Home help services in Sweden: responsiveness to changing demographics and needs

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Abstract Decreases in Swedish home help services have not resulted in increased rates of unmet need. To understand these changes, we identified predictors of home help services and rates of institutional care and how these effects changed over time using longitudinal data (1994–2000) from 286 Swedish municipalities. Outcomes were home help coverage rates, intensity of home help per recipient, and rates of institutional living. Predictors reflected availability and need for services. Services decreased over time, but not uniformly. Coverage rates were higher in municipalities with a greater proportion of population 65 and older and greater proportion of unmarried elders. Decreases in coverage rates were greater in municipalities with a higher proportion of unmarried elders, greater ratio of older women to men, with more home help staff workers, and more expensive services. Home help was provided more intensively in municipalities with higher median incomes, higher unemployment rates and municipalities spending more per inhabitant on child care. Decreases in intensity

were greater in municipalities with lower proportions of unmarried elders and fewer home help staff workers. Rates of institutional living were higher in municipalities that spent more on old age services and with a greater proportion of unmarried elders. Decreases in institutionalization were greater in municipalities with a greater proportion of unmarried elders and lower ratio of older women to men. Variability in how municipalities responded to these changes may explain continued low rates of unmet need. Results are consistent with both increased efficiency and more effective targeting, but cannot capture service quality.

Keywords Home help services · Sweden · Institutional care · Targeting

Introduction

Sweden, like other Scandinavian nations, has long been noted for its comprehensive and universally available system of home help services. In recent years, however, these services have not kept pace with increases in the older population, an issue Europe and many other countries may soon expect to face. These services are a municipal responsibility in Sweden and there are long-standing wide local variations in the nature and extent of home help services provided. As services have begun to contract, there has been growing concern about inequality between municipalities (e.g., Davey et al. 2006). With their high quality record keeping, Sweden has data most other countries are only now beginning to develop and exploit (e.g., IMERSO 2005; Jeger 2005; Petite and Weber 2006).

In this paper, we focus on factors affecting the level of home help services within municipalities, and how they have changed over time. Recognizing that care for older

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adults can be provided in either community or institutional settings, we consider both aspects. Further, we include predictors that are associated both with the potential availability of, and potential need for home help services, as shown in Fig. 1 which presents our empirical model.

Local variations are large in all the Scandinavian countries and indeed comparative studies of old-age care in these countries concluded that there were larger variations inside than between them (Daatland 1997). Attempts to analyze these local variations have been undertaken in all the Scandinavian countries, but most energetically in Sweden (Berg et al. 1993; Trydegård and Thorslund 2001); and France (Jeger 2005). All but the last of these studies failed to find substantial cause and effect variations despite examining a host of structural, financial, political and demographic variables, and differences in service coverage.

A problem with all these earlier studies is that they assumed that needs were about equal in all municipalities. If local needs vary significantly, ambitions to provide services in an equal fashion may result in provisions that are far from equitable (i.e., in proportion to these needs). At the same time, surveys have found quite small local variations in unmet needs in old people in Sweden (Statistics Sweden 1993) which might indicate that families are “filling up” the balance and may become overburdened. One study has shown, for example, that public services stagnated in the 1990s but that family care expanded during the same period (Sundström et al. 2002). Other research based on individual level data has suggested that Sweden does a particularly good job of targeting those with the greatest needs for services (Shea et al. 2003), and that formal and informal sectors together serve to keep rates of unmet need low for older adults (Davey et al. 2005). Whether this remains true as services have been further diminished, however, is an issue of considerable contemporary concern (Meinow et al. 2005). Another issue is the

balance between what the family and state respectively are doing for old people and to what extent the responsibility for old people in need is a shared one. International comparative studies indicate that the degree of family and state responsibility varies, but a mix of both kinds of help is the option preferred both by old people and by their families in most countries (Daatland and Lowenstein 2005; Sundström et al. 2007).

