

Ludovico Carrino and Cristina Elisa Orso

## 31 Eligibility regulations and formal home-care utilisation among the vulnerable older people in SHARE Wave 5

- 
- ▶ Eligibility matters and differs across countries
  - ▶ Potential failures of Long-term Care (LTC) systems arise when objective vulnerable elders are left out of home-care programmes, or when formal care is provided to healthy individuals
  - ▶ Education plays a crucial role in determining the access to formal home-care for eligible individuals
  - ▶ Diabetes, cancer, Parkinson, fractures partially explain why non-vulnerable individuals receive home-care
- 

### 31.1 Eligibility regulations and access to formal home-care

Availability, accessibility and acceptability of public home-based programmes of long-term care for older people in Europe is under intense analysis. Tightening government budget constraints, together with the ongoing ageing process, call for efficient and effective home-care provision that could promote the practice of healthy (and active) ageing among older adults (European Commission 2014). Gaining insights on availability, accessibility, acceptability and utilisation of formal home-care is therefore particularly useful to improve both its efficiency and effectiveness.

In this chapter we explore the determinants of access to formal home-care for the older population in Europe. We contribute to the existing literature in that we take into account the institutional regulations for public LTC programmes, which label individuals as “eligible” or “non-eligible” to in-kind/in-cash benefits, according to their medical-status. In particular, we investigate potential “failures” of LTC programmes, which arise when vulnerable individuals who are legally entitled to receive formal-service, do not receive any (the so-called “no-care zone” (Wallace 1990)) or when, conversely, individuals make use of home-care although not being eligible for it.

Utilisation of public home-based assistance requires some degree of interaction between the applicant and the institution providing the benefit. Access

to main care programmes in Europe is vastly determined in two sequential and regulated steps. First, an assessment-of-need is performed by medical teams in order to build a “vulnerability profile” of the elder applicant; second, a decision on their eligibility status is taken by comparing the vulnerability profile with a set of eligibility rules defined by the legislation. The eligibility status conveys two sorts of information: at the extensive margin it discriminates between eligible and non-eligible individuals (i.e. having *access* to the programme or not) while at the intensive margin it characterises the individual degree of eligibility and, therefore, the extent to which a recipient can benefit from the programme (i.e. the *utilisation* of the service). What needs to be stressed is that assessment and eligibility processes act as a compulsory gateway to public domiciliary support in all countries and, in some cases, as pathways to reablement or to care planning (Eleftheriades & Wittenberg 2013). Although such regulative aspects are likely to be crucial factors in determining access to and utilisation of home-based care in Europe, they have not been comprehensively reviewed and included so far in applied analyses.

In a recent paper (Carrino & Orso 2014) we provide a review of main public LTC programmes of domiciliary-care in several European countries. We find that regulations are highly heterogeneous, both within and between countries, with respect to the actual definition of the population in “need-of-care”. Due to the high level of heterogeneity in defining eligibility criteria, we focus our attention on a subset of European countries (Austria, Belgium, Czech Republic, Germany, Spain and France), whose public LTC regulations clearly identify a minimum level of need corresponding to a condition of “objective dependency” that entitles individuals to receive a public home-care service.

Table 31.1 summarises the assessment and eligibility rules for main LTC programmes in these countries. Even though all regulations attach a vulnerability-index to each medical profile, substantial variations arise in how such indices are built. Even if most programmes evaluate “objective vulnerability” on a set of functional (mostly ADL and iADL tasks) and cognitive limitations, almost no regulation includes them altogether in the assessment process. Moreover, the health outcomes are often unequally weighted within an assessment scale: some limitations are given more importance than others, and there are legislations that define some deficit as necessary and/or sufficient for eligibility. As a consequence, individuals with equal medical-profiles may well result to be eligible for LTC services under one legislation while being ineligible under others.

