European Network of Economic Policy Research Institutes

Assessing Needs of Care in European Nations

PROJECTIONS OF USE AND SUPPLY OF LONG-TERM CARE IN EUROPE: POLICY IMPLICATIONS

JOANNA GEERTS, PETER WILLEMÉ, LINDA PICKARD, DEREK KING, ADELINA COMAS-HERRERA, JÉRÔME WITTWER, ANDREAS GOLTZ, ESTHER MOT, ERIKA SCHULTZ, AGNIESZKA SOWA AND RAQUEL VEGAS

ENEPRI POLICY BRIEF NO. 12

April 2012

Abstract

Projections of use and supply of formal and informal carried out in Work Package 6 of the ANCIEN project show that if current patterns of care use and supply prevail, supply of care is likely to fall behind demand. This paper discusses the key policy implications of these findings. Meeting the required care capacity poses multifarious challenges for European welfare states, namely: how to limit the growing burden of LTC expenditure on social security or government budgets, especially in countries that rely heavily on formal care, and how to avoid an increased informal caregiver burden, while at the same time ensuring adequate care for disabled older persons. Technological advances could help close the care gap, by reducing the need for care and boosting the productivity of formal and informal care workers, or by lessening the need for care. As it is impossible to assess whether these efficiency gains will suffice to bridge the care gap, policies should anticipate an increasing care burden and plan accordingly for how to deal with its consequences.

ENEPRI Policy Briefs extract the policy implications of research carried out by member institutes of the European Network of Economic Policy Research Institutes. Initiated by CEPS in 1999, ENEPRI conducts research on welfare and employment issues with the aim of diffusing research, coordinating research plans and increasing the awareness of the European dimension in national problems (see www.enepri.org).

The research presented in this Policy Brief was conducted under the ANCIEN project (Assessing Needs of Care in European Nations), which focuses on the future of long-term care for the elderly in Europe. Funding for the project is received from the European Commission under the 7th Framework Programme (FP7 Health-2007-3.2.2, Grant no. 223483). See the back page for more information "About ANCIEN". The views expressed are attributable only to the author in a personal capacity and not to any institution with which he is associated.

PROJECTIONS OF USE AND SUPPLY OF LONG-TERM CARE IN EUROPE: POLICY IMPLICATIONS

JOANNA GEERTS, PETER WILLEMÉ, LINDA PICKARD, DEREK KING, ADELINA COMAS-HERRERA, JÉRÔME WITTWER, ANDREAS GOLTZ, ESTHER MOT, ERIKA SCHULTZ, AGNIESZKA SOWA AND RAQUEL VEGAS

ENEPRI POLICY BRIEF NO. 12/APRIL 2012

Summary

This policy brief summarises the main findings and policy recommendations from Work Package (WP) 6 of the ANCIEN project. It presents results of projections of use and supply of long-term care for older persons in four representative countries: Germany, the Netherlands, Spain and Poland. The projections show that between 2010 and 2060, the numbers of users of residential care, formal home care and informal care are projected to increase in all countries, but at different rates. The results also indicate that if current patterns of care use and supply prevail, the supply of informal and formal care is likely to fall behind demand. Policy measures to increase LTC capacity will be needed in all countries.

1. Introduction

Sharp increases in the numbers of older persons and an improved survival of disabled older persons are expected to cause an increase in the demand for and use of long-term care (LTC) in the coming decades in all European countries. At the same time, population ageing is likely to have a profound impact on future availability of both formal and informal caregivers. As work packages (WP) 1 and 3 of the ANCIEN project and other comparative studies have demonstrated, European countries differ considerably in how they organise, finance and allocate LTC (see, for instance, Colombo et al., 2011; Kraus et al., 2010). There is considerable variation not only in levels of formal and informal care use, but also in how care use is related to disability, household composition, and other characteristics of older persons (Broese van Groenou et al., 2006; Geerts & Van den Bosch, 2011; Jiménez-Martin et al., 2011; Kalmijn & Saraceno, 2006; Marcinkowska & Sowa, 2011). Supply side analyses have shown large country differences in the prevalence of informal care giving and in formal care workforce participation rates (Pickard, 2011; Geerts, 2011). Furthermore, current and predicted disability levels are much higher in some countries than in others (Bonneux et al., 2011). How population ageing and other societal trends (e.g. changing living arrangements, higher female employment rates) will affect future use and supply of formal and informal care is therefore likely to differ considerably across European countries.

WP 6 of ANCIEN has delved into the issue of how supply and use of LTC are likely to develop in different care systems. Projections of use and supply of residential care, formal home care and informal care have been made up to 2060 for four countries, Germany, the Netherlands, Spain and Poland, identified in WP1 as representative of different LTC systems (Kraus et al., 2010). The projections focus on personal care, i.e. help with basic activities of daily living (ADLs) such as bathing, dressing, eating and getting in or out of bed.

The future use of LTC has been projected using macro-simulation (cell-based) models. Probabilities of care utilisation by persons aged 65 and over have been estimated using the cross-nationally harmonised SHARE data (home care use) and national databases (residential care use). Due to data limitations, the projections for Poland include residential care only. Numbers of care users have been projected under a range of bio-demographic, risk factor and socio-demographic scenarios, relying on

the population projections by age, gender and disability provided by NIDI in WP 2 of ANCIEN, and available population projections by household composition (national databases) and education (Kc et al.). The bio-demographic scenarios explore the effect of different relationships between the incidence of disability and mortality. The base DELAY scenario assumes that disability incidence is delayed to older ages with the same amount of time as mortality is delayed (see Bonneux et al., 2011). It has been chosen as base scenario, as it is an intermediate scenario between more pessimistic scenarios assuming constant prevalence (PREV) or constant incidence (CHRON) of disability and the more radical optimistic BIOL scenario. The latter assumes a similar *relative* disability incidence decline as the mortality incidence declines. The risk factor scenarios explore the effect of alternative assumptions about trends in smoking and obesity. Further socio-demographic scenarios take account of the changing household composition and higher levels of education of the future older population. In all scenarios, the probabilities of using different types of care are assumed to remain the same in the future as they are at present, controlling for age, gender, disability and other relevant variables.

