

Retirement, Home Care and the Importance of Gender

By Anders Brändström and Glenn Sandström

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Retirement, Home Care and the Importance of Gender

Anders Brändström

Umeå University

Glenn Sandström

Stockholm University & Umeå University

ABSTRACT

In recent decades elderly care policies in Sweden have been characterized by a marked shift from institutional care to home care. Previous research has highlighted how this has resulted in the elderly receiving care at a higher age and increased reliance on family and kin for providing care. Using register data for the entire Swedish population aged 65+ in 2016, we analyze how home care services in contemporary Sweden distribute regarding individual-level factors such as gender, health status, living arrangements, and closeness to kin. By far, the most critical determinants of receiving home care are age, health status, and whether the elderly are living alone or not. Although our results do not discard that access to kin have become more important, our results show that childlessness and geographical proximity to adult children play a minor role for differentials in the reception of home care. The main conduit for informal care instead takes the form of spousal support. Gender plays a role in how living arrangements influence the probability of receiving home care, where cohabiting women are significantly more likely to receive care than cohabiting men. We interpret this as a result of women, on average, being younger than their male partners and more easily adopting caregivers' roles. This gendered pattern is potentially explained by the persistence of more traditional gender roles prevailing in older cohorts.

Keywords: Home care, Gender, Health, Retirement, Record linkage

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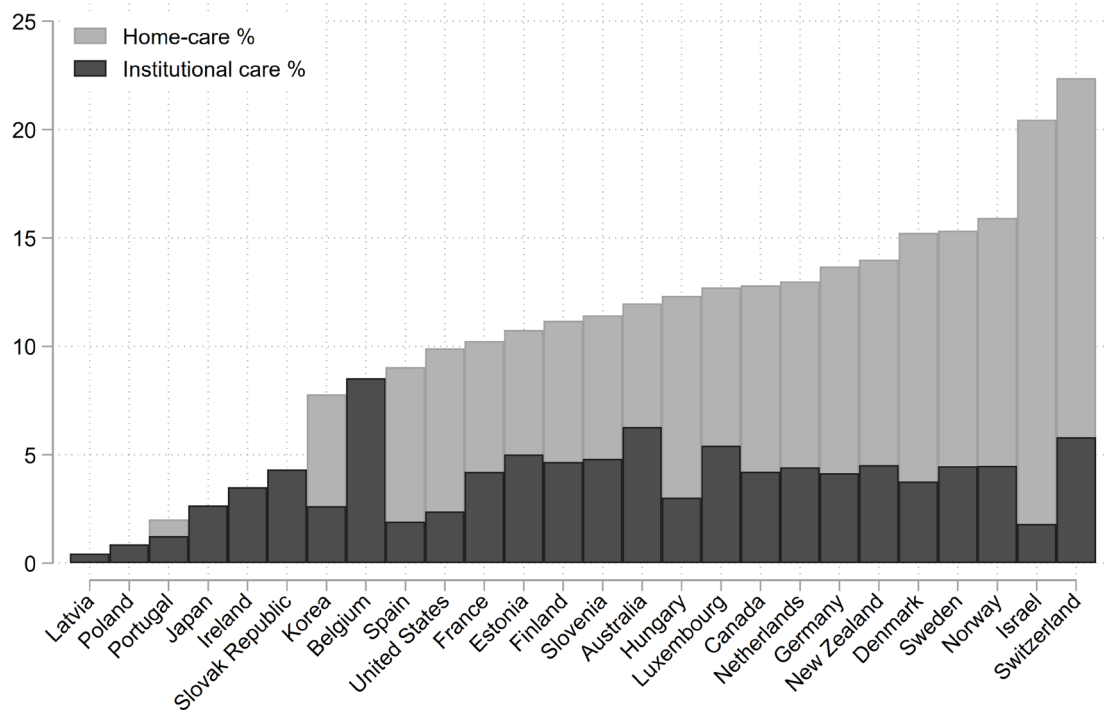
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1 INTRODUCTION