As home help services have decreased in both absolute and relative terms in Sweden, there has been an increasing emphasis on targeting those individuals with the greatest need, and a corresponding shift from help with instrumental (e.g., transportation, shopping) to personal (e.g., dressing, bathing) activities of daily living. Sundström and Malmberg (1996) illustrate an emerging gradient of need, such that individuals receive significantly less support for a given level of functional impairment in 1993 relative to 1987 levels, with the greatest discrepancies being found at moderate levels of impairment. Those with little impairment continue to receive little support and those with high levels of impairment continue to receive high levels of support. Their findings also suggest that women are likely to be hardest hit with continued declines in home help services, since this is the group that is least likely to have available informal supports to fill the gap left by diminished formal services. In contrast to a number of other studies documenting differences in care processes for frail older men and women, Larsson and Thorslund (2002) examined an urban population in Sweden and reported that most of the observed gender differences in receipt of home help and informal care disappeared once living arrangements were controlled.

More recently, two studies demonstrated that unequal distribution of services might have a more rational foundation such as needs of its citizens. Davey and his colleagues (2006) linked nationwide individual and municipal data for 3267 individuals aged 65 and older in the 2002–2003 Undersökningen av levnadsförhållanden (ULF, Level of Living, Statistiska Centralbyrån 2003) survey in order to evaluate whether regional variability in home help services resulted in service inequity as a function of individual needs. While individuals were obviously more likely to be receiving home help assistance in municipalities with higher levels of home help provision, controlling for individual needs for assistance, they found that there were no differences in the probability of receiving home help as a function of the level of municipal support.

In a second paper (Davey et al. 2007), longitudinal multilevel data (1994 and 2000) were used to determine whether declines in home help services differentially affected the most disadvantaged, namely, women, the oldest old, and those with greater disability. In municipalities that provided more formal services (higher home

Fig. 1 Empirical model of delivery of formal services to elders

help coverage and/or institutionalization placement rates), women were relatively less likely to be receiving informal assistance alone; individuals with greater disability were more likely to be receiving all forms of assistance, and the oldest-old were relatively less likely to be receiving either informal or formal help alone. The results provide clear evidence that targeting of formal services in Sweden is based increasingly on needs of its citizens and suggests that greater coordination of formal and informal sectors has served to keep the rates of unmet needs low for older adults in Sweden, despite shrinking service levels.

In the United States, there is a lack of coordination between federal, state, and local authorities in determining the nature and scope of home help services. Nonetheless, papers by Egleston et al. (1999) and Muramatsu et al. (2007) indicate state spending on home help services was associated with both lower risk of nursing home placement, and placement of individuals with greater levels of functional impairment, especially for those living alone. Analyses by Muramatsu and Campbell (2002) further support the idea that state expenditures predict individual care mix in the community with those having greatest impairment most affected by low state expenditures.

In summary, recent studies provide evidence that Sweden's old age care system remains equitable overall, and that municipal home help services may have changed over time in a manner that is at least partially consistent with changes in the potential availability of, and need for, services at the municipal level. Building on these studies, the current paper extends previous research to focus attention on predictors of service levels longitudinally and to consider how the importance of these predictors has changed over time.

Research questions

The preceding review of the literature permits several conclusions. Most clearly, it suggests considerable decreases in levels of most home help services in Sweden in recent years relative to changes in the population age structure. It also indicates that while there is considerable variability in levels of services from one region to another, these levels appear to largely reflect levels of needs within them. Research linking individual and regional characteristics suggests that regional variations in home help coverage rates, intensity of home help services, and rates of institutional placement are most closely associated with the type of support individuals in those municipalities receive. Based on this summary of the current state of knowledge, two inter-related research questions represent key knowledge gaps addressed by the current paper, both of which must be addressed at the regional level.

1. What regional characteristics predict (a) home help coverage rates, (b) intensity of home help services, and (c) rates of institutional living?
2. What regional characteristics are associated with the extent of change over time in each of these services?