Likewise, the future supply of informal care has been projected using cell-based models. The models focus on provision of personal care by persons aged 50 and over. The projections are based on micro models using SHARE data, linking the probability of being an informal caregiver to a number of socio-demographic variables. The models distinguish between help given to people in the older generation (intergenerational care) and help given to spouses or partners aged 65 and over (spouse care). The probability of providing informal care is assumed to remain the same in the future as it is at present, controlling for key socio-demographic variables. The supply of formal care has been projected using aggregate labour supply models, and simple assumptions of constant fractions of LTC workers in the workforce. Trends in demand and use of LTC have been confronted with future LTC capacity, both in terms of the formal care workforce and informal care availability.

2. How will use and supply of formal and informal care evolve?

Future use of residential care, formal home care and informal care

In all ANCIEN representative countries, the numbers of users of residential care, formal home care and informal care are projected to increase between 2010 and 2060 under the base DELAY scenario. However, trends differ markedly for different care categories within countries, and there are large between-country differences in trends for similar care categories as well. Relative to the base year, the increase in the use of residential care is projected to be highest in the Netherlands (+ 200 %), followed by Spain (+ 162 %) and Poland (+ 152 %) (see Table 1). The smallest increase in residential care use is projected for Germany (+102 %).

Table 1. Projected numbers of residential care users in Germany, the Netherlands, Spain and Poland, 2010-2060, DELAY scenario (in thousands)

	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	% increase 2010-2060
DE	648	729	814	906	978	1028	1108	1218	1321	1360	1310	102%
NL	142	160	180	206	245	299	339	375	408	429	426	200%
ES	364	400	426	465	522	593	680	777	858	918	954	162%
PL	59	67	77	88	98	110	121	129	136	141	149	152%

Source: Geerts, Willemé & Comas-Herrera (2012), "Projecting long-term care use in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

Use of both formal home care and informal care is projected to increase most in Spain. Under the base DELAY scenario, the numbers of formal home care users are projected to increase between 2010 and 2060 by 150% in Spain, by 79% in Germany and by 116 % in the Netherlands (Table 2). For informal care use, an increase of 140% is projected for Spain, while for Germany and the Netherlands the projected increase is much lower (51% and 66% respectively, see Table 3).

Table 2. Projected numbers of formal home care users in Germany, the Netherlands and Spain, 2010-2060, DELAY scenario (in thousands)

	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	% increase 2010-2060
DE	756	849	940	1014	1095	1180	1275	1364	1410	1403	1357	79%
NL	229	258	296	338	387	436	472	493	502	502	493	116%
ES	417	463	494	532	592	663	751	851	937	1001	1042	150%

Source: Geerts, Willemé & Comas-Herrera (2012), "Projecting long-term care use in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

Table 3. Projected numbers of informal care users in Germany, the Netherlands and Spain, 2010-2060, DELAY scenario (in thousands)

	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	% increase 2010-2060
DE	2700	2846	3102	3364	3710	3975	4070	4133	4197	4198	4075	51%
NL	93	107	123	138	150	161	167	165	159	155	154	66%
ES	1176	1280	1376	1486	1635	1841	2080	2343	2577	2747	2825	140%

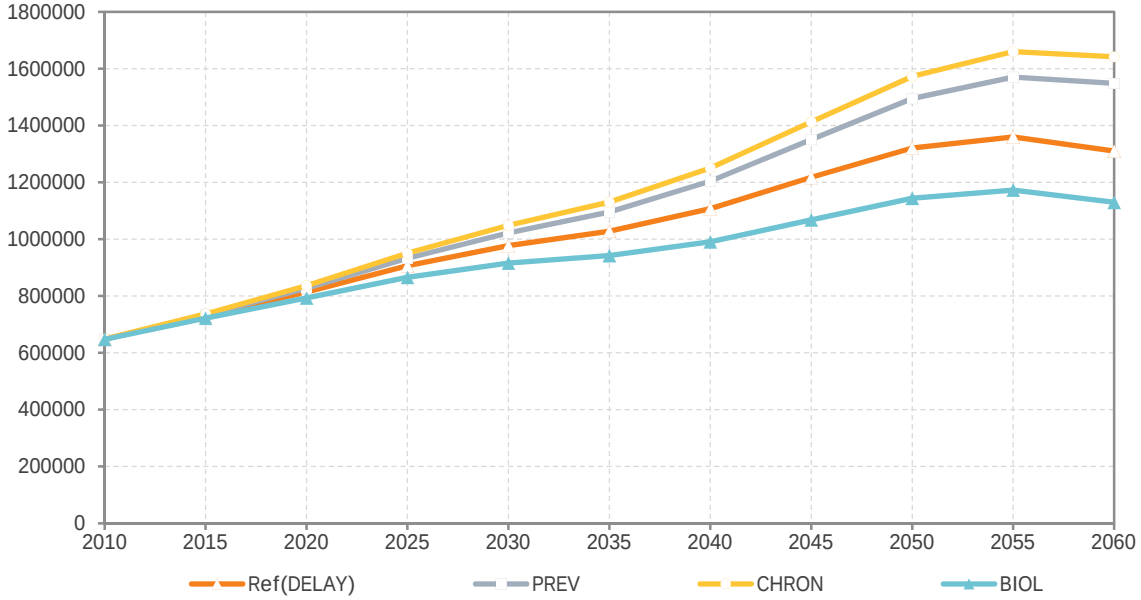
Source: Geerts, Willemé & Comas-Herrera (2012), Ibid.

For all countries, the percentage increase in the numbers of residential care users is projected to be higher than the percentage increase in the numbers of formal home care users. The smallest increases are projected for informal care use. While for Spain the differences between care categories are rather small (under the base scenario use of residential care is projected to rise by 162% and use of informal care by 140%), differences are much larger for the Netherlands (a 200% increase for residential care but an increase of only 66% for informal care).