**Table 31.1:** Summary of LTC Eligibility Regulations

Country	Programme (scale)	# items	ADL	iADL	Others	Eligibility threshold	Equal weighing
AT	<i>Pflegegeld</i>	21	✓	✓	M, C	60h/month+	No
BE	<i>APA</i>	7	p	p	C	7 points	Yes
	<i>INAMI/RIZIV (BESADL)</i>	6	✓		C	Washing and dressing / cognition	No
	<i>Vlaamse zorgverzekering</i>	25	✓	✓	C	35 points	No
CZ	<i>Příspěvek na péči</i>	10	✓	✓	C	3 deficits	yes
DE	<i>Pflegeversicherung</i>	15	✓	✓	M, C	90m/day+/ Cognition	No
ES	<i>Promoción de la Autonomía Personal</i>	9	✓	✓	C	25 points	No
FR	<i>APA (AGGIR)</i>	8	✓*	**	C	2 ADL / cognition	no
	<i>Action Sociale (AGGIR)</i>	8	✓*	**	C	washing / cooking / housework	no

Notes: C = cognitive limitations; M = advanced medication procedures; p = partial coverage;

\* Incontinence not included; \*\* iADL do not enter the algorithm for GIR classification; + Austria: at least one ADL and one iADL limitations must occur. Germany: out of the 90m of need, at least 45m must come from ADL limitations.

Source: Carrino & Orso (2014)

## 31.2 Potential failures of long-term care

Basing on our review, we implement countries' LTC eligibility rules on the individual observations included in the 5<sup>th</sup> wave of SHARE, for Austria, Belgium, Czech Republic, France, Germany and Spain. Our sample selection includes all individuals aged 65+ (15,481 observations). SHARE data are particularly useful for this sort of analysis, since they contain a set of questions that allows us to build, for each individual, a simplified medical profile comparable with the LTC regulations of the countries in our sample. As a result, we are able to generate a dichotomous individual variable, named *eligibility*, which takes value 1 if the

individual fulfils the minimum requirements of at least one LTC programme implemented in her area of residency (i.e. he/she is *eligible* to LTC home-care services) and 0 otherwise. The eligibility status is therefore exogenously assigned at the individual level on the basis of the LTC regulations implemented in each respondent's country. Furthermore, eligibility in these countries is determined solely on a patient's functional and cognitive status, as well as on age (the latter is not always included as a condition). Our eligibility variable can be interpreted as a necessary requirement to obtain publicly funded long-term care, and as a proxy for the country-specific perspectives on the concept of vulnerability, therefore allowing us to account for the heterogeneity in both the assessment-of-need procedures and the eligibility rules among the selected countries.

We consider an individual as *formal care receiver* if he/she reports to have received professional or paid personal-care/nursing-care in their own home, in order to perform activities that he/she could not have performed otherwise, or to have received meals-on-wheels. We construct a dichotomous variable for formal home-care utilisation that assumes value 1 if respondents receive such forms of assistance during the twelve months preceding the interview, and 0 otherwise.

Table 31.2 shows that, on average, ten per cent of the population is eligible to home-based LTC. The country-specific eligibility rates go from 11.7 per cent in France to 7.3 per cent in Belgium. These rates should not be interpreted as comparable inclusiveness rates, since their heterogeneity derives from both differences in regulations and differences in the country-specific population and these effects cannot be disentangled at this level of analysis (Carrino & Orso 2014).

**Table 31.2:** Eligible and non-eligible individuals across countries

	Austria	Germany	Spain	France	Belgium	Czechia	Total
Non-eligible	1,970	2,256	2,796	1,978	2,354	2,572	<b>13,926</b>
Eligible	250	203	347	262	185	308	<b>1,555</b>
(in %)	11.3 %	8.3 %	11.0 %	11.7 %	7.3 %	10.7 %	<b>10.0 %</b>
<b>Total</b>	<b>2,220</b>	<b>2,459</b>	<b>3,143</b>	<b>2,240</b>	<b>2,539</b>	<b>2,880</b>	<b>15,481</b>

Source: Authors' elaboration from SHARE data

Furthermore, we can exploit the exogenous and regulative nature of the eligibility variable to gain some further insight on formal care utilisation in our sample. Table 31.3 reports the share of total population who gets formal home-care and/or is eligible for it.