As we age, our quality of life often becomes limited by poorer health and dependency on various kinds of support from close friends, kin, and family members. Even if improvement in life expectancy is driven by declining disease incidence as well as improved survival from disease, the number of old aged individuals with health problems will likely grow as population aging continues. Furthermore, for many diseases, the improvements in survival have been more significant than the improvements in disease risk (Schmidt, Jacobsen, Lash, Bøtker, & Sørensen, 2012). Such improvements imply a growing share of individuals with a disease history, and likely more than one disease, which results in an increasing prevalence of multimorbidity among the old (Prince et al., 2015). This brings on challenges for the welfare systems, intergenerational solidarity, the family, and for the individual.

Recent decades have seen a sharp decrease in the proportion of elderly that live in old-age care facilities in favor of support and services through home care. This is true for almost all OECD countries (Rodrigues, Huber, & Lamura, 2012).

Figure 1 Long-term care recipients as a share of population aged 65+ in OECD-countries in 2016



Source: OECD, Long-term Care <https://www.oecd.org/els/health-systems/long-term-care.htm>.

Note: Some countries have only reported the number of individuals in institutional care and therefore lack information on the share receiving home care.

In Sweden, older people now receive home care at a higher age than before, with poorer health, and consequently, receive it for a much shorter time before death. This trend, it is argued, is compensated by a 're-familiarization' of home care where close kin take on greater responsibilities. A more substantial burden is placed upon, for instance, spouses for more extended periods until the situation with disease and immobility becomes a too heavy burden (Ulmanen & Szebehely, 2015).

The main objective of this study is to investigate how home care services in contemporary Sweden distributes with regards to individual-level factors such as age, sex, living arrangements, health, and proximity to kin. Who gets home care and when, and who must rely upon family care?

2 DATA AND METHOD

To investigate how home care distributes, we have linked register data for the entire non-institutionalized Swedish population aged 65 and older ($N = 1,883,924$) in 2016. Information on home care draws from the *Register of municipal care for elderly and individuals with disabilities in accordance with the Social Services Act, (SoL)* [Registret över insatser till äldre och personer med funktionsnedsättning]. As our outcome variable, we have chosen a simple dichotomous indicator of those having received home care during 2016, as opposed to those that did not.

To be included in the working sample, we condition on the individual being 65 years or older and alive December 31, 2016, and therefore being at risk of receiving home care for the entire year. Further, we choose only to include individuals living in private dwellings and exclude those living in institutional care facilities. In 2016 this exclusion corresponded to approximately 4% of the total population aged 65 and older, highly concentrated to ages above 80 years. To add necessary demographic and socioeconomic information, we link the home care register to the *Register of the Total Population (RTB)* at Statistics Sweden. The record allows us to identify the same unique individual across all the different registers in our study. To determine the living arrangements of the subject, we use the *Dwelling Register* at Statistics Sweden, which links all individuals that live in the same household/dwelling. The register allows us to distinguish elderly living alone from those that cohabitate.

Most previous research has used the civil status of the individual as a proxy for living arrangements, thus overestimating the proportion living alone. In our data, among those listed as unmarried, widowed, or divorced, almost one third is still cohabitating with someone.

To get an estimation of comorbidity, we apply the Charlson Comorbidity Index (CCI). It is estimated based on previous hospital admissions in the *National Inpatient Register (NPR)*. The diagnosis codes are based on the International Classification of Diseases Version 10 (ICD-10). The index takes into account 14 clinically relevant comorbidities associated with an increased mortality risk, including cancer, diabetes, dementia, and myocardial infarction.¹ We coded all individuals that had no record of any comorbidities as 'Healthy', those having 1 as 'Mild', 2 as 'Moderate', and 3 or more comorbidities as 'Severe'.

Table 1 shows the descriptive statistics for the variables included in our final models divided between subjects that received, and did not receive, home care during 2016.

