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22 Entry into institutional care: predictors and alternatives

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- ▶ Supply of residential care varies greatly across European countries
 - ▶ Nursing home entry is triggered by functional limitations
 - ▶ Nursing home entry is more frequent among persons with low income or wealth
 - ▶ In low supply countries co-residence with children is a substitute for nursing homes
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22.1 Few older persons enter residential care

Opinion surveys show regularly that old people want to stay in their home as long as possible. At the same time the arrival of large baby-boom cohorts may increase the demand for home care and for nursing homes (European Commission 2012). Governments faced with increased long-term care cost are looking for the most efficient way of providing such care (Geerts & Willemé 2012). Given these policy concerns, it comes as a surprise to learn that little is known of the nursing home population. In many countries they are left out of official surveys. SHARE is beginning to fill the gap as respondents are followed when they move to nursing homes.

There are many national studies of entry into institutional care of older persons, see Lippa et al. (2010) for a review. Age, disability and the availability of informal care (predominantly delivered by the spouse, but children are also important) appear to be the main predictors of institutionalisation. Apart from the recent paper by Angelini and Laferrère (2012), who studied entry into nursing homes between Wave 1 and Wave 2 of SHARE, there is to our knowledge no cross-national study of moving into residential care. This chapter complements and extends that study.

Using SHARE data from Waves 2, 3 and 4, we selected persons who were at least 65 in 2006, since the use of residential care is very rare before that age. We further left out those who already lived in a nursing home. We considered both those who moved to a nursing home and were interviewed in Wave 4, and those who moved and died in a nursing home between Wave 2 and Wave 4. We knew what happened to the latter, thanks to the End-of-Life questionnaire which was answered by a surviving respondent, often the spouse, or a child (Jürges 2008). For persons who were single, often women, such a respondent was more difficult to find, hence men and married persons were overrepresented. Whether SHARE

respondents lived in nursing homes is ascertained by the interviewer, who was given the following definition: “A nursing home provides all of the following services for its residents: dispensing of medication, available 24-hour personal assistance and supervision (not necessarily a nurse), and room and meals”. This description seems rather similar to the one often used for care homes or homes for the aged (Norton 2000: 961). Nursing homes are supposed to deliver nursing care in addition. It seems reasonable to suppose that interviewers regarded any long-term care facility for older persons as nursing homes. For this reason, we use the terms ‘nursing home’ and ‘residential care’ interchangeably.

Few respondents in Italy or Poland moved to a nursing home. According to data collected by the OECD (2012) in those countries less than two per cent of the people aged 65 and over are institutionalised, whereas the rate is three per cent in Spain, four per cent in Austria and the Czech Republic, five per cent in France, Denmark and Germany, seven per cent in Switzerland, Belgium and the Netherlands and eight per cent in Sweden. The number of persons making this transition in the sample was low, even though it was substantially higher when those who died in a nursing home were included. Because follow-up of dead and living respondents was incomplete, especially when they had moved, the numbers

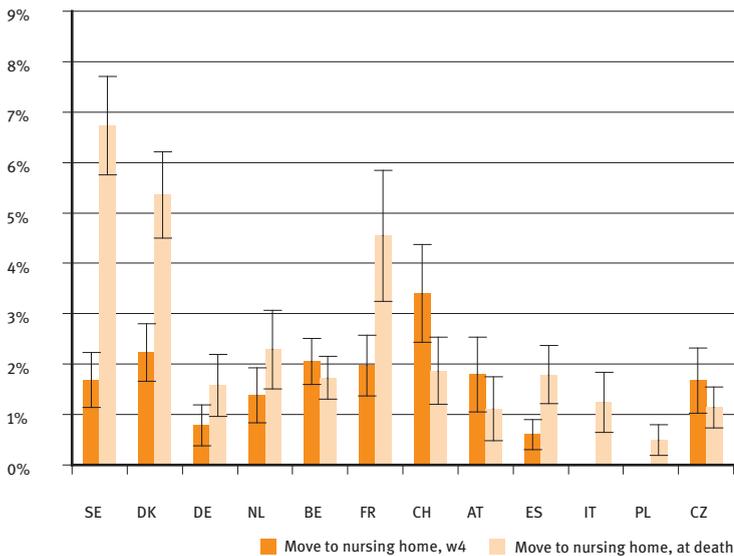


Figure 22.1: Proportion of persons aged 65+ entering residential care between Wave 2 and Wave 4, or between Wave 2 and their death by country