**Table 31.3:** Eligibility and receiving home-care

(% of total population)		Receiving formal home-care	
		No	Yes
Eligible	No	86.7 %	3.2 % (ii)
	Yes	5.5 % (i)	4.6 %

Source: Authors' elaboration from SHARE data

As it is visible from Table 31.3 the “eligibility” status does not necessarily identify those individuals who are actually “treated” by public programmes, for a number of reasons. First, SHARE does not include information on whether an individual did apply for LTC benefits. Our eligibility variable is built independently of individuals’ actual utilisation of formal care, and does not represent a treatment effect but, rather, an intention to treat. That is, eligible individuals are those whose medical-profile is regarded by local regulations as being “vulnerable enough” to receive public care. Second, an individual can choose to buy formal care on the private market, because of a lack of public care supply or because he/she needs a kind of assistance which is not covered by the public programmes.

Nevertheless, Table 31.3 allows us to distinguish between two well-known potential “failures” of the care-programmes, which arise when:

- i. individuals who would be, in principle, considered as eligible, do not actually receive any formal care
- ii. individuals who are not eligible still make use of formal care

Point (i) should be carefully examined, since it highlights “no-care zones” where the LTC programmes are not effective, thus hinting at existing issues in the interaction between applicants and institutions. Investigating the determinants of these conditions is a task of major economic and policy relevance. The existing literature provides evidence for an important role played by education (health and bureaucracy literacy) on the lack of access among those who need it, but does not consider the role of eligibility regulations (Parker et al. 2003, Peerson & Saunders 2009).

Point (ii) potentially encompasses actual “system failures”, e.g. when someone receives a service (formal home-care) he/she is not entitled to receive, since he/she is not eligible for it. As already mentioned, caution should be exercised in interpreting these figures, since they could be partly generated by the presence of non-LTC services which are usually assimilated to LTC (e.g. some disease-specific home-assistance, like insulin injections for diabetic patients), by the presence of smaller community-level LTC programmes (whose eligibility rules are not included in the “eligibility” variable), and the presence of private providers from which non-eligible individuals can receive paid assistance.

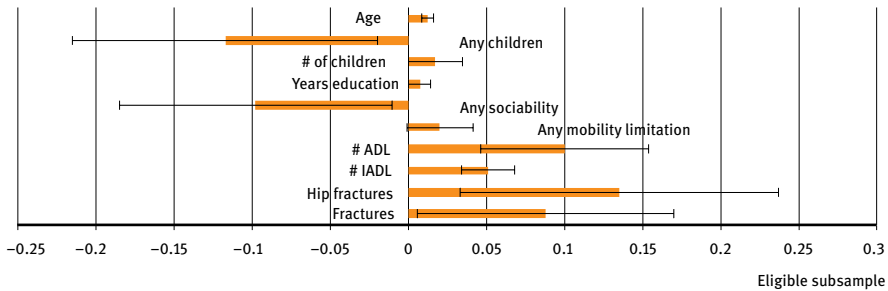
### 31.3 The main determinants of access to formal care and the role of education

Our aim is to shed light on the determinants of formal care utilisation between two different subpopulations: eligible and non-eligible individuals. In order to do that, we estimate two probit models conditioning on the eligibility status of the respondents. In line with the prevailing literature, the demand for formal care is assumed to rely on various socio-demographic, health-related and economic factors (see for instance Bonsang 2009, Balia & Brau 2013). Specifically, we consider a set of socio-demographic variables and several measures of respondents' health status. Moreover, we introduce information on the elder adults' degree of involvement in the public sphere: an indicator for "sociability", which includes the number of social activities in which he/she has been involved during the month preceding the interview, and a variable counting the number of contacts with the dentist during the twelve months prior to the interview.

