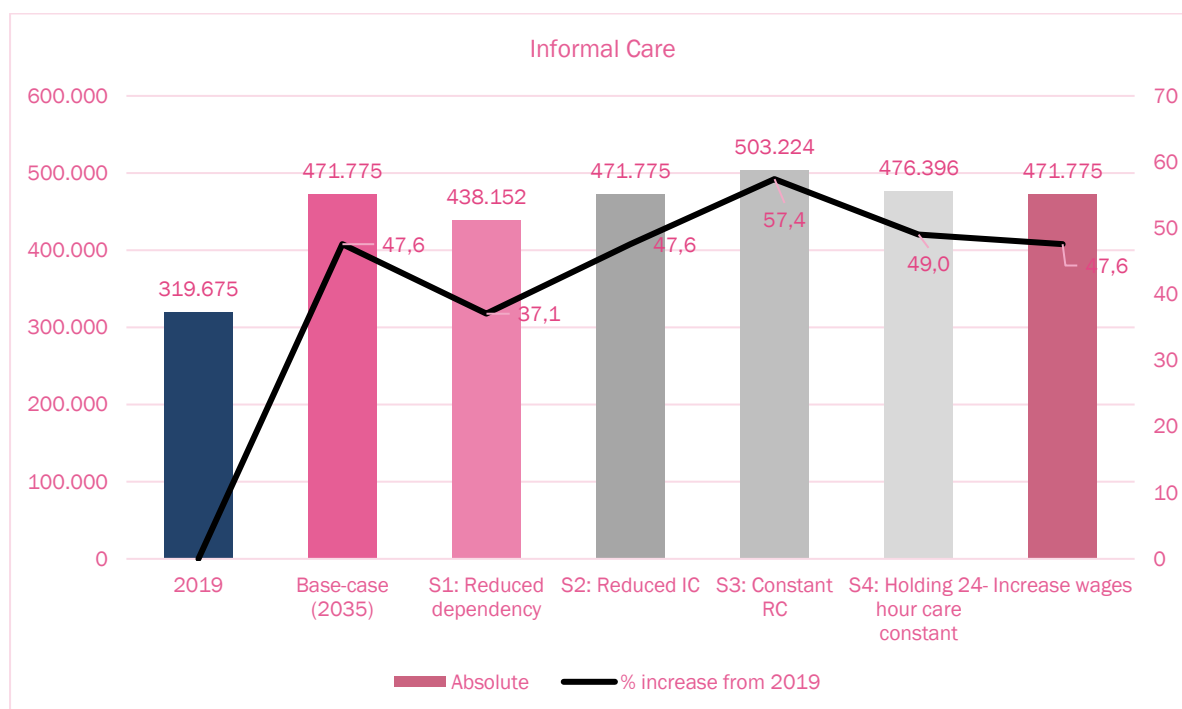
	LTC Workers		
	Residential care	Home-based care	Other
Baseline year (2019)	33,306	74,921	886
Central base-case: constant rates of care dependency and service use	45,035	89,501	1,338
Scenario 1: Rates of care dependency reduce over time	40,649	78,140	1,112
Scenario 2: Reduced availability of informal care, replaced by home care services	45,035	130,496	1,338
Scenario 3: Residential care spots remain constant; additional demand met through mobile and informal care	33,306	114,713	1,338
Scenario 4: Holding 24-hour care constant and replacing additional demand with other home and community-based services	45,035	90,247	1,358
Scenario 5: Increase in wages of LTC workers	45,035	89,501	1,338

FIGURE 13: % INCREASE IN LTC WORKERS ACROSS SCENARIOS AND SECTORS (2019-2035)



If the rate of availability of informal care and probability of receiving informal care remained the same until 2035, informal care beneficiaries would increase by 45% in the 2035 base scenario (Figure 14). The different assumptions about the demand and availability of informal care, as well as the alternative policy measures, all have an impact on informal care beneficiaries. A natural reduction in the rate of care dependency would reduce the demand for informal care, resulting in only a 35% increase in 2035. This would constitute the lowest number of informal care beneficiaries across scenarios, apart from scenario 2 if informal care was to become less available. On the opposite end, keeping residential care spots constant (Scenario 3) would require the largest increase in informal care beneficiaries, as much of the additional demand for care would be replaced through a combination of home care and informal care. Similarly, informal care would have to increase to meet the demand for care if 24-hour care was to remain constant until 2035 (Scenario 4). Still, in any case, informal care would have to increase across all scenarios to meet the expanding demand for care.