Notes: Only persons not in residential care in Wave 2. n (unweighted) = 8,949.

Source: SHARE Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

shown in Figure 22.1 should be regarded as indicative only. The proportion of persons dying in nursing homes, relative to those found alive in nursing homes in Wave 4 differed by country. This is likely to be partly due to the varying success of the End-of-Life interviews across countries. But it also reflects the different role of nursing homes in the long-term care systems. In Italy, Spain, Poland, Germany and to a lesser extent Sweden, Denmark or France, it seems very much an end-of-life institution; whereas this seems less the case in Switzerland, Belgium, the Czech Republic or the Netherlands (see Künn-Nelen and Jürges in this volume).

22.2 Functional limitations trigger the entry, but women differ

We modelled the probability of a transition from living in the community to living in an institution between Waves 2 and 4, using probit regression. Following Geerts and Van den Bosch (2012), we considered a wide range of predictors, referring to various dimensions of health, household and neighbourhood characteristics, income, wealth and use of formal home care. In Table 22.1, model (1) presents the results for those who moved to residential care and survived in Wave 4 and model (2) adds those who moved and died between Wave 2 and Wave 4. Moves to a nursing home happened mostly after age 85, and even at very high age many persons manage to stay at home. Relying on the rich information provided by SHARE, we found that bad self-perceived health, depression, having severe conditions or even motor limitations as such did not lead to such a move. More precisely, motor limitations were found to be associated with nursing home entry only when we did not control for limitations in activities of daily living (ADL, e. g. washing oneself, eating) and instrumental activities of daily living (IADL, e. g. preparing a hot meal, doing work around the house or garden). Indeed, ADL and IADL, the accumulation of limitations and even more the evolution in the number of such limitations were the direct triggers of nursing home entry. Apparently, it is not so much the conditions, but their consequences in day to day life that are the crucial factors preventing independent living. In the same vein, low cognitive function was not significant per se but only in that it prevented people from taking care of themselves. Low cognition is a composite variable, incorporating orientation in space and time, numeracy and short-term memory. When we added some of the specific health problems as measured in Wave 2, stroke, Alzheimer, osteoporosis (for those not observed dying in a nursing home) were predictive of a move, while all other conditions were not (Table 22.1). Bad health generally only pushes persons into nursing homes if it leads to loss of autonomy.

