Journal of Multidisciplinary Healthcare

Dovepress
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ORIGINAL RESEARCH

Home care patients in four Nordic capitals – predictors of nursing home admission during one-year followup

This article was published in the following Dove Press journal:
Journal of Multidisciplinary Healthcare
23 March 2010
Number of times this article has been viewed

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Abstract: The aim was to predict nursing home admission (NHA) for home care patients after a 12-month follow-up study. This Nordic study is derived from the aged in home care (AdHOC) project conducted in 2001–2003 with patients at 11 sites in Europe. The participants in the cohort study were randomly selected individuals, aged 65 years or older, receiving homecare in Oslo, Stockholm, Copenhagen, and Reykjavik. The Resident Assessment Instrument for Home Care (version 2.0) was used. Epidemiological and medical characteristics of patients and service utilization were recorded for 1508 home care patients (participation rate 74%). In this sample 75% were female. The mean age was 82.1 (6.9) years for men and 84.0 (6.6) for women. The most consistent predictor of NHA was receiving skilled nursing procedures at baseline (help with medication and injections, administration or help with oxygen, intravenous, catheter and stoma care, wounds and skin care) (adjusted odds ratio = 3.7, 95% confidence interval: 1.7–7.8; $P < 0.001$). In this Nordic material, stronger emphasizing on higher qualified nurses in a home care setting could prevent or delay NHA.

Keywords: aged, home care, cross-sectional study, self-rated health, level of care, care burden, comprehensive assessment, RAI, Nordic

Introduction

In Nordic countries (here including Denmark, Iceland, Norway, and Sweden), as in many countries in continental Europe, adult children have no legal obligation to provide care or financial support for their elderly parents.[1] In the Nordic countries, the formal health care systems have developed a more comprehensive home care service, than have many other European countries.[2] They provide services to functionally impaired patients, including home help and home nursing, caregiver support and professional help related to rehabilitation. The distribution of home care is a question of local resources. Anyone may apply for health care, but it is the administrative staff in the municipalities that assess and determine the amount of help that will be given.

Many older people see their entitlement to public services as a right.[3] Long-term care services are structured around the common belief that older people should live independently at home as long as possible. The threshold for an institutional bed in Norway, however, is low compared with other European countries.[4]

Few projects have compared the health status of home care patients between the Nordic countries.[1] During the last decades there has been a change in the care of older people. Sweden has adjusted more than the other Nordic countries towards privatization of health care services.[5] Comparative studies would be helpful to learn from best practice about the best care for older patients.

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A European Union study addressing social protection for the dependency elderly concluded that information is sparse regarding the needs of older individuals. The lack of a standardized gathering system precludes data collection and cross-national comparisons[6] and a lack of data to identify home care patient or caregiver variables in predicting residential care utilization in local settings.[7]

A meta-analysis was conducted in the US of published research articles from 1950 to 2006, using the keywords "nursing home placement", "nursing home entry", "nursing home admission" (NHA), and "predictors of institutionalization" to identify predictors of NHA. Among the strongest predictors were dependencies in three or more activities of daily living (ADL) functions, cognitive impairment, and prior nursing home use.[8] The current authors used the same keywords to search for relevant literature from April 2006 to May 2009, as supplemental to general methods. Common reasons for nursing home entry are deterioration of independence and mental confusion.[9] Different models have been developed for predicting NHA.[10–13] However, where elderly patients live after a given followup period is dependent on the availability of a nursing bed in the community and economical resources.

As a part of the Dutch Prevention of Influenza, Surveillance and Management (PRISMA) study, the perceived need for institutionalization was analyzed in a sample of old adults without cognitive impairment. Factors related to physical disabilities and inadequacy of resources were important correlates.[14] Some older home care patients could probably manage better if they were moved to a more convenient environment, as the Swedish experience has shown. Over the last decade, Sweden has developed service houses and decreased the number of nursing home beds, while older patients in Iceland seem to prefer nursing home care.[1]

The aim of this study was to characterize home care patients and their need of assistance in the capitals of four Nordic countries, and determine predictors for NHA over a 12-month followup period.

Material and methods

This study is a spinoff project derived from the Aged in Home Care (AdHOC) project conducted in 2001–2003 in urban areas at 11 sites in Europe. This research uses data from four Nordic capitals: Oslo, Norway; Stockholm, Sweden; Copenhagen, Denmark and Reykjavik, Iceland (Data from Helsinki is excluded in this article because of lack of NHA data). The target study population was aged 65 years and over, and was already receiving home care services at the beginning of the study. The home care service in the Nordic capitals is divided into different sectors and consists of a network of services. A multidisciplinary team provides the patients with social service, personal care, nursing procedures, medical treatment, and rehabilitation.