In both subgroups, we find the following results:

- a positive effect of age is found on the probability of receiving home-care. The dummy for being retired is not significant, mainly due to the sample selection (we include only respondents aged 65+ who are mostly retired)
- the spousal support has a significant and positive effect on the formal home-care use
- having children significantly reduces the likelihood of formal care utilisation with respect to not having any. The latter effect follows economic intuition, since it highlights the offspring's role in providing help to their parents
- As for the dummy for the household's ability to make ends meet, its coefficient is not significant in both models
- Objective and generic vulnerability outcomes like ADL and IADL are significant (with a positive sign) for both samples. This shows that discretionality of care-access due to functional limitations exists regardless of whether individuals are "officially" labelled as vulnerable or not

Among eligible individuals, an important result concerns education. Having lower education significantly decreases the probability to receive home-care. These findings provide evidence for an accessibility issue that would be hard to identify without information on eligibility status. Higher levels of education significantly matter in navigating the intricate LTC settings, understanding the complicated bureaucracy and the associated technical jargon in order to access to formal home-care services. This effect can be related to the health literacy concept, which refers to the degree of familiarity with health-related terminol-



**Figure 31.1:** Probability of receiving home-care, eligible population

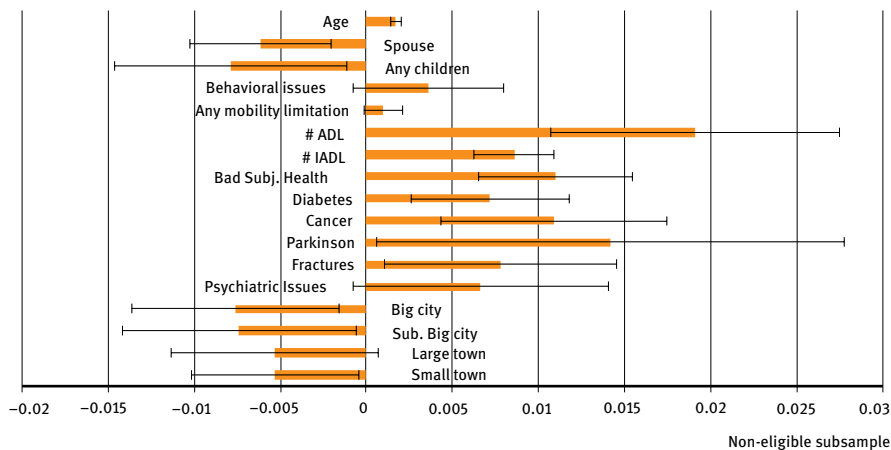
Notes: Probit model, marginal effects at the mean of the variables (we reported only significant marginal effects); 65+ individuals (N=1,538).

Source: SHARE Wave 5 release 0

ogy and notions (Nutbeam 2008). According to the WHO definition “health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health”. Education is one of the crucial determinants of health literacy (see e.g. Sun et al. 2013). Highly educated individuals are more likely to apply literacy skills to health tasks, improving decision-making related to health issues in a highly bureaucratic and complicated health-care maze. In an ideal situation, being in a condition of objective dependency would be sufficient to receive assistance, regardless of individuals’ literacy levels. However, the unavoidable (so far) hurdle of interacting with regulations and formal institutions appears to increase the difficulty of access for the lower educated subgroups.

Further results, specific to the eligible population, can be summarised as follows:

- among eligible individuals, the number of children has a negative effect on formal care utilisation, but this effect decreases with their number
- the “sociability” variable highlights that individuals who take part in activities (external to the family) have a lower probability of receiving care, probably because they are more able to exploit informal support from friends (or neighbours) compared to those who do not participate in any (Kalwij et al. 2014)



**Figure 31.2:** Probability of receiving home-care, non-eligible population

Notes: Probit model, marginal effects at the mean of the variables (we reported only significant marginal effects); 65+ individuals (N=13,874)

Source: SHARE Wave 5 release 0

If we look at the non-eligible population, health-status characteristics contribute to explain why we observe that individuals who are not in an “objectively” vulnerable condition (and maybe do not report any functional limitation) still receive some formal care, i.e. the (ii) case discussed above.