Table 22.1: Probit model of determinants of the move to a nursing home

Variables		Without end-of-life respondents		With end-of-life respondents, with IT & PL		
		(1) coef	se	(2) coef	se	
Age	Female	-0.244*	(0.128)	-0.026	(0.084)	
	Age 65–74	ref.		ref.		
	Age 75–84	0.325**	(0.128)	0.322***	(0.089)	
	Age 85+	0.677***	(0.171)	0.393***	(0.118)	
Household variables	Single Wave 2	0.761***	(0.147)	0.412***	(0.091)	
	Became single between Waves 2 and 4	0.759***	(0.185)	0.545***	(0.130)	
	Has a child in Wave 2	0.384**	(0.196)	0.198	(0.139)	
	Has a daughter in Wave 2	-0.312**	(0.128)	-0.190**	(0.092)	
	Distance to nearest child less than 25 KM in Wave 2	-0.309**	(0.142)	-0.319***	(0.096)	
	Income & wealth in Wave 2	Low income	0.184	(0.116)	0.081	(0.081)
	Low wealth	0.318***	(0.115)	0.165**	(0.080)	
	Health in Wave 2	Stroke	0.252	(0.186)	0.237*	(0.122)
ADL level in Wave 2	Osteoporosis	0.255*	(0.145)	0.053	(0.110)	
	Hip fracture	-0.041	(0.248)	-0.198	(0.171)	
	Alzheimer	0.634**	(0.280)	0.595***	(0.154)	
	Low cognition	-0.026	(0.127)	0.088	(0.082)	
	No motor limitations	ref.		ref.		
	1 motor limitation	0.023	(0.187)	0.014	(0.134)	
	2–3 motor limitations	0.128	(0.162)	0.028	(0.117)	
	4–6 motor limitations	0.094	(0.183)	0.090	(0.130)	
	7–8 motor limitations	0.058	(0.266)	-0.023	(0.174)	
	9–10 motor limitations	-0.289	(0.388)	0.005	(0.218)	
	No ADL limitations					
	1 ADL limitation	0.420*	(0.247)	0.534***	(0.185)	
	2–3 ADL limitations	0.291	(0.292)	0.342*	(0.205)	
	4–6 ADL limitations	0.240	(0.436)	0.662***	(0.238)	
ADL changes	No change in ADL limitations	ref.		ref.		
	0 to 1 ADL limitation	0.168	(0.192)	0.343**	(0.145)	
	0 to 2–3 ADL limitations	0.286	(0.226)	0.297*	(0.160)	
	0 to 4–6 ADL limitations	0.676***	(0.246)	0.832***	(0.162)	
	Other increase in ADL limitations	-0.056	(0.275)	0.100	(0.179)	
	Fewer ADL limitations	0.018	(0.256)	-0.200	(0.175)	
IADL level in Wave 2	0 IADL limitations	ref.		ref.		
	1–2 IADL limitations	0.194	(0.229)	-0.042	(0.173)	
	3–4 IADL limitations	0.513	(0.337)	0.568***	(0.217)	
	5–7 IADL limitations	0.892**	(0.406)	0.537**	(0.235)	

IADL changes	No change in IADL limitations	ref.		ref.	
	0 to 1–2 IADL limitations	0.324*	(0.179)	0.131	(0.146)
	0 to 3–4 IADL limitations	0.395	(0.271)	0.301	(0.187)
	0 to 5–7 IADL limitations	1.208***	(0.260)	0.705***	(0.176)
	1–2 to 3–4 IADL limitations	0.478*	(0.266)	0.356*	(0.204)
	1–2 to 5–7 IADL limitations	1.160***	(0.274)	0.786***	(0.193)
	3–4 to 5–7 IADL limitations	0.068	(0.390)	-0.016	(0.230)
	Fewer IADL limitations	-0.011	(0.241)	-0.101	(0.151)
Residence and neighbourhood in Wave 2	Moved recently	0.500**	(0.212)	0.267*	(0.153)
	Vandalism and crime in area	0.415*	(0.216)	-0.013	(0.164)
Home care in Wave 2	Sufficient facilities	-0.067	(0.157)	0.076	(0.099)
	Nursing home care	-0.027	(0.187)	-0.048	(0.120)
	Domestic home help	0.125	(0.151)	0.283***	(0.101)
	Meals-on-wheels	0.122	(0.221)	0.264*	(0.142)
Residential care Wave 2	Hospitalised recently	-0.079	(0.136)	-0.036	(0.089)
	Taken up in other institution recently	0.448	(0.288)	0.443**	(0.212)
	Pseudo R ²	0.3781		0.4378	
	Observations	6,123		8,705	

Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Notes: Standard errors in parentheses. Other controls: country and source of data (Wave 4, End of Life (EOL) Wave 3 or EOL Wave 4) dummies, number of months elapsed between Wave 2 and Wave 4 (or death). Model (1) excludes IT and PL. Excluding IT and PL from model (2) does not change the results. 65+, non-nursing home residents in Wave 2.