2.1 STATISTICAL METHOD

As our outcome is the dichotomous indicator of having home care or not, we use logistic regression to estimate how the probability of receiving service is related to individual characteristics. In the regression output, we report coefficients in an exponentiated form as odds ratios $\exp(B)$. Variations in predicted probabilities between individuals having different combinations of covariate values are reported in the form of average marginal effects (AMEs) derived from the model estimates. All estimations are calculated in Stata version 16.1.

1 Complete list: Myocardial infarction, congestive heart failure, peripheral vascular disease, cerebrovascular disease, dementia chronic pulmonary disease, rheumatic disease, liver disease, diabetes mellitus, hemiplegia, paraplegia, renal disease, cancer, metastatic tumors, and AIDS/HIV.

Table 1 *Descriptive statistics*

	No home care (N = 1,696,848)	Has home care (N = 187,076)	Total (N = 1,883,924)
Dependency ratio			
Mean (SD)	77.63 (11.36)	76.86 (11.59)	77.56 (11.39)
Min, Max	51.4 - 109.7	51.4 - 109.7	51.4 - 109.7
Age-group			
65–69	551,233 (32.5%)	11,217 (6.0%)	562,450 (29.9%)
70–74	513,690 (30.3%)	19,963 (10.7%)	533,653 (28.3%)
75–79	319,014 (18.8%)	28,009 (15.0%)	347,023 (18.4%)
80–84	191,086 (11.3%)	40,529 (21.7%)	231,615 (12.3%)
85–89	92,126 (5.4%)	48,439 (25.9%)	140,565 (7.5%)
90+	29,699 (1.8%)	38,919 (20.8%)	68,618 (3.6%)
Sex			
Men	815,296 (48.0%)	64,464 (34.5%)	879,760 (46.7%)
Women	881,552 (52.0%)	122,612 (65.5%)	1,004,164 (53.3%)
Household type			
Cohabiting	1,157,425 (68.2%)	56,457 (30.2%)	1,213,882 (64.4%)
Living alone	539,423 (31.8%)	130,619 (69.8%)	670,042 (35.6%)
Level of education			
Primary	540,483 (31.9%)	88,364 (47.2%)	628,847 (33.4%)
Secondary	688,825 (40.6%)	64,083 (34.3%)	752,908 (40.0%)
Under-graduate	180,940 (10.7%)	12,513 (6.7%)	193,453 (10.3%)
Graduate level	265,013 (15.6%)	17,561 (9.4%)	282,574 (15.0%)
No information	21,587 (1.3%)	4,555 (2.4%)	26,142 (1.4%)
Income quartile			
–25%	452,363 (26.7%)	58,137 (31.1%)	510,500 (27.1%)
26–50%	434,675 (25.6%)	83,066 (44.4%)	517,741 (27.5%)
51–75%	434,054 (25.6%)	32,656 (17.5%)	466,710 (24.8%)
76%–	355,037 (20.9%)	11,983 (6.4%)	367,020 (19.5%)
No information	20,719 (1.2%)	1,234 (0.7%)	21,953 (1.2%)
Charlson index			
Healthy	1,249,789 (73.7%)	78,055 (41.7%)	1,327,844 (70.5%)
Mild	297,651 (17.5%)	50,821 (27.2%)	348,472 (18.5%)
Moderate	102,464 (6.0%)	31,622 (16.9%)	134,086 (7.1%)
Severe	46,944 (2.8%)	26,578 (14.2%)	73,522 (3.9%)
Kin availability			
No living children	315,483 (18.6%)	37,516 (20.1%)	352,999 (18.7%)
Child not in same municipality	461,157 (27.2%)	47,041 (25.1%)	508,198 (27.0%)
Child in same municipality	920,208 (54.2%)	102,519 (54.8%)	1,022,727 (54.3%)

3 RESULTS

Table 2 *Logistic regressions, odds ratio to receive home care in the Swedish population aged 65+ in 2016*