These differences in care utilisation trends can be related to demographic, epidemiological and care system factors. Among European countries, the timing, extent and speed of population ageing varies considerably. Furthermore, age-specific prevalence of disability also differ (Bonneux et al., 2011), as does the extent to which formal and informal care use is related to care needs, potential informal care availability and other characteristics of older persons (Geerts, 2012; Jiménez-Martin et al., 2011; Marcinkowska and Sowa, 2011; Mot et al., 2012).

Sensitivity analyses have shown that the projected numbers of residential care users are very sensitive to alternative assumptions about the incidence of disability and mortality in Germany, but less so in the other countries. For Germany, the projected increase in the number of residential care users between 2010 and 2060 ranges from 74% under the BIOL scenario to 153% under the CHRON scenario (see Figure 1). Even in the very optimistic BIOL scenario a considerable increase in the number of residential care users is projected.

Figure 1. Projected numbers of residential care users, Germany, 2010-2060, bio-demographic scenarios



Source: Geerts, Willemé & Comas-Herrera (2012), op. cit.

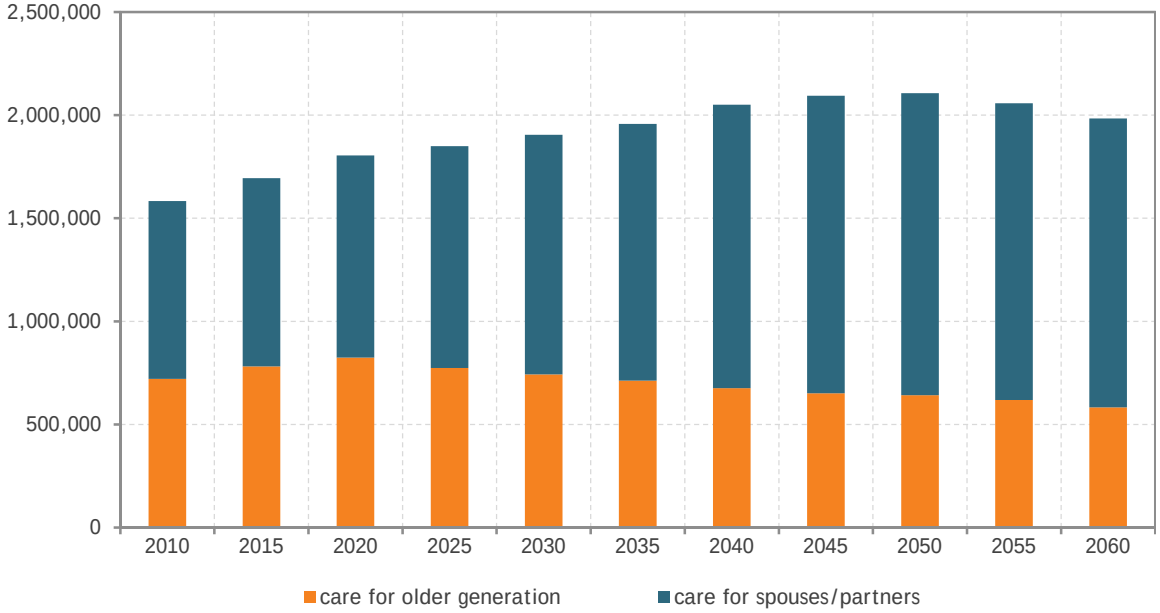
The alternative bio-demographic scenarios have strong effects on the projections of formal home care and informal care in all countries considered. Of the different risk factor scenarios, the BMI scenarios generally have little impact – as their impact on the disability projections is low (see Bonneux et al., 2011) while alternative assumptions about future trends in smoking behaviour have a larger effect. Taking account of future trends in household composition generally makes little difference. The impact of the better education scenario differs, depending on the strength of the association of care use and educational level and the magnitude of projected educational changes.

Under the assumption of constant probabilities of care utilisation, for all countries the projections show a considerable increase in the numbers of users of all types of care – residential care, formal home care and informal care – even under the more optimistic scenarios. The key driver of the projected increases is demographic change. It is therefore clear that care capacity – the availability of formal and informal resources – will have to rise considerably in future years to keep pace with the increasing demand.

Future supply of informal and formal care

In all the ANCIEN representative countries, informal care supply, by people aged 50 and over, is projected to increase both in the shorter term, over the next 30 years, and in the longer term, over the next 50 years (Pickard & King, 2012a). The projections for Germany show an increase in the numbers providing personal care to older people over the next 50 years, with numbers rising from approximately 1.6 million in 2010 to approximately two million in 2060 (Figure 2). This increase is solely due to an increase in spouse care. Care for the older generation is projected to fall in absolute terms.