Source: SHARE Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

The effects of health limitations were not independent from the family situation. Those who could not receive care or help from within the household were more likely to have moved. Nursing home entry was more likely, *ceteris paribus*, for those who had no spouse in Wave 2, or had lost their spouse since. We found that the presence of a spouse also helped not to die in a nursing home (Table 22.1, model 2). As far as children are concerned, the results were less clear; only having a living-in or nearby daughter decreased the likelihood of a move. More women moved to nursing homes than men, but keeping family situation and other factors constant, women were no more likely to move. They were just more likely to become widowed than their husband, and also faced a greater chance of suffering from motor limitations. Interestingly, an interaction term between being single and ADL level indicated that the former had a much larger impact at low ADL levels than at high ADL levels. When persons had four or more ADL limitations, household situation did not matter anymore (result not shown). This confirms former studies with SHARE data showing that family is an effective substitute for long-term care as long as the needs of the older persons concerned are low (Bonsang 2009).

22.3 Does formal home care prevent older persons from moving?

We introduced three variables regarding the type of formal help received at the original private home in Wave 2: professional or paid nursing care, professional or paid domestic help and meals-on-wheels. Among these variables, only domestic help and meals-on-wheels had a significant *positive* effect; moreover the effect was significant only for those we observed dying in a nursing home. It is as if the need for help predicted the future need of institutionalisation rather than help being a substitute. Obviously, use of formal home care may have captured the effects of unobserved differences in needs for care. Also, this finding fits in with home care allocation policies and practices in many countries, with publicly funded domestic help services often restricted to persons having no informal care available (and who will be less able to stay at home when their health further deteriorates), whereas access to home nursing services is solely or more strongly based on needs (ADL-limitations), regardless of informal care availability. Ideally, we would have liked to have used an indicator of the supply of formal home care in the community where the respondent lives, independent of actual use, but such data were not available.

Few characteristics of the housing environment had any independent effect. We found no association of residential care entry with having special features to adapt one's home in Wave 2, area transportation, noise and pollution, and the number of facilities. Only living in a crime ridden neighbourhood increased the likelihood to move to a nursing home. This could be a direct link (crime induces to move) or an indirect link (neighbourhoods where crime is high may lack services that older persons find important). Note that crime had no effect for those who moved and died in a nursing home. These persons may have been already severely disabled when they moved, so comparatively trifling reasons like neighbourhood circumstances did not make much difference. Contrary to what was found for mobility between private homes (Angelini & Laferrère 2012), the length of housing tenure had no effect on mobility to nursing homes. Habit, i. e. having become used to a home, did not prevent older persons from moving; apparently people moved to a nursing home because they had to move. We added a control for "having moved recently", expecting the first move to delay the second and final one, as the first move could have been motivated by the wish to live in a home better adapted to disabled persons. In fact, it had a positive effect on entry into a nursing home, though it was non-significant when the dead were included. The move may have been to a residence adapted to old age that did not qualify as a nursing home. Having stayed in other types of institutions in the year before the

Wave 2 interview also made it more likely to move to a nursing home and die. Our interpretation is that it is often not easy to adapt a private home to the requirements of an older person who needs care.

22.4 Are nursing homes for the poor?

In the SHARE countries taken as a whole, moving to a nursing home and surviving in Wave 4 was more frequent for those who are in a country's lowest wealth or income quartile (Table 22.1, column 1). This result confirms what was found between Wave 1 and Wave 2 (Angelini & Laferrère 2012). It is in line with what was found on US data by Börsch-Supan (1990) and on French census data. In that respect, moving to a nursing home is the ultimate downsizing. There was no evidence that some individuals might be prevented from moving to nursing institutions because of the cost of residential care. In no country did we find that a higher income induces a move to nursing homes. However, entry into a nursing home shortly before death did not depend on income or wealth (Table 22.1, column 2).