Variables	Odds ratio
Age-group	
70–74	2.18***
75–79	5.64***
80–84	16.34***
85–89	44.61***
90+	109.94***
Sex	
Women	1.74***
Household type	
Living alone	6.31***
Household type * Age-group	
Living alone * 70–74	0.86***
Living alone * 75–79	0.67***
Living alone * 80–84	0.51***
Living alone * 85–89	0.43***
Living alone * 90+	0.42***
Household type * Sex	
Living alone * Women	0.71***
Kin availability	
Child not in same municipality	0.76***
Child in same municipality	0.72***
Charlson index	
Mild	3.61***
Moderate	8.38***
Severe	18.75***
Charlson index * Age-group	
Mild * 70–74	0.80***
Mild * 75–79	0.69***
Mild * 80–84	0.57***
Mild * 85–89	0.51***
Mild * 90+	0.49***
Moderate * 70–74	0.73***
Moderate * 75–79	0.55***
Moderate * 80–84	0.40***
Moderate * 85–89	0.34***
Moderate * 90+	0.29***
Severe * 70–74	0.76***
Severe * 75–79	0.50***
Severe * 80–84	0.33***
Severe * 85–89	0.23***
Severe * 90+	0.20***
Constant	0.00***
N	1,883,924

Legend: * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 2 gives the results of the logistic regressions for the probability of receiving home care dependent on demographic determinants.

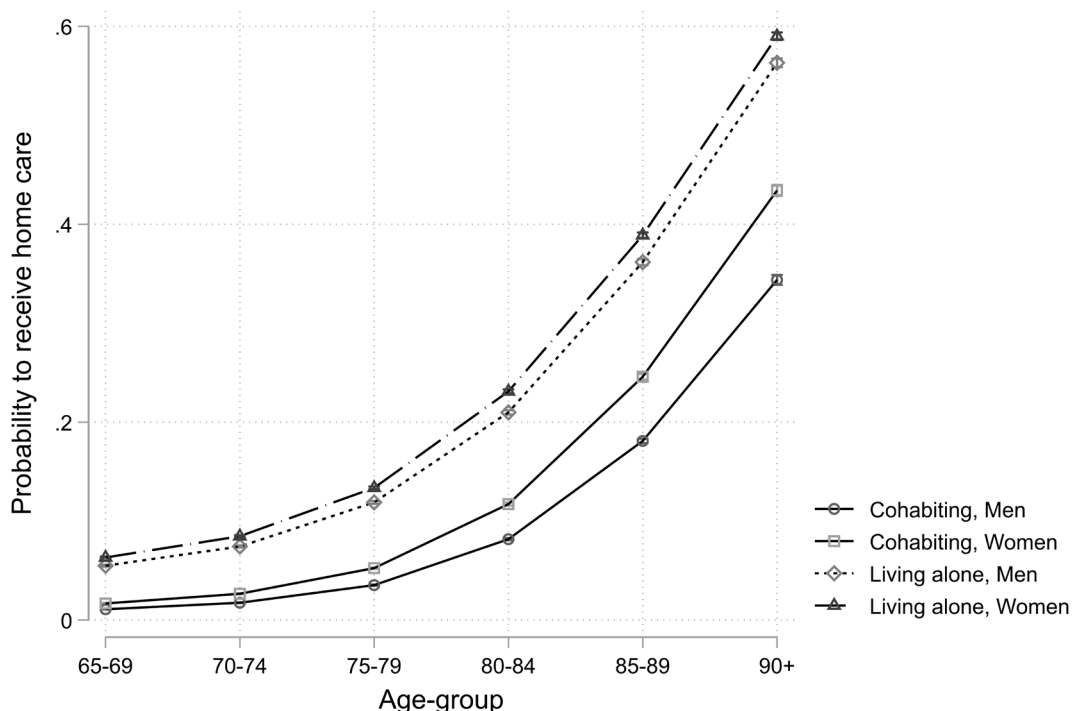
3.1 DEMOGRAPHIC DIFFERENTIALS

Age is, as expected, by far the most influential variable in our model even when we include a control for other factors such as the health status. Net of other factors, the probability of receiving home care increases sharply when the individual reaches the age of 80 and above. The odds ratio of having home care is approximately 44 times higher compared to individuals aged 65–70 and skyrockets to 109 times higher for individuals aged over 90. It is well in line with previous research showing that home care is increasingly given to the oldest-old, while the younger-old are more likely dependent on informal support.