FIGURE 14: INCREASE IN INFORMAL CARE BENEFICIARIES ACROSS SCENARIOS



Finally, Table 9 highlights the value of informal care in each scenario, the number of informal care beneficiaries, and the number of informal caregivers. Given the relevance of informal care and number of hours that informal carers provide, the value of informal care is naturally very high if replacement costs are used (i.e. average wage of care workers per hour). In all future scenarios, the value of informal care would increase substantially relative to 2019. The value of informal care in 2019 was estimated at 13.5 billion and would increase by 6 billion by 2035 if the rate of informal care remained constant. As informal care would increase to some extent across all scenarios, the value of informal care would also correspondingly increase. The value of informal care would be highest in scenario 3 at 21.7 billion euros, if informal care was to replace part of the additional demand for care in place of residential care. Close behind this, replacing additional demand for care by informal care in place of 24-hour care would increase the value to 19.8 billion. The increase in value of informal care would be minimized only if the rate of care needs would naturally reduce over time. It's important to note that any decrease in availability of formal care services will result in a corresponding increase in informal care.

Given that an individual tends to receive informal care from multiple family members or friends at the same time, the increase in informal care receipt would correspond to an even larger increase in the number of informal carers. The required number of informal carers to meet future care needs would be highest in scenario 3 (keeping residential care spots constant from 2019 onward), followed by scenario 4 (holding 24-hour care constant). The fewest informal carers would be required if the rate of care dependency decreased over time (scenario 1), and naturally if the availability of carers decrease (scenario 2).

TABLE 9: IMPACT ON INFORMAL CARE VALUE, BENEFICIARIES AND CARERS ACROSS SCENARIOS

	Value of informal care (euros, billions)	Informal care beneficiaries	Informal carers
<i>Baseline year (2019)</i>	13.5	319,675	763,600
<i>Central base-case: constant rates of care dependency and service use</i>	19.9	471,775	1,126,918
<i>Scenario 1: Rates of care dependency reduce over time</i>	18.5	438,152	1,046,605
<i>Scenario 2: Reduced availability of informal care, replaced by home care services</i>	19.9	471,775	1,126,918
<i>Scenario 3: Keeping residential care spots constant and instead increasing home care</i>	20.3	503,224	1,202,041
<i>Scenario 4: Holding 24-hour care constant and replacing additional demand with other home and community-based services</i>	20.1	476,396	1,137,957
<i>Scenario 5: Increase in wages of LTC workers</i>	18.5	438,152	1,046,605


Discussion

This study provides evidence that if rates of care dependency remain constant into the future, population ageing and changes in household composition will result in a substantial increase in the demand for care, both formal and informal. The higher life expectancy enjoyed by men will contribute to this increase in demand for care, as well as the growth in the population of the oldest old with highest care needs, especially among older women.

This anticipated increase in care needs is worrisome for public spending on LTC. In order to keep up with the projected increase in demand for care services, a substantial increase in public LTC expenditure will be required. To maintain the current rates of care services, an additional 3,7 billion euros will be needed annually by 2035, alongside an increase of nearly 28.000 LTC workers. LTC spending will comprise an increasingly larger share of GDP, which raises concerns about the fiscal sustainability of care. Given difficulties recruiting and retaining with the LTC sector, it will likely be a challenge to increase the size of the LTC workforce in the future to meet future demand. These findings emphasizing the need for action now to ensure the LTC system is able to address care needs in the future.

If rates of care dependency remain constant and lead to an increase in the absolute number of individuals with intense care needs, this will put considerable pressure on the residential care sector to increase beds in care homes. Residential care will comprise a majority of services given the increase in intense care needs, which will be problematic given that residential care is costly and comprises a substantial portion of the LTC budget. Given that there will be higher demand for residential care, yet this form of care is quite costly, replacing this additional demand instead with care in one's home and in the community would be ideal, but would not solve the issue of cost. Replacing institutional care with home care is still costly as a large number of hours of home care would need to be substituted to maintain the same level of care. In addition, coordinating the necessary home care services for an individual with high care needs introduces additional costs as well as would require significant investment in home care infrastructure, which could not be captured in the model. Therefore, cost savings would be minimal even if residential care demand would be filled through care in the community (home and community setting). Still, investing in home care is preferable given that societal preferences lean towards ageing at home.

Public expenditure towards the LTC cash benefit (Pflegegeld) will also comprise a significant portion of the care budget, with around 4.3 billion spent on it annually by 2035. Despite comprising a large share of the care budget, the LTC cash benefit allows care users a certain extent of flexibility of choice in the type of care they would like as well as protects care users from financial burden to some extent.