In a second specification (Table 22.2), we replaced country dummies by context variables. We used the share of the 65+ population by country from Eurostat and three indexes describing the accessibility and degree of cost sharing of residential care collected by the project 'Assessing Needs of Care in European Nations' (ANCIEN, Kraus et al. 2010). First, the aggregate share of private spending in total long-term care (LTC) expenditure in three groups of countries (around a low 10 % in most countries, 30 % in France, Austria, Spain and, Poland, 38.5 % in Italy); second, a dummy for means tested access to a nursing home (Spain, Italy and Poland); third, how many expenses (up to three: home care, home nursing and residential care) are shared between the public system and the care recipient. In general, cost sharing is the rule for residential care in all countries. All other costs are borne by the public system in Denmark and Germany (where the variable equals 1); there is cost sharing in home care but not in home nursing care in Belgium, France, Italy and Spain (the variable equals 2); cost sharing exists for all three types of expenses in Sweden, the Netherlands, Austria, the Czech Republic and Poland (variable equals 3). Switzerland was left aside for lack of information. We found that living in a country where access to a nursing home is means tested reduced the likelihood to move. Having a larger co-payment did the same and it was more significant if we included those who died in a nursing home. The effect of the other variables was not modified by the use of contextual variables.

Table 22.2: Effects of institutional context on the move to a nursing home

Variables	Without End-of-Life respondents		With End-of-Life respondents, with IT & PL	
	(1) coef	se	(2) coef	se
Rate 65+ in the country population	-0.076	(0.055)	-0.012	(0.031)
Private spending 10 %	ref		ref	
Private spending 30 % (FR, AT, ES, PL)	-0.220	(0.154)	-0.228**	(0.113)
Private spending 38,5 % (IT)			-0.149	(0.264)
Cost sharing for all types of care	ref		ref	
Cost sharing in residential and home care (not in home nursing)	0.239	(0.161)	0.053	(0.108)
Cost sharing in residential care only	-0.033	(0.175)	-0.060	(0.114)
Access to NH is means tested	-0.544*	(0.279)	-0.873***	(0.158)
Pseudo R ²	0.3755		0.4295	
Observations	5,711		8,256	

Significance: *** p<0.01, ** p<0.05, * p<0.1

Notes: Standard errors in parentheses. Other controls: all those of Table 22.1, except country dummies. Model (1) excludes IT and PL. Excluding IT and PL from model (2) does not change the results. 65+, non-nursing home residents in Wave 2. CH is excluded.

Source: SHARE Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

22.5 Alternatives to residential care?

As we mentioned above, the supply of residential care is very unequal across European countries. These differences raise the question: What is the situation of those older persons in countries with very little residential care who, if they were living in Sweden, Belgium or another country with a relatively ample supply of such care, would have moved to a nursing home?

The cross-country comparable SHARE data make it possible to answer this question in some detail. Using Wave 4 data only, we distinguished between countries where the supply of residential care is relatively high (Sweden, Denmark, the Netherlands, Belgium, France and Switzerland), and countries where there is very little residential care, and where in fact we observed very few persons living in nursing homes (Italy, Portugal, Poland and Slovenia). Germany, Austria, Spain, Hungary and Estonia, which are intermediate, are left out of this analysis. We looked only at respondents aged 75 or over, and focused on the most important determinants of entry into residential care, which are, apart from age, living

without a partner and limitations in activities of daily living (ADL). Respondents without a partner and with an ADL score of 5 or higher were regarded as being at high risk of entering residential care. In the high-supply countries, no less than 46 per cent of this group in the SHARE sample were institutionalised, about eight times the overall institutionalisation rate among those aged 75+ in those countries. We compared low- and high risk persons in the low-supply countries with each other, and with their counterparts in the high-supply countries. For the latter group of countries, we also show the characteristics of the respondents who were actually living in residential care.