A sample size of about 250 from each site allows 80% power to detect significant variations in the outcome variables over the study period. The national partners selected a random sample. The plan was that each site would have 405 participants. For practical reasons, the sample from each country varied from 246 in Stockholm to 469 in Copenhagen (Table 1). The percentage of people aged 65 years or more in the target study population was approximately equal to the national value for each site.[15]

Ethical approval for the study was obtained at all sites according to national regulations. Participants were assured of the confidentiality of study information and asked to give informed consent.

Measurements

Patients were assessed three times (at baseline, and after six and 12 months) using the inter*RAI* version 2.0 Resident Assessment Instrument for Home Care (RAI-HC), which consists of over 300 items derived from the literature, where available (functional status, cognitive abilities, morbidity and symptoms, social contacts, communication, informal help, and sociodemographic background), and utilization of selected services and treatments. All items were assessed for each patient.

The RAI instrument has been translated, back-translated, and examined for validity in the language of each participating country. The instrument has good content and face validity, and good interobserver reliability.[16,17]

All assessments took place in the client's home. Assessors were trained to become familiar with the MDS and the entire RAI-HC. In some countries, the "normal staff" of home care agencies responsible for providing services was involved in data collection, usually with the assistance of special research nurses. The assessors were responsible for checking all the variables. If not applicable, "none of the above" was coded. Missing data were relatively rare.

Definitions

In analyzing the data from the Nordic capitals, we used alternative cutoff points for the total AdHOC sample, because the Nordic sample had a lighter case-mix than in other participating sites. When dichotomizing the scales, the

Table 1 Background data, health service utilization and care burden stress in the participating sites

	Copenhagen	Reykjavik	Oslo	Stockholm	Total
	n = 469	n = 405	n = 388	n = 246	n = 1508
Age[a] (years, mean, SD)	84.4 (6.8)	81.7 (6.6)	83.9 (6.3)	84.1 (6.8)	83.5 (6.7)
Female	79	74	72	73	75
Living alone	76	68	74	80	74
Homebound[b]	28	22	28	24	27
Hospitalization in last 90 days	13	13	13	14	13
Nursing procedures	47	66	72	41	58
Nurse[c] (days per week, mean, SD)	1.29 (2.1)	1.5 (1.8)	4.2 (3.0)	0.5 (1.1)	2.2 (2.7)
Care burden stress	8	4	8	5	6
Better off somewhere else	13	18	8	9	12
MAPLe[d] $\geq$ 4: high/very high priority (0–5)	15	16	16	12	15
Participations' rate	90	97	93	62	74
Nursing home	8	8	16	9	10
Dead	10	6	17	23	13

Notes: Data presented as percentage unless otherwise indicated. [a]Male = 82.1 (6.9), Female = 84.0 (6.6); [b]"No days out of the house or building during the last week" or "needed extensive assistance for outside locomotion". [c]Visiting nurse n = 1026; [d]MAPLe (Method for Assigning Priority Levels) client's eligibility for admission to a nursing home (Scale 0–5).
Abbreviation: SD, standard deviation.

cutoff point was the value closest to the median. We used the ADL hierarchy scale for physical functioning; in which scores range from 0 to 8 with a cutoff point of ADL $\geq$ 1 (56% of patients scored "0" [intact]). For instrumental activity, the instrumental activities of daily living (IADL) hierarchy scale was used; scores range from 0 to 7 with a cutoff point of IADL $\geq$ 4 (49% were $<$4). The Cognitive Performance Scale (CPS) measures the level of cognitive performance on a range from 0 to 6. A crosswalk between CPS and The Mini-Mental State Examination (MMSE) has been conducted.[18,19] The scale of the MMSE ranges from 30, indicating an absence of cognitive impairment, to 0, indicating severe cognitive impairment, and a value between 6–0 corresponds to a score of 4–6 on the CPS. A cutoff point of CPS $\geq$ 4 was first chosen for clinically significant cognitive impairment, values that indicate moderate severe to very severe impairment. However, only 50 patients (3.3%) met or exceeded this cutoff point. The cutoff point for the chi-square analysis and the regression model was set to CPS $\geq$ 1. "Caregiver" is used here as a non-institutional person who provides care to a patient, ie, an informal caregiver. The two variables "care burden stress" and "better off living in another environment" were answered by the patients themselves or in collaboration with their caregiver. Care burden stress was coded as a positive response to any one of the following statements in the RAI-HC instrument: a) caregiver unable to continue; b) caregiver dissatisfied with support; or c) caregiver is experiencing distress. Whether the patient would be better off living in another environment was coded as a positive response from the patient, caregiver, or both.