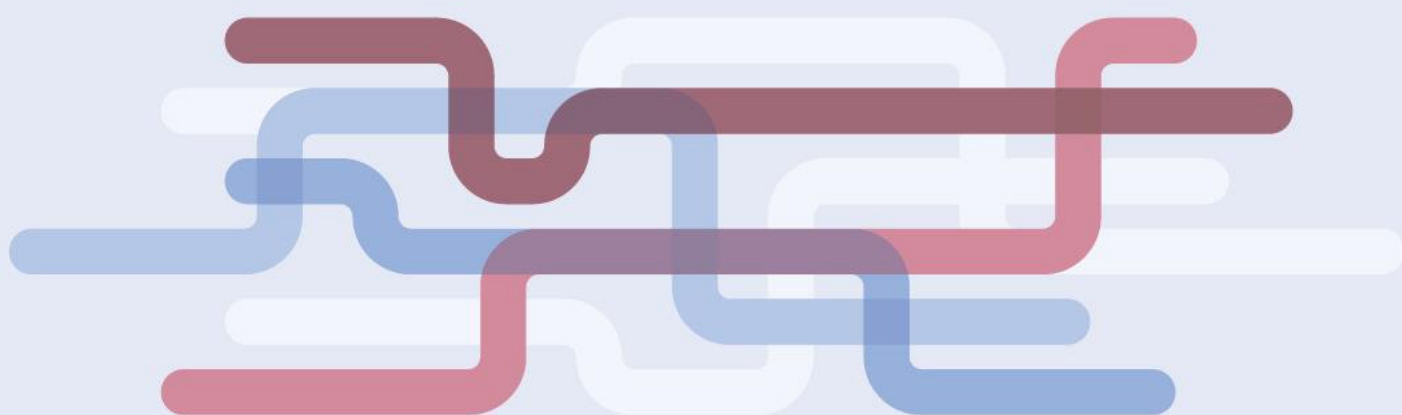


There remains an uncertainty about the availability of informal care in the future. If rates of informal care receipt and of caregiving remain constant in the future, there will continue to be a large reliance on informal care to meet the care needs of older adults. However, anticipated pressures on the availability of informal care, such as increasing labour market participation, changing views on the role of the family in providing care, and difficulties reconciling work and care responsibilities, may lead to a reduction in informal care in the future. Given informal care's extensive and crucial role in the long-term care system at present, replacing informal care for care in the community and in one's home would be costly for the state. This speaks to not only the large societal cost of informal care, but also the dependence on informal care within the care system and subsequent cost savings it brings the state.

If the rate of care dependency were to reduce in the future, this would help to alleviate the burden on the care system and public budget for LTC. Other studies from the UK have used longitudinal data to suggest that the rate of care needs may be diminishing over time (Kingston et al 2018). However, it's not clear what measures may be impacting this and over what timeline these changes could be expected. In any case, this modelled scenario in this study indicates the potential cost savings if the rate of care needs reduces over time. The findings suggest that increased investment and additional policy measures aimed at prevention and delaying care needs could help to alleviate the financial burden on public LTC expenditure.

The replacement of additional demand for 24-hour care with other types of care in one's home and in the community also highlights the benefits of 24-hour care as a relatively cheap alternative for those with intense care needs wishing to age in their home. Replacing 24-hour care with alternative home and community-based options would put additional burden on public LTC expenditure, given that a large number of home care hours would be required to be an equivalent substitute. While 24-hour care remains a suitable, cost-effective option, working conditions have been an issue in this line of work. To ensure that 24-hour care remains viable in the future, it's important that measures are taken to ensure a certain standard and suitable working conditions for 24-hour carers.

Finally, this study has shown that wages comprise the majority of costs of care and that increasing wages permanently would substantially increase public expenditure on LTC. At the same time, this study was not able to consider the beneficial impacts that raising wages may have on other aspects of the LTC system, such as increasing the retention of care workers and attracting care workers to the sector. While a permanent wage increase would put additional pressure on the state's budget, there would also be large benefits. Some form of wage increase is likely necessary moving forward as one way to recruit and retain LTC workers to ensure the care workforce will suffice in future. Increasing wages can not only benefit in this regard, but it can also help improve moral of care workers and ensure a certain level of satisfaction among them. In this study, we assumed the number of care workers in 2019 was sufficient and that a relative increase in care workers in the future would be sufficient to meet the demand for care, however in practice, the LTC sector has long struggled to retain and recruit care workers, with current numbers already insufficient to meet care demand in many regions. This will continue to be a challenge in the future given the substantial increase in LTC workers required. While we were unable to account for behavioural changes of LTC workers in the model and therefore calculate what measures may be needed, wages could be one way to promote the appeal of the sector to recruit and retain workers in future, leading to larger benefits than costs for the state.



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