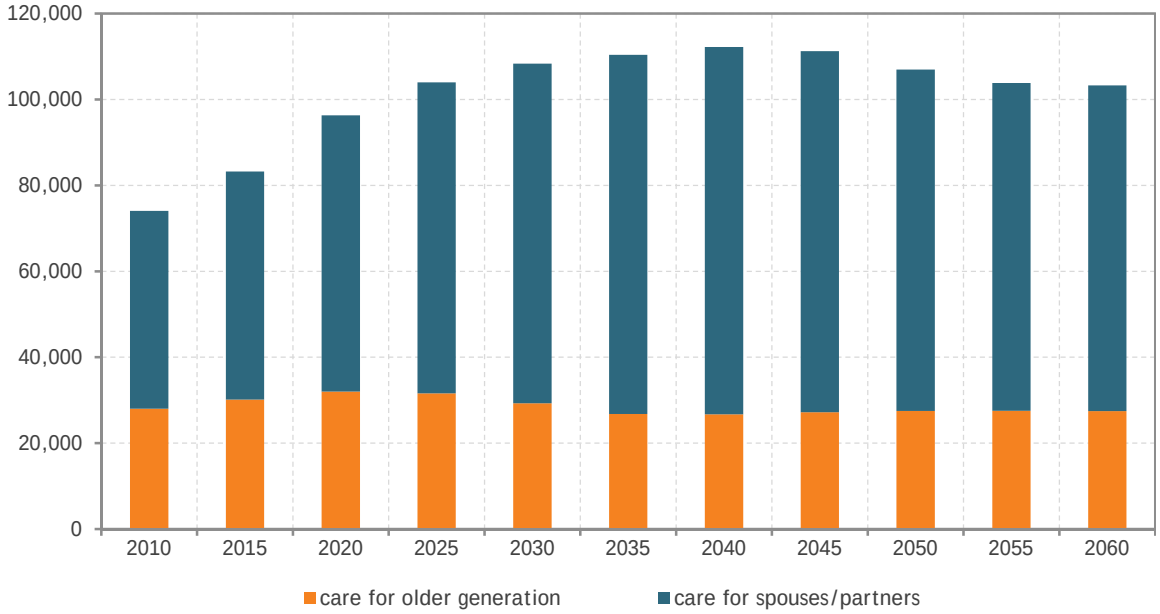
Figure 2. Estimated numbers of people aged 50 and over providing informal personal care to an older person, by type of care recipient, Germany, 2010-2060



Source: Pickard & King (2012a), "Modelling the future supply of informal care for older people in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

The projections for the Netherlands show an increase in the estimated numbers providing informal personal care to older people over the next 50 years, with numbers rising from approximately 75,000 in 2010 to approximately 105,000 in 2060. As in Germany, the projected increase in the numbers providing informal care is solely due to an increase in spouse care. Care for the older generation is projected to fall in absolute terms, though the decline is not as great as in Germany.

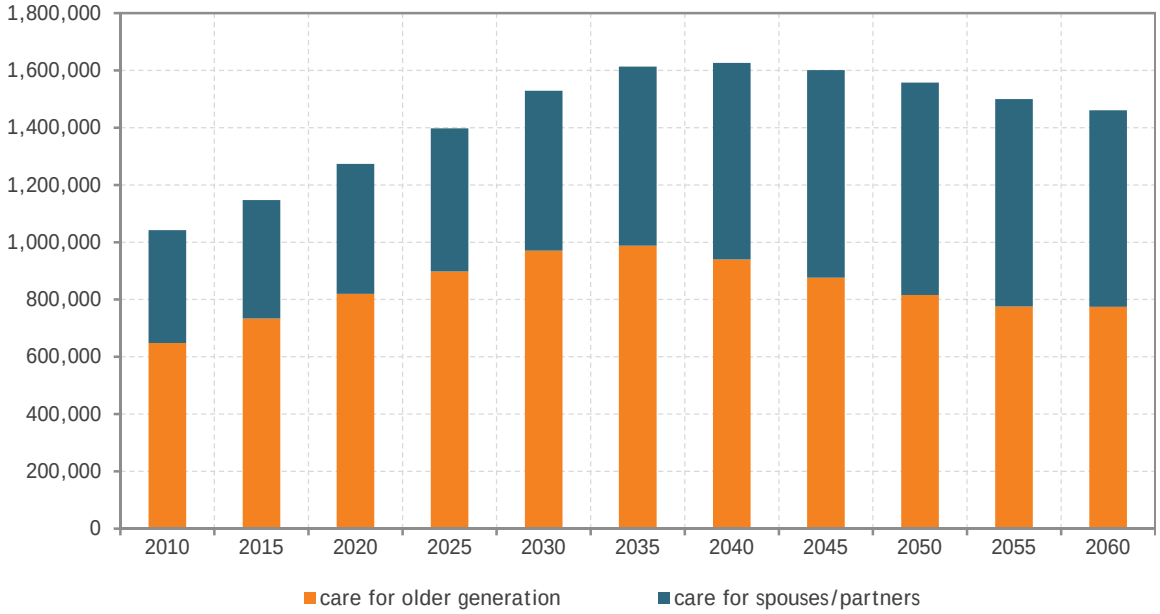
Figure 3. Estimated numbers of people aged 50 and over providing informal personal care to an older person, by type of care recipient, the Netherlands, 2010-2060



Source: Pickard & King, Ibid.

In Spain, there will be an increase in the numbers providing personal care to older people over the next 50 years, with numbers rising from approximately one million in 2010 to approximately 1.5 million in 2060, an increase of 40% (Figure 4). In Spain, this increase is a result of increases in both spouse care and care for the older generation.

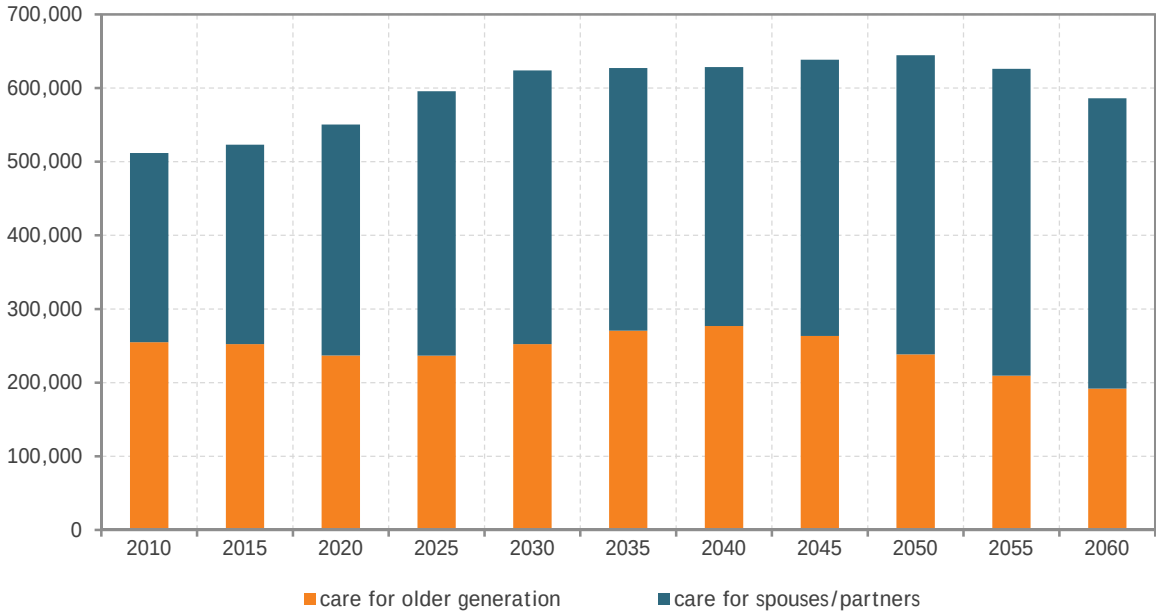
Figure 4. Estimated numbers of people aged 50 and over providing informal personal care to an older person, by type of care recipient, Spain, 2010-2060