Apart from age, the *living arrangement* of the individual also has a strong influence. Those not cohabiting have approximately six times higher odds of receiving home care. The effect of living arrangements is, however, dependent both on age and gender, where the importance of living alone decreases as individuals age. The impact of living arrangements is also different for men and women. Men are less likely than women to receive home care if they are cohabiting. This pattern is more easily observed when we look at the influence of age, sex, and living arrangements on the probability scale, as an average marginal effect rather than as odds ratios (see Figure 2). Here we find that the gender difference is most significant among those cohabiting, where men have by far the lowest probability of receiving home care. On the other hand, gender differences are minimal for men and women living alone.

This difference is likely the result of different gender roles and the access to informal support provided by a spouse. Women take the role as caregivers when their partners require support. On the other hand, when women's health deteriorates, especially with increased age, their husbands or partners are less likely to assume the role of caregivers. In addition to culture and gender roles, we can assume that men more often than women are unable to assume a caregiver role due to impairments, as men in cohabitation tend to be older than their spouses (Joe, Dickins, Enticott, Ogrin, & Lowthian, 2019). To the extent that there is a 're-familiarization' of family care, it seems that it is predominantly the female spouses of frail elderly that are acting as a substitution for municipal home care.

Figure 2 Average marginal effect of living alone by age-group



Source: Longitudinal integrated database for health insurance and labor market studies (LISA), Statistics Sweden (SCB), Inpatient-register and SoL-register, Government Board of Health and Welfare.

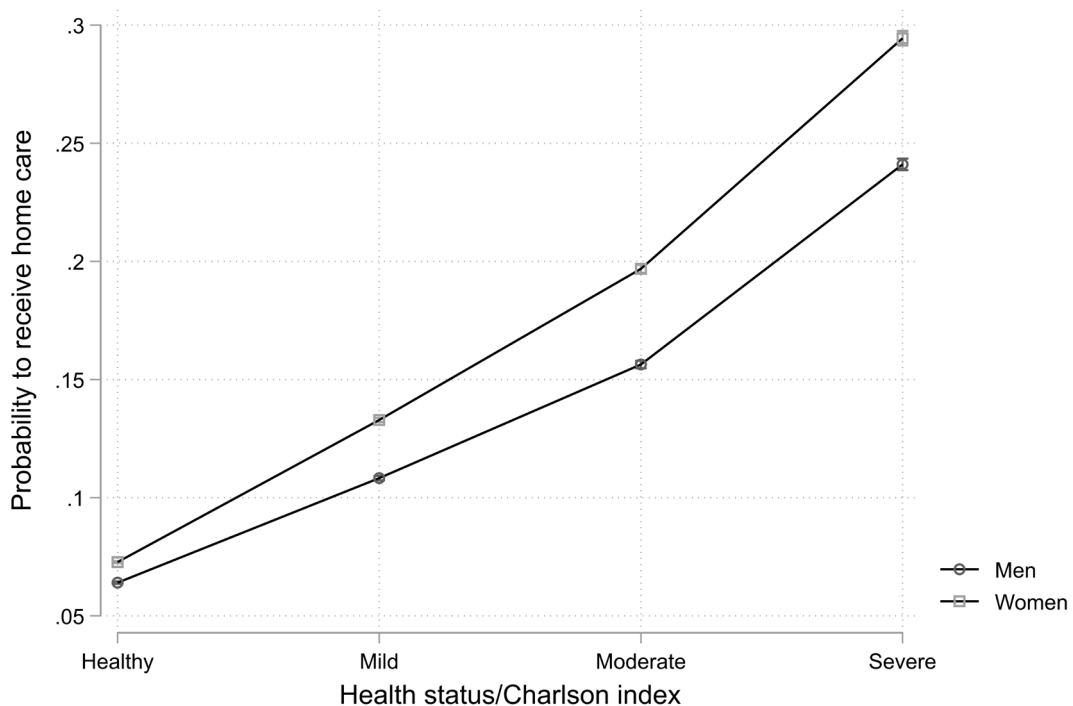
The odds of receiving home care are reduced by 24% among those that have children and 28% if they have at least one child living in the same municipality. However, when we look at the effect, not as a relative difference in odds, but as an average marginal effect, the impact of children nearby is fairly modest. Those that have no children have, on average, a 12% probability of receiving care, as opposed to approximately 9% of those that have children living in the same municipality.