In the first question, we focus on characteristics associated with both availability of services and need for them. In the second question, we concentrate on municipal characteristics that previous research (Davey et al. 2006, 2007; Trydegård and Thorslund 2001) has found to be most closely tied to formal sources of support. Specifically, we consider the proportion of older adults who are unmarried, the ratio of older women to older men, the number of home health workers per 1,000 residents, and municipal expenditures on old age care. Although these questions are inter-related, they are conceptually distinct enough that we consider them separately.

Method and analysis

Data and sample

Official statistics on social services provided in each Swedish municipality have been routinely collected since the early 1970s and are considered largely accurate. In addition to data on a variety of indicators of formal service provision, data on demographics and the local economy are publicly available for each municipality. Data on the characteristics of each municipality and the services they offer were obtained from Socialstyrelsen (National Board of Health and Welfare www.sos.se) and Statistiska Centralbyrån (Statistics Sweden www.scb.se).

Several key variables changed definitions or categories over the years, which required us to limit our analyses to the period between 1994 and 2000 for which comparable municipal level data are available. Three municipalities were split off from larger municipalities during this period. For the purposes of these analyses, data were recombined in order to provide data from 286 municipalities in existence in 1994. Data which were not available on-line were manually entered and checked for accuracy based on published reports.

Measures

Outcome variables

Three variables associated with the delivery of formal services to elders (65 years of age and older) served as outcomes in this paper. Consistent with previous research

in this area (e.g., Trydegård and Thorslund 2001), coverage rates of home help services were defined as the proportion of municipal residents aged 65 and older receiving home help services. Intensity of home help services was assessed as the natural logarithm (to improve normality of the distribution) of hours of help per recipient. Our third outcome, rate of institutional living, reflected the proportion of the older population living in institutions to reflect the obverse face of home help.

Predictor variables

Building on past research (e.g., Hanssen 1997; Hörstedt et al. 1996; Trydegård and Thorslund 2001), we consider the indicators associated with availability of, and need for, services as key predictor variables for this study.

Measures of potential availability of services In order to take into account the capacity of a municipality either to provide fiscal resources to fund the home help services or to provide the labor force to administer home help services, we included the natural logarithm (also to improve normality of the distribution) of municipal population, as well as unemployment rate, and number of home help workers per older inhabitants as indicator of the home help services labor supply. We also included information about the economic structure of the municipality: median income adjusted to year 2000 krona (reported in 1,000,000 SEK) and municipal tax rates as an assessment of the financial

strength of the municipality. Municipal expenses on activities for elderly and childcare adjusted by the consumer price index (Statistics Sweden www.scb.se) to derive costs comparable to year 2000 *krona* were also included as an indicator of the amount of money spent on funding home help services programs and competing programs such as child care, as well as a marker of precedence given to the care for elders.

Factors associated with potential need for services We also included indicators of the needs of the municipality. These included indirect indicators, such as the proportion of older adults (65+ years), old age sex ratio calculated as the ratio of older women (65+ years) to men (65+ years) and the proportion of unmarried older adults (65+). The proportion of women of childbearing age (15–44 years) was also included as an indicator of need since it represents competing demands for resources from the municipalities. Descriptive statistics for all study variables are presented in Table 1.

Analyses

Models were estimated separately for each municipal level outcome variable using random effects regression models for cross-sectional time series data in Stata 10 (e.g., Greene 2003; Stata 2007). These models account for the non-independence of observations over time. Additionally, all predictor variables were drawn from the previous year