Source: Pickard & King, op. cit.

In Poland, there will be an increase in the numbers providing personal care to older people over the next 50 years, with numbers rising from approximately 500,000 in 2010 to 600,000 in 2060, an increase of nearly 15% (Figure 5). As in Germany and the Netherlands, the increase in provision of care for older people in Poland is solely due to an increase in spouse care, which rises by over 50% between 2010 and 2060.

Figure 5. Estimated numbers of people aged 50 and over providing informal personal care to an older person, by type of care recipient, Poland, 2010-2060

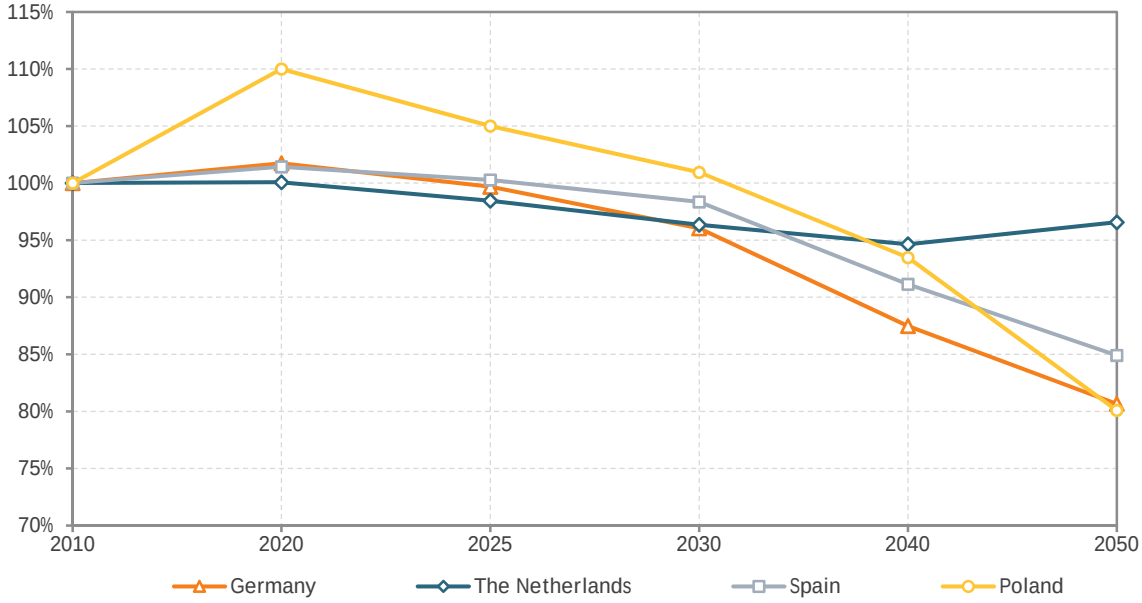


Source: Pickard & King, op. cit.

In all four ANCIEN representative countries, the relatively slow projected rise in informal care supply is not primarily due to trends in spousal care, which is projected to rise in all countries. The relatively slow growth in informal care supply is due to projected trends in care for the older generation, which are, in turn, driven by underlying demographic trends in the numbers of people aged 50 to 64.

Projections of the LTC workforce show a rather similar trend until 2025 for the ANCIEN representative countries (Figure 6). All countries stay at a more or less stable number of LTC workers, with the exception of Poland, where the number of LTC workers will increase between 2010 and 2020. After 2030 the countries split into two clusters. The first cluster, consisting solely of the Netherlands, will experience only a very small decrease of LTC workers until 2040 and a final increase in the number of LTC workers between 2040 and 2050. The second group, consisting of Spain, Germany, and Poland, will experience a much stronger decrease and lose 15% to 20% of its LTC workforce between 2010 and 2050 if current patterns persist.

Figure 6. Projections of the LTC workforce for Germany, the Netherlands, Spain and Poland, 2010-2050 (2010=100)



Source: Wittwer & Goltz (2012), "Projections of the future long-term care workforce", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

Growing care-gaps

Drawing on a methodology originally developed in relation to projections of informal care supply and demand in England (Pickard, 2008), the results of the projections of use of informal care under the base DELAY scenario are compared with the projections of informal caregivers, and a similar comparison is made for the projections of formal care use and the projections of formal care workers.

In the methodology, a comparison is initially made between projected numbers of informal (or formal) caregivers and projected numbers of informal (or formal) care-users, with the projections of informal (or formal) caregivers assuming constant probabilities of providing informal care (or constant rates of LTC workforce participation). These projections of the numbers of caregivers are then compared with the numbers of caregivers that would be needed if the supply of informal (or formal care) were to meet demand in future. The estimate of the number of caregivers that would be needed if supply were to meet demand is calculated by assuming that the current ratio of caregivers to care-users remains constant in future years. A potential shortage of caregivers, an informal (or formal) 'care gap', can then be identified.