The concept of "homebound" included a positive-coded response to one of the two following variables: "No days out of the house or building during the last week" or "Needed extensive assistance for outside locomotion".

With the exception of Reykjavik, the three other capitals offered integrated home care services, in which both social services and home nursing were administrated from the same office. In the RAI instrument, service providers were categorized in three groups, ie, visiting nurse, home health carer, and home help. One way to split home service and home nursing could be between IADL and ADL functions. To date, however, home service personnel may assist the patient with personal care, such as toileting, eating, and showering. This research focuses on variables in the RAI instrument, which are explicitly nursing-related. The following variables were dichotomized and recoded as nursing procedures: visiting nurse daily or less than daily in previous seven days, help with medication and injections, administration or help with oxygen, intravenous, catheter and stoma care, wounds, and skin care. Other variables included diagnoses, symptoms, falls, health conditions, incontinence (bladder or bowel), life expectancy, use of medications, and hospitalization. We used the MAPLe (Method for Assigning Priority Levels) algorithm[20] to determine who should have been prioritized based on each characteristic. The algorithm uses 14 variables from the RAI-HC: ADL

hierarchy scale, few meals, swallowing, behaviour, geriatric screener, ulcers (pressure/stasis), cognitive performance scale, institutional risk CAP, wandering, environment, meal preparation, worsening of decision-making, falls, and medication management.

Statistical analysis

Descriptive statistics were generated from baseline in 2001–2002 and from 12-month followup data, according to outcome variables. Statistical analyses were performed using SPSS software version 16. The results were assessed statistically using univariate, bivariate, and multivariate methods. The selection of variables was based upon theoretical considerations and experiences from other publications with the AdHOC data.[15,21] Chi-square analysis for dichotomous variables was used to test characteristics and clinical features associated with NHA during the 12-month followup period.

Differences were considered statistically significant at a *P* level below 0.05. We used odds ratios (ORs) with 95% confidence intervals (CI) for risk estimates. A stepwise logistic regression model was developed using the variables in Table 2, except for two variables: the MAPLe algorithm which was excluded because it was created from a combination of several of the individual variables included in the regression and Parkinson's disease because of its low frequency 30 (2%). The dependent variable was NHA during the 12-month followup period. A similar regression model was conducted separately for each capital.

Results

Background data

Table 1 presents general characteristics of the study sample (n = 1508), of which 1129 (74.9%) were women. The mean age (SD) was 83.5 (6.7) years; 82.1 (6.9) for men and 84.0 (6.6) for women.

The prevalence of use of nursing procedures among the population varied across countries, ranging from 41% to 72% (Table 1). On average, 74% of the people in the sample lived alone and 27% were assessed as being homebound. Of those patients who received nursing procedures, the number of days of visiting nurse service in the previous week varied from 4.2 (3.0) days in Oslo to 0.5 (1.1) days in Stockholm. Overall, 185 (12.3%) of patients or informal caregivers assessed the elderly patient to be better off living in another environment (patients 4.2%, caregiver 3.5%, and patient and caregiver 4.6%).

Using the MAPLe algorithm, 220 (15%) of the recipients were determined to be a high or very high priority for admission to a nursing home. After 12 months, 153 recipients (10%) had moved to a nursing home, while 198 (13%) had died. Of those who died during the study period, 20 had moved to a nursing home prior to their death (11 participants in Oslo, eight in Stockholm and one from Reykjavik).

MAPLe provided an estimated risk for NHA (OR = 2.29, 95% CI: 2.00–4.27), $P < 0.001$. Self-rated bad health was statistically significant for NHA (OR = 1.56, 95% CI: 1.11–2.19).

Predictive factors of NHA

The logistic regression model for the whole sample gave an explanatory value of 25% (Table 3). Predictors remaining in the final stepwise model were nursing procedures, IADL ≥ 4, better off living in another environment, homebound, age 85+, CPS ≥ 1, and incontinent (bowel or bladder). The strongest predictor in Norway and Reykjavik was nursing procedures, and IADL ≥ 4 for Copenhagen and Stockholm.