Table 1 Descriptive statistics for study variables

Variable	M	SD	Min	25 %ile	Mdn	75 %ile	Max
Outcomes							
Home help coverage rate	8.40	2.58	0.00	6.70	8.06	9.78	25.58
Intensity of home help services (logged)	3.61	0.45	1.89	3.31	3.57	3.88	5.70
Rate of institutionalized living	8.28	1.88	1.69	7.10	8.25	9.46	30.01
Predictors (drawn from preceding year) availability							
Municipal population (logged)	9.84	0.88	7.90	9.25	9.66	10.37	13.53
Total proportion unemployed	0.04	0.01	0.01	0.03	0.04	0.05	0.08
Staff workers per elder	0.02	0.01	0.00	0.02	0.02	0.03	0.04
Adjusted median income (in 1 000 000 <i>krona</i>)	0.16	0.02	0.12	0.14	0.15	0.17	0.34
Municipal tax rate	20.57	1.75	13.20	19.62	20.69	21.55	32.25
Expenditures for elder care	9.72	2.85	2.03	7.81	9.66	11.57	21.29
Expenditures for child care	4.23	0.82	2.05	3.66	4.15	4.67	7.27
Needs							
Proportion of population 65+	0.19	0.04	0.06	0.17	0.19	0.22	0.30
Old age sex ratio	1.31	0.08	1.10	1.25	1.31	1.35	1.65
Total proportion unmarried 65+	0.48	0.03	0.35	0.46	0.48	0.50	0.57
Proportion of population in childbearing age	0.36	0.03	0.26	0.33	0.35	0.37	0.47

(i.e., lagged) in order to ensure that all predictor variables were temporally prior to the outcome variables. In order to reduce the potential effects of multicollinearity, planned interaction effects were tested one at a time. For ease of interpretation, interaction effects were interpreted by comparing municipalities with high (75th %ile), medium (Mdn), and low (25th %ile) levels of the predictor variables over time, although any observed values may be used. We rely on a conventional Type I error rate of .05 for interpretation; however standard errors presented can be used to obtain any desired confidence interval. Model results are presented in Table 2, and are described fully in the results section below. We also present the predicted values of each outcome for each significant interaction term in Table 3.

Results

Home help coverage rates

In terms of our first research question, none of the characteristics associated with availability of services, including the number of home help workers, predicted home help coverage rates. Two municipal characteristics

associated with need for these services were significant predictors, however. Specifically, coverage rates were actually higher in municipalities with a higher proportion of their population aged 65 or older. Similarly, coverage rates were higher in municipalities where a higher proportion of the older adults were unmarried. Finally, coverage rates decreased significantly over time. In addition to these main effects, there were also significant interaction terms between time and a variety of municipal characteristics.

With regard to our second research question, although home help coverage rates declined substantially over the six-year period considered here, there was variability in how municipalities changed, and several variables moderated the extent of the decline. Coverage rates were initially higher in municipalities with more home help workers per older inhabitant but these municipalities also experienced a faster rate of decrease in coverage rates. By 2000, municipalities with more home help workers actually had lower coverage rates than municipalities with fewer home help workers. This finding was mirrored as a function of expenditures on old age care. Municipalities with higher expenditures also initially had higher coverage rates. Due to a more rapid rate of decrease among high expenditure

Table 2 Random effects regression model predicting municipal level services

Predictors (drawn from preceding year)	Coverage rate		Home help intensity		Rate of institutional living	
	b	SE	b	SE	b	SE
Availability						
Municipal population (logged)	−0.24	0.18	0.05	0.03	−0.59**	0.13
Total proportion unemployed	5.87	8.14	5.33**	1.47	7.73	5.67
Staff workers per elder	6.06	18.80	2.58	3.53	−16.03	12.81
Adjusted median income (in 1,000,000 SEK)	12.08	6.87	2.50*	1.22	7.87	4.90
Municipal tax rate	−0.08	0.06	0.01	0.01	0.02	0.04
Expenditures for elder care	−0.04	0.06	0.02	0.01	0.16**	0.04
Expenditures for child care	0.17	0.10	0.06**	0.02	0.02	0.07
Needs						
Proportion of population 65+	23.51**	6.65	1.02	1.18	7.96	4.76
Old age sex ratio	−1.05	1.43	−0.13	0.25	0.99	1.02
Total proportion unmarried 65+	16.68**	4.00	−0.98	0.71	6.29*	2.88
Proportion of population in childbearing age	13.86	7.62	0.51	1.34	6.97	5.46
Year	−0.35**	0.08	−0.11**	0.01	−0.33**	0.05
Intercept	−4.84	3.68	2.53**	0.64	4.08	2.69
Interactions						
Year × staff workers per 1,000 elders	−21.76**	3.60	1.51*	0.70	−2.18	2.42
Year × expenditures for elder care	−0.05**	0.01	0.00	0.00	−0.01	0.01
Year × proportion unmarried 65+	−1.58*	0.75	0.32*	0.14	−1.24*	0.50
Year × old age sex ratio	1.29**	0.31	0.04	0.06	0.43*	0.21