Table 4. Informal care-users, informal care-givers at constant ratio of care-givers to care-users, informal care-givers at constant probability of providing care and informal 'care gap', Germany, the Netherlands, Spain, 2010 and 2060 (in thousands)

		Care-users (A)	Care-givers at constant ratio of care-givers to care-users (B)	Care-givers at constant probabilities of providing care (C)	Informal 'care gap' (B)-(C)
Germany	2010	2,700	1,583	1,583	0[a]
	2060	4,075	2,389	1,984	405
The Netherlands	2010	93	74	74	0
	2060	154	123	103	19
Spain	2010	1,176	1,042	1,042	0
	2060	2,825	2,504	1,461	1,043

Notes: [a] It is important to note that a zero care gap does not imply adequacy of current levels of care.

Sources: Pickard & King (2012b), "Conclusions – Informal care supply and demand in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

Table 4 shows that the projected numbers of informal caregivers, based on constant probabilities of providing care, are lower in 2060 than the numbers that would be needed if supply were to meet demand. By 2060, the 'care gap' between the numbers of caregivers projected to be available and the numbers needed to meet demand amounts to approximately 400,000 caregivers in Germany, approximately 20,000 caregivers in the Netherlands and over a million caregivers in Spain. The key conclusion of the comparison of informal care supply and demand is that the supply of informal personal care to older persons in representative European countries is unlikely to keep pace with demand in future years. The reason why informal care does not keep pace with demand is primarily to do with trends in intergenerational care, which are themselves based on underlying demographic trends in the numbers of people aged 50 to 64. The informal 'care gap' is particularly large in Germany and Spain, and this in turn reflects the heavy reliance on informal care in the long-term care systems in these countries (Pickard & King, 2012b).

Table 5. Formal care-users, formal care workers at constant ratio of care workers to care-users, formal care workers at constant fraction of workforce and formal 'care gap', Germany, the Netherlands, Spain, Poland, 2010 and 2050 (in thousands)

		Care-users (A)	Care workers at constant ratio of care workers to care-users (B)	Care workers at constant fraction of workforce (C)	Formal 'care gap' (B)-(C)
Germany	2010	1,405	631	631	0[a]
	2050	2,731	1,227	509	718
The Netherlands	2010	371	236	236	0
	2050	911	581	228	353
Spain	2010	781	430	430	0
	2050	1,795	988	365	623
Poland	2010	59	18	18	0
	2050	136	42	15	27

Notes: [a] It is important to note that a zero care gap does not imply adequacy of current levels of care.

Source: Geerts & Willemé (2012), "Conclusions – Formal care supply and demand in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

As Table 5 shows, in all four countries, in 2050 the projected numbers of formal LTC workers based on constant workforce participation rates are lower than the numbers that would be needed if supply of

formal care were to meet demand. The resulting formal 'care gap' amounts to approximately 700,000 LTC workers in Germany, 350,000 care workers in the Netherlands, 625,000 care workers in Spain, and 27,000 care workers in Poland. While current rates of informal care provision are not projected to keep pace with demand, at current LTC workforce participation rates, supply of formal personal care, in turn, is unlikely to keep pace with demand. In relative terms, the formal 'care gap' is particularly large in the Netherlands, a country with a high share of formal care users, and in Poland, where use of formal (residential) care is much less prevalent. It is also large in Spain, where use of formal care is low too. While in the Netherlands the formal 'care gap' is almost completely due to an increased demand, in Spain and Poland a combination of an increased demand and a shrinking workforce is at play. In all four countries, the shares of the workforce in the LTC sector would at least need to double in order to keep pace with demand.

3. Policy implications and recommendations

The inevitable rise in the numbers of elderly persons in Europe as a result of the ageing of the baby-boom generation and increased life expectancy are expected to lead to a corresponding increase in the demand for LTC in the coming decades. The challenges that this increased demand will raise are threefold. First, the projections of use and supply of informal and formal care of the ANCIEN project have shown that the supply of care is unlikely to keep pace with demand in future years (Pickard & King, 2012b). Given that the informal 'care gap' is attributable primarily to trends in intergenerational care, if more people are to provide care, they are likely to be people of 'working age'. There is pressure in all European countries for people of 'working age' to be in employment, in order to maximise the tax base in the context of population ageing (OECD, 2006). It seems unrealistic to expect people to combine regular personal care for an older person with high rates of employment. It seems likely that, in response to the informal 'care gap', more formal services will need to be provided. However, at current LTC workforce participation rates, the supply of formal personal care, in turn, is unlikely to keep pace with demand. The key driving factor of the projected shortages, both informal and formal, is demographic change: smaller birth cohorts after the baby boom generation resulting in lower numbers of available carers, both professional and informal. If this 'care gap' is not filled, the available care will not suffice to meet growing demand.

A second challenge that the future demand will present is the associated rise in LTC expenditure and the increasing burden on social security or government budgets, if growing needs are partially met by growing formal care supply. This will be a major problem in countries that rely heavily on formal care.

Third, the projected shortage of informal caregivers will further increase the already substantial burden the carers are facing (such as labour market problems, physical and mental health problems due to workload and stress, etc., see for instance Colombo et al. (2011)). If, due to budgetary constraints, the projected additional demand would be shifted towards informal care, this will further exacerbate the situation of elderly spouses and adult children. Alternatively, if informal carers will not be able to increase their supply of care further because of labour market obligations and other obstacles, the situation of disabled elderly people will deteriorate.

Meeting the required care capacity, even regardless of budgetary constraints, raises the problem of maintaining an adequate level of quality of care. With respect to formal care, this entails ensuring that the required numbers of adequately trained nurses and other care professionals will be available. Given the burden of the job and the opportunities in other sectors of the economy, this challenge can probably only be met by making the job more attractive, both financially and otherwise. With respect to informal care, quality assurance is already less developed today in most countries (Dandi et al., 2012), so if the burden on informal carers grows in the future due to increased demand, this problem is likely to become even more acute.