Discussion

Qualified documentation of the patient's health status is a sign of professionalism for both nurses and physicians. It is necessary to ensure continuity of care and effective treatment of the patient.[22] Several authors have emphasized the need for more cross-national studies to assess comprehensively the health-related needs of older populations. Legal and economic rights have dominated projects related to research concerning Scandinavian welfare policy, and less focus has been on services and practical aspects of home care.[23] A review of the Nordic Council's report on research on the care of the elderly concluded that more health data are needed.[24] As far as we know, ours is the first study that compares home care in the Nordic capitals using a standardized comprehensive geriatric assessment instrument.

Several common characteristics of home care participants at each site and across Nordic populations were observed. Approximately 15% of the population in each site were over the age of 65 years (with the exception of Stockholm, which had a higher percentage of over 65 year olds). This prevalence is very close to that of national population in each country. The frequency of older women living alone in the Nordic sites was high compared with other European sites.[15,25] Because of their old-age pension, the Nordic welfare model keeps elderly females economically independent. In the analysis of the OASIS project that included five European countries (Norway, United Kingdom, Germany, Spain, and Israel), it was found that with respect to issues such as whether adult children

Table 2 Characteristics and clinical features associated with nursing home admission during the 12-month followup

Yes/No	Overall n (%)	NHA		*P*-value	Odds ratio
		Yes n (%)	No n (%)		(95% confidence intervals)
Demographic characteristics of patients					
Female	1129 (74.9)	113 (10.0)	1016 (90.0)	0.761	0.94 (0.64–1.38)
Male	379 (25.1)	40 (10.6)	339 (89.4)	0.761	1.06 (0.75–1.55)
Age 85 years and over	662 (43.9)	88 (13.3)	574 (86.7)	0.001	1.84 (1.31–2.58)
Lived alone	1115 (73.9)	103 (9.2)	1012 (90.8)	0.05	0.70 (0.48–1.00)
Diagnosis					
Alzheimer's/dementia	174 (11.5)	28 (16.1)	146 (83.9)	0.006	1.86 (1.19–2.89)
Parkinson's disease	30 (2.0)	10 (33.3)	20 (66.7)	0.001	4.67 (2.14–10.17)
Arthritis	492 (32.6)	64 (13.0)	428 (87.0)	0.01	1.56 (1.11–2.19)
Symptoms and need of assistance					
CPS scale ≥ 1 (0–6)	484 (32.1)	91 (18.8)	393 (81.2)	0.001	3.59 (2.55–5.07)
CPS scale ≥ 4 (0–6)	50 (3.3)	16 (32.0)	34 (68.0)	0.001	4.54 (2.54–8.43)
Unstable condition[a]	244 (16.2)	46 (18.9)	198 (81.1)	0.01	2.51 (1.72–3.66)
ADL scale ≥ 1 (0–8)	637 (42.3)	98 (15.4)	539 (84.6)	0.001	2.69 (1.90–3.81)
IADL scale ≥ 4 (0–7)	751 (49.8)	128 (17.0)	623 (83.0)	0.001	6.02 (3.87–9.36)
MAPLe[b] scale ≥ 4 (0–5)	220 (14.6)	46 (20.9)	174 (79.1)	0.001	2.29 (2.00–4.27)
Dizziness	372 (24.7)	51 (13.7)	321 (86.3)	0.009	1.61 (1.13–2.31)
Falls (last 90 days)	342 (22.7)	52 (15.2)	291 (84.8)	0.001	1.88 (1.31–2.70)
Vision/hearing problems	620 (41.1)	103 (16.6)	517 (83.4)	0.001	3.34 (2.34–4.76)
Incontinence[c]	638 (42.3)	92 (14.4)	546 (85.6)	0.001	2.24 (1.59–3.14)
Medications					
Antidepressants	305 (20.3)	46 (15.1)	259 (84.9)	0.001	1.83 (1.26–2.66)
Health status					
Self-rated bad health	492 (32.6)	64 (13.0)	428 (87.0)	0.01	1.56 (1.11–2.19)
Homebound	390 (25.9)	74 (19.0)	316 (81.0)	0.001	3.08 (2.19–3.33)
Better off in another environment	185 (12.3)	44 (23.8)	141 (76.2)	0.001	3.48 (2.35–5.14)
Formal and informal care					
Nursing procedures	867 (57.5)	130 (15.0)	737 (85.0)	0.001	4.74 (3.00–7.48)
Hospitalized last 90 days	200 (13.3)	32 (16.0)	168 (84.0)	0.003	1.87 (1.23–2.85)
Prior LTCF	106 (7.0)	23 (21.7)	83 (78.3)	0.001	2.71 (1.65–4.45)
Caregiver stress	99 (14.4)	21 (21.2)	78 (78.8)	0.014	4.96 (2.14–3.37)
Country-specific site					
Copenhagen	469 (31.1)	38 (8.1)	431 (91.9)	0.077	0.71 (0.48–1.04)
Reykjavik	405 (26.9)	32 (7.9)	373 (92.1)	0.080	0.70 (0.46–1.46)
Oslo	388 (25.7)	62 (16.0)	326 (84.0)	0.001	2.15 (1.52–3.04)
Stockholm	246 (16.3)	21 (8.7)	225 (91.5)	0.361	0.80 (0.49–1.29)