* $P < 0.05$

** $P < 0.01$

Table 3 Predicted values for significant interaction terms

	1994	1995	1996	1997	1998	1999	2000
Home help coverage rates							
% 65+ Unmarried							
25th %ile	8.30	7.98	7.65	7.32	7.00	6.67	6.34
Mdn	8.69	8.33	7.98	7.62	7.27	6.91	6.56
75th %ile	9.10	8.71	8.33	7.94	7.56	7.17	6.78
Staff							
25th %ile	8.71	8.46	8.21	7.96	7.72	7.47	7.22
Mdn	8.96	8.61	8.26	7.91	7.56	7.21	6.86
75th %ile	9.20	8.75	8.30	7.86	7.41	6.96	6.51
Expenditures							
25th %ile	8.95	8.65	8.35	8.05	7.75	7.45	7.15
Mdn	9.19	8.80	8.40	8.01	7.62	7.23	6.84
75th %ile	9.43	8.95	8.46	7.98	7.49	7.00	6.52
Old age sex ratio							
25th %ile	11.39	10.95	10.50	10.06	9.61	9.17	8.73
Mdn	11.17	10.79	10.42	10.05	9.68	9.31	8.94
75th %ile	10.99	10.68	10.36	10.04	9.73	9.41	9.10
Intensity							
% 65+ Unmarried							
25th %ile	65.08	57.64	51.05	45.22	40.05	35.47	31.42
Mdn	63.00	56.12	50.00	44.54	39.68	35.35	31.49
75th %ile	60.83	54.53	48.89	43.83	39.29	35.22	31.58
Staff							
25th %ile	55.92	49.49	43.80	38.76	34.30	30.36	26.87
Mdn	55.75	49.69	44.28	39.47	35.18	31.35	27.94
75th %ile	55.58	49.87	44.75	40.16	36.03	32.34	29.02
Institutional							
% 65+ Unmarried							
25th %ile	8.60	8.30	8.00	7.70	7.40	7.10	6.80
Mdn	8.78	8.46	8.13	7.81	7.49	7.16	6.84
75th %ile	8.96	8.62	8.27	7.92	7.58	7.23	6.88
Old age sex ratio							
25th %ile	9.97	9.61	9.25	8.89	8.52	8.16	7.80
Mdn	9.97	9.63	9.30	8.96	8.62	8.29	7.95
75th %ile	9.97	9.65	9.33	9.02	8.70	8.38	8.06

municipalities, however, by 2000 high expenditure municipalities had lower coverage rates. Whereas home help coverage rates were higher in municipalities where a higher proportion of the older population was unmarried, these municipalities experienced a more rapid decrease than municipalities where a smaller proportion of older adults were unmarried. The last municipal characteristic that interacted with home help coverage rates was the old age sex ratio. Municipalities with more older women relative to older men experienced very little longitudinal change in coverage rates. Municipalities with fewer older women relative to older men initially had higher coverage

rates. They also experienced a more rapid decrease in coverage rates such that by 2000 municipalities with fewer women relative to men had lower coverage rates.