The diverging trends in future LTC demand and supply raise the question of whether technological advances could help reduce the care gap, essentially by boosting the productivity of formal and informal care workers or by reducing the need for care in the first place. While it is hard to answer this question in any definite way, technology certainly has the potential to help in a variety of ways, some of which have been documented in Work Package 4 of the ANCIEN project. Examples include

improved independence of disabled elderly people due to remote monitoring systems, assistive devices etc., but also the potential improvements offered by information and communication technology in coordinating and organising LTC. Furthermore, technology can support improvements in the diagnosis and treatment of chronic conditions that may slow the increase in the need for LTC. Whether these efficiency gains will suffice to bridge the care gap is impossible to assess, so it is probably wise to anticipate an increasing care burden in European countries and to start making plans to deal with its consequences.

4. Research parameters

ANCIEN (Assessing Needs for Care in European Nations) is a research project that concerns the future of long-term care (LTC) for older persons in Europe and investigates two questions: 1) How will need, demand, supply and use of LTC develop? 2) How do different systems of LTC perform? This Policy Brief summarises findings from Work Package 6 of the ANCIEN project, whose main objective is to project use and supply of care in different LTC systems.

Projections of use and supply of residential care, formal home care and informal care have been made up to 2060 for four countries, Germany, the Netherlands, Spain and Poland, identified in WP1 as representative of different LTC systems (Kraus et al., 2010). The projections focus on personal care, i.e. help with activities of daily living (ADLs) such as bathing, dressing, eating and getting in or out of bed. Help with household tasks has not been included in the projections as comparability of household help data turned out to be limited, and help with personal care is more likely to capture help given due to the disability of the cared-for person. Because of data limitations, the projections for Poland only concern residential care.

While other European comparative LTC projections (e.g. Comas-Herrera et al., 2006; Economic Policy Committee and European Commission, 2009) mostly rely on national, often administrative, data sources, applying country-specific definitions of different types of LTC, the ANCIEN projections of care utilisation are based, to the extent possible, on cross-nationally harmonised survey data (SHARE), using identical definitions and measurements of the different types of care in all countries involved. The use of individual-level data allowed the project team to link probabilities of using and providing care not only to age, gender and being ADL disabled, but also to level of disability, household composition, educational level and other relevant characteristics of older people. Furthermore, by being able to rely on WP2 projections of the future numbers of older persons by age, gender and severity of need under different bio-demographic and risk factor scenarios, the study could explore the sensitivity of the projected numbers of care users to a wide range of alternative assumptions about trends in demography and disability.

Although SHARE proved to be a very important data source for the projections, the data had some limitations: no information on formal care use for Poland (Wave 2), very limited sample numbers of care users for some countries, limited information on use of help with household tasks. The expansion of the SHARE study towards more waves, the inclusion of more EU 12 countries, larger samples in each country, and the continued inclusion of detailed questions on use and provision of care, could provide important data for future studies in this domain.

References

Bonneux, L., N. van der Gaag, G. Bijwaard and J. de Beer (2011), *Forecasting disability in the European Union*, Nidi, Den Haag.

Broese van Groenou, M., K. Glaser, C. Tomassini and T. Jacobs (2006), "Socio-economic status differences in older people's use of informal and formal help: a comparison of four European countries", *Ageing and Society*, 26(05), pp. 745-766, doi:10.1017/S0144686X06005241.

Colombo, F., A. Llena-Nozal, J. Mercier and F. Tjadens (2011), *Help Wanted? Providing and Paying for Long-Term Care*, OECD, Paris.

Dandi, R., G. Casanova, R. Lillini, M. Volpe, A. De Belvis, M. Avolio and F. Pelone (2012), *Long-term care quality assurance policies in European countries*, ENEPRI Research Report No. 111, CEPS, Brussels.

Economic Policy Committee and European Commission (2009), *The 2009 Ageing Report: economic and budgetary projections for the EU-27 Member States (2008-2060) Joint Report prepared by the European Commission (DG ECFIN) and the Economic Policy Committee (AWG)*, European Economy 2/2009, Brussels: European Commission.

Geerts, J. (2011), *The long-term care workforce: Description and perspectives*, ENEPRI Research Report No. 93, CEPS, Brussels.

Geerts, J. (2012), "Determinants of use of formal and informal personal care by older persons living at home: Evidence from Germany, the Netherlands and Spain", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116,(forthcoming) CEPS, Brussels.

Geerts, J., P. Willemé and A. Comas-Herrera (2012), "Projecting long-term care use in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

Geerts, J. and K. Van den Bosch (2011), "Transitions in formal and informal care utilisation amongst older Europeans: the impact of national contexts", *European Journal of Ageing*, doi:10.1007/s10433-011-0199-z.

Hancock, R., A. Juarez-Garcia, A. Comas-Herrera, D. King, J. Malley, L. Pickard and R. Wittenberg (2007), "Winners and Losers: Assessing the Distributional Effects of Long-Term Care Funding Regimes", *Social Policy and Society*, 6(03), p. 379.

Jiménez-Martín, S., R. Vegas Sánchez and C. Vilaplana Prieto (2011), *The relationship between formal and informal care in Europe and its implications for the number of caregiving hours*, ENEPRI Research Report No 100, CEPS, Brussels.

Kalmijn, M. and C. Saraceno (2006), "Responsiveness to parental needs in individualistic and familialistic countries", Netspar Discussion Paper No. 2006-022 (http://arno.uvt.nl/show.cgi?fid=58019).

Kc, S., B. Barakat, A. Goujon, V. Skirbekk and W. Lutz (2010), "Projection of populations by level of educational attainment, age, and sex for 120 countries for 2005-2050", *Demographic Research*, 22, pp. 383-472, doi:10.4054/DemRes.2010.22.15.

Kraus, M., M. Rieder, E. Mot, P. Willemé, G. Röhrling and T. Czypionka (2010), *Typology of Systems of Long-Term Care in Europe - Results of Work Package 1 of the ANCIEN Project*, ENEPRI Research Report No 91, CEPS, Brussels.