Notes: [a]Has conditions or diseases that make cognition, ADL, mood or behaviour patterns unstable (fluctuations, precarious, or deteriorating; [b]MAPLe) client's eligibility for admission to a (Scale 0–5); [c]Bowel or bladder.

Abbreviations: ADL, activities of daily living; CPS, Cognitive Performance Scale; IADL, instrumental activities of daily living; LTCF, long time care facility; MAPLe, Method for Assigning Priority Levels.

should live close to their parents, Norwegians subscribed to a norm of independent living.[4,26] Older Norwegians preferred residential living to living with their children, and this preference was highest among the oldest age group (75+ years). Norwegians were more likely than other European participants to place primary responsibility for care of the elderly on the welfare state. We anticipate that there would be the same tendency in the other Nordic

Table 3 Binary logistic regression analysis with forward selection of variables: Nursing home admission during the 12-month followup

Independent variable	Adjusted odds ratio	95% CI	*P*-value
Aged ≥ 85	1.73	1.06–2.80	0.029
IADL ≥ 4 (scale 0–7)	2.25	1.18–4.28	0.014
CPS ≥ 1 (scale 0–6)	1.68	1.01–2.80	0.046
Nursing procedures	3.67	1.72–7.82	0.001
Homebound	1.80	1.08–2.99	0.023
Incontinent (bowel/bladder)	1.67	1.03–2.72	0.040
Better off in another environment	2.09	1.11–3.93	0.022

Notes: Wald χ^2 (7) = 81,640; *P* , 0.001; Nagelkerke R^2 = 0.25.
Abbreviations: CI, confidence interval; CPS, ; IADL, .

countries. The AdHOC data revealed that the recipients of home care in the Nordic capitals appeared to be generally less dependent than those cared for in other sites, and that these recipients had lower levels of ADL and cognitive impairment.[15] Examination of service delivery in the AdHOC sample revealed that the Nordic capitals' and Amsterdam's management mainly provided assistance for ADL and basic nursing care according a sociomedical model (both social and medical services were provided for the home care population) while other sites had less integrated models.[21] In the Nordic sites, older patients with a CPS ≥ 4 seldom remained at home 50 (3.3%). They would be offered a bed in an institution if the next of kin were unable to provide care, a trend that was rare in the southern part of Europe.[15]

Data from a 12-month followup assessment enabled us to identify predictors for NHA. Several models have been developed for studying the risk associated with NHA. A model was developed for a population study over the age of 70 years in Iowa. This model includes demographic and social factors, as well as self-reported attitudes, beliefs, and expectations for NHA. Older age, prior hospitalization or nursing home use, lower self-rated health, and difficulties with ADL or IADL were also statistically significant and strong risk factors for NHA.[11] A qualitative study of psychosocial factors concerning NHA was conducted with participants in 12 American focus groups. All participants had previous personal experience with health care services, either as a patient or as a caregiver. The most common factors influencing long-term care decision-making were family care burden and care-giving expectations,[10] which is consistent with our results and those of other studies. Caregiver stressors in conjunction with care recipient characteristics are important for predicting NHA for persons with dementia-related diseases in particular.[27]

International RAI-HC data from earlier studies were used to identify predictors for nursing home placement, caregiver distress, and for being rated as requiring alternative placement to improve outlook. Iceland and Sweden were similar in that the majority of home care clients were skewed toward the low, mild, and moderate MAPLe priority levels compared with data from the US, Italy, and Japan. As in our Nordic study, it was found that being assessed to be better off living in another environment was a statistically significant predictor for NHA.[12]