Intensity of home help services

In terms of our first research question, home help services were provided more intensively in municipalities with higher median incomes. Home help services were also provided more intensively in municipalities with higher unemployment rates. Several predictors associated with needs were also important. Specifically, home help services were provided more intensively in municipalities spending more per inhabitant on child care. Finally, over time, the intensity of home help services decreased nearly by half.

For our second research question, there was also systematic variability in change over time. There was an interaction between time and the number of home help staff members per 1,000 older adults. Initially, there were no differences in home help intensity between municipalities with high and low relative staff levels. However, the rate of decrease in intensity of home help services was lower in municipalities with more staff members per older adult such that services were provided more intensively by 2000 in municipalities with higher staffing levels. There was also a significant interaction between time and the proportion of older municipal residents who were unmarried. Initially, intensity of services was higher in municipalities with a lower proportion of unmarried older residents, but the rate of change was less in municipalities where a higher proportion of older adults were unmarried. By 2000, these curves had converged.

Rates of institutional living

With regard to our first research question, rates of institutional living were lower in larger municipalities, but otherwise no predictors associated with availability were important. Characteristics associated with need were such that rates of institutional living were higher in municipalities where a higher proportion of the older population was unmarried, and where municipalities spent more on old age services per inhabitant. Finally, rates of institutional living decreased over time.

With regard to our second research question, two municipal characteristics interacted with time to predict rates of institutional living. In 1994, rates of institutional living were higher in municipalities where a higher proportion of the older population was unmarried. Rates of institutional living decreased more rapidly in municipalities with a higher proportion of unmarried older adults,

however, so that rates converged over time. The second characteristic was the old age sex ratio. Initially, there were no differences in rates of institutional living between municipalities with high and low old age sex ratios. However, rates of institutional living decreased more slowly in municipalities where there were relatively more older women than older men, such that these municipalities diverged over time.

Discussion

In this paper, we set out to identify which municipal characteristics predict home help coverage rates, intensity of home help services, and rates of institutional living in Sweden, along with the extent to which changes in these supports were moderated by characteristics of the municipalities. This paper extended the literature in several important ways. It is the first paper to make use of the high quality longitudinal data on these services and associated municipal characteristics. As such, we were able to include predictor variables that were temporally prior to measurement of our outcomes. In contrast to other recent work examining individual level outcomes as a function of municipal service levels, the current study allows us to elaborate the model presented by Davey et al. (2007) longitudinally at the municipal level.

Of course, there are several limitations to this study as well. First, the data we used were collected for general purposes. As such, they do not explicitly track need for services, quality of services, or unmet need for services, a limitation our study shares with others that have approached these issues from a largely descriptive (Berg et al. 1993) or cross-sectional (Davey et al. 2006; Jeger 2005; Trydegård and Thorslund 2001) perspective. Relatedly, we are thus also lacking explicit information about the precise nature of services provided and characteristics of recipients. Regardless, other recent evidence suggests that unmet need has changed little despite the considerable declines in service levels in recent years (Davey et al. 2006, 2007), although at least some of this seems to have been accomplished through greater involvement of informal sources (cf. Johansson et al. 2003), and decreased levels of disability (Batljan and Lagergren 2005; Larsson 2006).

The present study provided some good insights into the municipal characteristics associated with each of the three types of services we examined. In terms of our first research question, different predictors generally emerged for each municipal outcome. The only similarity across all three was that all three of our outcomes decreased over time. In terms of our second research question, however, the factors associated with the extent of change over time were more consistent.

Whereas coverage rates can tell us about the proportion of older adults receiving services, municipalities may also choose to allocate services in a more or less intensive fashion (i.e., “spreading the jam more thinly”). For example, some municipalities may choose to prioritize provision of assistance to those with the greatest level of need, expecting that informal supports or assistive technology may be sufficient for individuals with lower needs. Intensity of home help services was predicted by a different set of municipal characteristics. Services were provided more intensively in municipalities with higher median incomes and with higher unemployment rates. Services were also provided more intensively in municipalities spending more on old age care per inhabitant. Rates of institutional living were lower in more populous municipalities. However, they were higher in municipalities with a larger proportion of their older population unmarried, and in municipalities spending more on old age care per inhabitant.