Marcinkowska, I. and A. Sowa (2011), *Determinants of the probability of obtaining formal and informal long-term care in European countries*, ENEPRI Research Report No 99, CEPS, Brussels.

Mot, E., E. Schulz, A. Sowa, R. Vegas and J. Wittwer (2012), "Determinants of institutionalisation in Europe for elderly disabled people: Evidence from Germany, the Netherlands, Spain and Poland", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

Organisation for Economic Co-operation and Development (OECD) (2006), *Live Longer. Work Longer*, OECD, Paris.

Pickard, L. (2008), "Informal Care for Older People Provided by their Adult Children: Projections of Supply and Demand to 2041 in England, Report to the Strategy Unit (Cabinet Office) and the Department of Health", PSSRU Discussion Paper No. 2515, Personal Social Services Research Unit, London.

Pickard, L. (2011), "The Supply of Informal Care in Europe" (http://www.ancien-longtermcare.eu/publications).

Pickard, L. and D. King (2012a), "Modelling the future supply of informal care for older people in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels, pp. 76-106.

Pickard, L. and D. King (2012b), "Conclusions – Informal care supply and demand in Europe", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels, pp. 114-123.

Sundström, G. and L. Johansson (2005), "The changing balance of government and family in care for the elderly in Sweden and other European countries", *Australasian Journal on Ageing*, 24(s1), pp. 5-11.

Wanless, D. (2006), *Securing Good Care for Older People: Taking a long-term view*, London: King's Fund.

Wittenberg, R., L. Pickard, A. Comas-Herrera, B. Davies and R. Darton (1998), *Demand for long-term care: Projections of long-term care finance for elderly people*, Canterbury: PSSRU, University of Kent at Canterbury (http://www.pssru.ac.uk/pdf/ltcrep98.pdf).

Wittwer, J. and A. Goltz (2012), "Projections of the future long-term care workforce", in Geerts, Willemé & Mot (eds), *Projecting long-term care use and supply in Europe*, ENEPRI Research Report No. 116, CEPS, Brussels.

EUROPEAN COMMISSION
European Research Area

SEVENTH FRAMEWORK PROGRAMME

Funded under Socio-economic Sciences & Humanities

ANCIEN

Assessing Needs of Care in European Nations

FP7 HEALTH-2007-3.2-2

Launched in January 2009, ANCIEN is a research project financed under the 7th EU Research Framework Programme. It runs for a 44-month period and involves 20 partners from EU member states. The project principally concerns the future of long-term care (LTC) for the elderly in Europe and addresses two questions in particular:

1) How will need, demand, supply and use of LTC develop?

2) How do different systems of LTC perform?

The project proceeds in consecutive steps of collecting and analysing information and projecting future scenarios on long-term care needs, use, quality assurance and system performance. State-of-the-art demographic, epidemiological and econometric modelling is used to interpret and project needs, supply and use of long-term care over future time periods for different LTC systems.

Work Packages. The project started with collecting information and data to portray long-term care in Europe (WP 1). After establishing a framework for individual country reports, including data templates, information was collected and typologies of LTC systems were created. The collected data form the basis of estimates of actual and future long term care needs in selected countries (WP 2). WP 3 builds on the estimates of needs to characterise the response: the provision and determinants of formal and informal care across European long-term care systems. Special emphasis is put on identifying the impact of regulation on the choice of care and the supply of caregivers. WP 6 integrates the results of WPs 1, 2 and 3 using econometric micro and macro-modelling, translating the projected needs derived from WP2 into projected use by using the behavioral models developed in WP3, taking into account the availability and regulation of formal and informal care and the potential use of technological developments.

On the back of projected needs, provisions and use in European LTC systems, WP 4 addresses developing technology as a factor in the process of change occurring in long-term care. This project will work out general principles for coping with the role of evolving technology, considering the cultural, economic, regulatory and organisational conditions. WP 5 addresses quality assurance. Together with WP 1, WP 5 reviews the policies on LTC quality assurance and the quality indicators in the EU member states, and assesses strengths, weaknesses, opportunities and threats of the various quality assurance policies. Finally WP 7 analyses systems performance, identifying best practices and studying trade-offs between quality, accessibility and affordability.

The final result of all work packages is a comprehensive overview of the long term care systems of EU nations, a description and projection of needs, provision and use for selected countries combined with a description of systems, and of quality assurance and an analysis of systems performance.

Principal and Partner Institutes

CEPS is responsible for administrative coordination and dissemination of the general results (WP 8 and 9). The Belgian Federal Planning Bureau (FPB) and the Netherlands Bureau for Economic Policy Analysis (CPB) are responsible for scientific coordination. Other partners include: German Institute for Economic Research (DIW); Netherlands Interdisciplinary Demographic Institute (NIDI); Fundación de Estudios de Economía Aplicada (FEDEA); Consiglio Nazionale delle Ricerche (CNR); Universitá Luiss Guido Carli-Luiss Business School (LUISS-LBS); Institute for Advanced Studies (IHS); London School of Economics and Political Science- Personal Social Services Research Unit (PSSRU); Istituto di Studi e Analisi Economica (ISAE); Center for Social and Economic Research (CASE); Institute for Economic Research (IER); Social Research Institute (TARKI); The Research Institute of the Finnish Economy (ETLA); Université de Paris-Dauphine-Laboratoire d`Economie et de Gestion des organisations de Santé (DAUPHINE- LEGOS); University of Stockholm, Department of Economics; Karolinska Institute-Department of Medecine, Clinical Epidemiology Unit ; Institute of Economic Research, Slovak Academy of Sciences (SAS-BIER); Center for Policy studies (PRAXIS). Most of the ANCIEN partners are members of the European Network of Economic Policy Research Institutes (ENEPRI).

For more information, please visit the ANCIEN website (www.ancien-longtermcare.eu) or the CEPS website (www.ceps.eu).