3.2 HEALTH DIFFERENTIALS

As expected, having poor *health*, as measured by the Charlson index, is second to age the most critical determinant for receiving home care. Individuals with severe health problems have almost 19 times higher odds of receiving home care than those that are relatively healthy. However, we find that age modifies the effect of health. As individuals age, receiving home care becomes less dependent on health issues, as shown by the negative interaction between health and age. The result is probably in part determined by the construction of the Charlson index. It is based solely on hospital admissions and likely misses general increases in loss of function that come with old age. Needing more assistance with personal activities of daily living, such as clothing and feeding, does not necessarily result in hospital care.

As seen in Figure 3, the average probability to receive home care among individuals with severe health problems is almost 30% for women and about 24% for men while this share drops radically to only 6–7% among men and women having a Charlson index of 0 (Healthy).

Figure 3 Average marginal effect of frailty-level by sex



Source: Longitudinal integrated database for health insurance and labor market studies (LISA), Statistics Sweden (SCB), Inpatient-register and SoL-register, Government Board of Health and Welfare.

4 DISCUSSION AND CONCLUSIONS

The main objective of this short study was to determine how home care services in contemporary Sweden distribute with regards to individual-level factors such as sex, health status, living arrangements, and closeness to kin. Our outcome variable was a dichotomous indicator of those having received home care during 2016, as opposed to those that did not.

Living arrangements of the individual, together with age and health, is by far the strongest determinant of receiving home care. Living alone increases the odds of getting these services almost six times in comparison with those cohabitating. It is an essential factor to consider now and in the future. Today, almost 20% of the Swedish population above 65 are living in one-person households. This proportion is expected to increase in the years to come. Somewhat surprisingly, having children living in the same municipality plays a relatively modest role in receiving home care, or not.

Gender differences play an important role in receiving home care among the cohabitating elderly. Women, when living with somebody, have a 41% higher chance of getting home care than cohabitating men. These differences are likely to reflect traditional gender roles and spousal age-differences. Women have more easily taken the role as caregivers when their partners require support and are, on average younger than their male partners and, therefore, more able to provide support. On the other hand, when their own health deteriorates, especially with increased age, their husbands or partners have been less likely to take on the role of caregivers.

The cohorts of the oldest elderly in our data set, in Sweden in 2016, were born in the 1920s–early 1930s. Among them, we would expect to find that traditional gender roles predominate in everyday life. However, what will we see in the coming decades among the recently retired birth cohorts of the 1940s and the 1950s? Undoubtedly, they are going to experience a longer life expectancy, with a much healthier life than generations before them. However, when the day comes that their health deteriorates and they need increased support, will family care be shared in a more egalitarian way? Younger generations have adopted more positive attitudes toward gender equality, where men's share of unpaid domestic work has increased. Apart from such cultural changes, age differences at the marriage between spouses have declined since the 1980s. Potentially, this should result in decreased gender differences in family care among the elderly of tomorrow.

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