Self-rated health at baseline is an approved predictor for future illness and mortality.[28] In our Nordic study of older patients, 492 (32.6%) rated their health as bad. Sixty-four (13%) got a nursing home bed during the 12-month followup period. Bad health is often automatically associated with old age, and important clinical markers may be underreported. The strongest predictor of NHA in the Nordic study was receiving nursing procedures (adjusted OR = 3.7, 95% confidence interval [CI]: 1.7–7.8; chi-square $P < 0.001$). As far as we know, this predictor has not been used in similar models before. When a patient is in need of skilled nursing over time, the threshold for getting a nursing home bed has been rather low. Skilled nurses determine the extent of the recipient's needs. Older patients discharged after an acute hospitalization are at high risk for institutionalization.[29] Researchers suggest use of administrative claims for identifying NHAs, together with various clinical and organizational approaches for prevention of NHA.[13,21,30]

Older patients living in Oslo had greater access to a nursing home than do their counterparts in the other Nordic sites. We have yet to determine an explanation for the higher frequency of recipients (21%) in Reykjavik regarded as being better off living in another environment. Iceland has had the highest frequency of nursing home beds (9.1 beds per 100 individuals over the age of 65 years) compared with Denmark, for example, which has three beds per 100 individuals over the age of 65 years.[1] One explanation for this disparity may be that attitudes toward living in a nursing home are more positive in Reykjavik than in other sites.

In Copenhagen and Stockholm, multiple impairments in IADL functions were a stronger predictor of NHA than nursing procedures. A probable explanation could be that these two capitals had more qualified nurses than the other capitals, but were short of staff in other respects.

Home care has undergone considerable changes in recent years as a result of reimbursement policies, access, and

utilization, leading to uncertainty about focus and goals for the care of the recipients.[31] In the Nordic countries, we have seen that municipal authorities are no longer the sole providers of care for senior citizens, and several private agencies have now entered the market. These changes increase the demand for control and quality assurance. Researchers have emphasized the need for assessment dialogues to mediate activities serving a fundamental function of bridging institutional, professional, individual, and personal perspectives.[32] Our experiences from the AdHOC study support this view.[33]

The aim of assessment using the RAI instrument was to capture the minimum information needed when assessing a frail and elderly patient. The strengths of this study were the large sample size and the use of a standardized assessment tool cross-nationally in a home-service setting.

One of the limitations of our study is that the data were gathered from home care units in one area of the capital in each of the participating countries, thus we cannot conclusively determine whether the variations reflect differences between specific sites or entire countries. Futhermore, we do not have information about older people who are not receiving home care.

Despite its wide use, dichotomization of independent continuous variables has been criticised for potential loss of information about individual differences, loss of effect size and power, and biased parameter estimates.[34,35] The simplification gained through dichotomization may thus represent a weakness in our study. Use of stepwise regression is also subject to criticism for possibly overfitting the model, making replication of results difficult because of the random selection of parameters in the sample at hand based upon purely mathematical rather than theoretical grounds.[36,37] The initial selection of variables was based upon theoretical considerations, although the subsequent use of stepwise methods may introduce a weakness. As this study was not designed to investigate whether participants required institutional care, the power of the sample was not originally calculated for this analysis. The highly reduced set of variables embedded in the RAI assessment form limit the ability of the study to measure a patients' view of his or her situation.

Conclusion

In this Nordic sample, community home care, on average, was not provided to patients with severe functional impairment as in other European sites. Nordic home care patients were vulnerable because of living by themselves. The strongest overall predictor of NHA was receiving skilled nursing procedures. A stronger emphasis on highly qualified nurses and non-medical staff could prevent or delay NHA. Home care recipients in Oslo were more frequently moved to a nursing home during our 12-month followup period, in contrast with Reykjavik, where a higher proportion compared with baseline was assessed to being better off living in another environment. The relationship between the common features of these Nordic home care populations and their welfare states warrants further investigation. European countries like Germany, France, and Italy may extend their community care. The housing policy for older people in the Nordic countries may be stimulated to develop more collective living arrangements, including within the families.

Acknowledgements

We are grateful to the following Nordic interRAI fellows: Palmi V Jónnson, Harriet Finne-Soveri, Marianne Schroll, and Gunnar Ljunggren, and to the AdHOC collaborators represented by Roberto Bernabei. The AdHOC study is founded by the European Commission Fifth Framework Program, contract number QLRT-2000-00002 and the Norwegian Medical Association.

Disclosure

The author reports no conflicts of interest in this work.

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