- First, when objective functional limitations are present, the individual can look for minor community-level programmes (whose regulations are not included in our eligibility variable) that can provide them with some LTC benefit
- Second, when specific pathologies are detected, some specific public health/social programmes, which do not necessarily fall within the category of LTC services, could provide domiciliary assistance. In our results, such effects are found for depressive symptoms, as well as for conditions like diabetes, cancer, Parkinson, and fractures
- Third, respondents may decide to buy formal care on the private market when the public provision is unavailable or does not cover the specific need

Finally, those individuals who report to live in rural areas (with respect to big cities, large towns, city suburbs and small towns) are more likely to receive formal home-care when their medical status is considered as “non-vulnerable” by LTC regulations. This might capture the higher confusion and difficulty of access that can characterise big city health services and medical bureaucracy. Moreover, rural areas are likely to exhibit a different organisation of social-assistance offices and health-care, which could result in a different care-supply and eligibility rules



with respect to those captured by our review (which concentrates at main nation- or region-wide programmes).

Overall, our analysis points to the key role of education as a vehicle for enhancing social inclusion in terms of accessibility to home-care programmes. Highly educated individuals labelled as “eligible” by the national or regional assessment schemes have more chances to receive home-care compared to those less educated, due to their capability to apply literacy skills to health related issues. In terms of policy implications, this conveys the importance of taking into consideration older individuals’ health, and bureaucratic literacy levels, in order to improve access to formal home-care programmes. Otherwise, the risk would be to incorrectly label low-educated eligible individuals, who do not get care, as “non-compliers” – simply when they just do not have enough skills to comply with the regulations implemented in their own nation or region. A second key point of our analysis concerns the non-eligible population. Suffering from severe diseases such as diabetes, cancer, Parkinson and fractures increases the probability of receiving home-care services among non-eligible individuals. As previously mentioned, it may be due to the presence of community-based care-programmes which do not fall within the range of long-term care programmes (and, consequently, are not “captured” by our eligibility measure), but which cover specific domiciliary services to those seniors most in need of care.

## References

- Balia, Silvia, Brau, Rinaldo (2013): “A country for old men? Long-term home care utilization in Europe”. In: *Health economics*. ISSN: 1057-9230. DOI: 10.1002/hec.2977.
- Bonsang, Eric (2009): “Does informal care from children to their older parents substitute for formal care in Europe?” In: *Journal of health economics* 28. No.1, p. 143–154.
- Carrino, Ludovico, Orso, Cristina Elisa (2014): “Eligibility and inclusiveness of long-term care institutional frameworks in Europe: a cross-country comparisons”. *Working paper No. 28*. Department of Economics, Ca’Foscari University of Venice.
- Eleftheriades, Christopher, Wittenberg, Raphael (2013): *A critical review of international practice on assessment and eligibility in adult social care: lessons for England*. Oxford: Centre for Health Service Economics and Organisation (CHSEO).
- European Commission, Social Protection Committee (2014): *Adequate social protection for long-term care needs in an ageing society*. Bruxelles: European Commission.
- Kalwij, Adriaan, Pasini, Giacomo, Mingqin Wu (2014) “Homecare for the elderly: family, friends and the state”, *Review of Economics of the Households* 12, p. 379–404.
- Nutbeam, Don (2008): “The evolving concept of health literacy”. In: *Social science & medicine* 67. No.12, p. 2072–2078.
- Parker, Ruth, Ratzan, Scott, Lurie, Nicole (2003): “Health literacy: a policy challenge for advancing high-quality health care.” In: *Health Affairs* 22. No.4, p. 147–153.

- Peerson, Anita, Saunders, Margo (2009): "Health literacy revisited: what do we mean and why does it matter?" In: *Health Promotion International* 24. No.3, p. 285–296.
- Sun, Xinying, Yang, Shuaishuai, Fisher, Edwin, Shi, Yuhui, Wang, Yanling, Zeng, Qingqi, Ji, Ying, Chang, Chun, Du, Weijiing (2014): "Relationships of health literacy, health behavior, and health status regarding infectious respiratory diseases: application of a skill-based measure" In: *Journal of Health Communication: International Perspectives*, DOI: 10.1080/10810730.2014.946112.
- Wallace, Steven (1990): "The no-care zone: availability, accessibility, and acceptability in community-based long-term care." In: *The Gerontologist* 30. No.2, p. 254–261.