Although the analysis was hampered by the small sample size, there are a number of remarkable results (Table 22.3). By definition, all persons in the high-risk group were living without a partner, both in the high-supply countries, and in the low-supply countries. The most striking result is that in low-supply countries 35 per cent of persons in the high-risk group were living with one or more children in the same household, and so did a substantial minority among the low-risk group. In the high-supply countries, hardly any older person was living with a child, irrespective of the risk of moving to residential care. Co-residence with other relatives or non-relatives was less common in all groups. About four in ten persons in the high-risk group in low-supply countries received personal help from someone inside the household, mostly from someone whom the person regards as part of her or his personal network (cf. the section on social networks in this volume). For high-risk persons in the high-supply countries, this was very seldom the case. The latter did often receive practical or personal informal help from someone outside the household. Remarkably, the proportion receiving informal help from outside the household was at nearly the same level for the high-risk group in the low-supply countries, despite their already high level of help from inside the household.

A large proportion of persons in low-supply countries had daily contacts with children or other family members, irrespective of the risk of entering residential care. In high-supply countries, these proportions were much lower; being at high-risk of moving to a care home, or actually living there, seemed to be accompanied by reduced contact with a family member; living in residential care was associated with much less contact with children. Finally, in all countries respondents in the high-risk group reported significantly lower levels of life satisfaction and life happiness than those at low risk, probably due to the health problems of the former group. It is too early to say whether the family copes equally adequately in low-supply countries, as formal care workers do in the high-supply countries. A complete picture would also consider the feelings of the family helpers themselves, as they might feel strained (Colombo et al. 2011).

Table 22.3: Characteristics of persons aged 75+, by risk of entering residential care and supply of residential care in country

	Countries with ample residential care (1)			Countries with very little residential care (2)	
	Low risk of residential care	High risk of residential care (3,4)	Actually in residential care (4)	Low risk of residential care	High risk of residential care (3)
Household size = 1	44 %	88 %	95 %	36 %	12 %
Living with children (5)	4 %	2 %	0 %	14 %	35 %
Living with persons other than spouse or children	1 %	1 %	3 %	2 %	10 %
Received personal help from person inside household	5 %	3 %	0 %	12 %	41 %
Received practical or personal help from person outside household	25 %	47 %	35 %	28 %	40 %
Daily contact with at least one family member	57 %	23 %	20 %	75 %	51 %
On average, daily contact with a child	11 %	11 %	2 %	33 %	33 %
Life satisfaction 8–10	61 %	40 %	48 %	45 %	30 %
Life happiness: often	60 %	45 %	49 %	33 %	22 %
n (unweighted)	5,784	102	192	2632	65

Notes: (1) Belgium, Denmark, France, The Netherlands, Sweden and Switzerland; (2) Italy, Portugal, Poland and Slovenia. (3) Not living with partner and 5 or more limitations in ADL. (4) categories overlap n = 27. (5) including children-in-law and stepchildren.

Source: SHARE Wave 4 release 1

22.6 Conclusions: inability to cope at home drives the move to an institution

Rather few SHARE respondents moved to a nursing home in the approximately four years that elapsed between Wave 2 and Wave 4. Many of those who entered a nursing home died fairly shortly afterwards, and we could trace them only thanks to the end-of-life questionnaire. Nevertheless, using the SHARE data we were able

to draw a clearer picture of the determinants of such a move, and to highlight some cross-country differences. Our main conclusions were the following.

Limitations in activities of daily living (ADL) and instrumental activities of daily living (IADL) are the factors that were most strongly associated with nursing home entry. These in turn are consequences of health problems. Among all health conditions that influence institutionalisation through their impact on ADL and IADL limitations, dementia and motor problems that limit the possibility to live alone after the death of a spouse were found to be the most important.

Across countries, the population in the lower quarter of economic resources was more likely to move to a nursing home. Our analysis of alternatives to residential care pointed to the importance of co-residing family members, mostly children, for taking care of disabled older people in countries where there is little residential care. Maybe as a consequence, these persons appeared to have more frequent contacts with family than their counterparts in countries where formal care is more abundant.

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