In terms of our second research question, however, the picture that emerged was quite compatible. The effects of the proportion of older adults who were unmarried changed over time for each of the three outcome variables. Although both coverage rates and rates of institutional living were initially higher in municipalities with a higher proportion of older adults who were unmarried, these municipalities also experienced a faster rate of decrease in these forms of assistance. Intensity of home help services was initially lower in municipalities with a higher proportion of unmarried older adults, but these municipalities experienced a slower rate of decrease. In all three cases, then, there was a trend toward convergence as a function of the proportion of older adults who were unmarried.

Changes in prioritization are also suggested in the changes associated with home help staff over time and expenditures for old age care. Coverage rates were initially higher in municipalities with more home help workers and which spent more money on old age care per inhabitant. However, these municipalities also experienced a steeper decline in coverage rates such that there was a cross-over effect between 1996 and 1997; after this point, high service municipalities actually had lower coverage rates than low service municipalities. Results for intensity of home help services are consistent with these changes. Specifically, there were initially no differences in home help intensity between municipalities with more versus fewer home help workers. However, intensity of services decreased more slowly in municipalities with more home help workers.

The effects of the ratio of older women to older men also changed over time. Coverage rates were initially lower in municipalities with a higher ratio of older women relative to older men. However, these municipalities also experienced a slower decline in coverage rates such that

there was a cross-over effect between 1997 and 1998. Rates of institutional living also diverged over time as a function of the ratio of older women to older men. Initially, municipalities did not differ on this dimension, but the rate of decrease in rates of institutional living was lower in municipalities with relatively more older women to older men, perhaps because women are less likely than men to have an alternative source of assistance.

Overall, then, marital status has become less important as a predictor of municipal service levels, whereas service levels have been relatively more preserved in municipalities where older women outnumber older men to a greater extent. The effects of the availability of home help staff and the costs of old age care appear to have shifted the way in which municipalities provide home help services. Those municipalities with the greatest number of home help workers and which spend the most on old age care have experienced faster decreases in coverage rates, but the intensity of services they provide has been spared.

As home help services have decreased in both absolute and relative terms, there has been an increasing emphasis on targeting those individuals with the greatest need. Past studies at the micro-level have shown that municipal levels of formal services are most important for elderly women (who are less likely than men to have available kin support) and the oldest-old (who are less likely to have kin support and to be in greatest need). Even at the macro-level, we see clearly that Swedish municipalities appear to be more proficient over time in targeting those with greatest needs. This is important for both policy and practice because a Danish intervention study (Vass et al. 2007a, b) clearly suggests that receipt of even preventive in-home services play an important role in reducing risks of disability over time.

Multivariate analyses at the municipal level (départements) in France (e.g., Jeger 2005) suggest that different predictor variables may be most important in systems with more of a financial than service basis. While also finding large regional variations, Jeger (2005) found that socio-demographic characteristics (e.g., rural residence, low financial resources, and agricultural occupation) were much more important factors than variables such as life expectancy or rates of solitary living. The importance of socioeconomic factors is similarly underscored in the cross-national work of Broese van Groenou et al. (2006), although in their study these effects could be largely attributed to variables such as age, gender, and marital status.

One aspect of support to older adults which the current paper cannot address is the changing role of family across municipalities. As services contract, families are likely to play an increasing role in support to older adults in Sweden (Johansson et al. 2003; Sundström et al. 2002, 2006), the United Kingdom (e.g., Young et al. 2005) and Europe

generally (Attias-Donfut et al. 2005; OECD 2005, Ogg and Renault 2006). It seems apparent that municipalities that are most effective at maximizing this source of support for older residents will be most effective in continuing to meet growing needs for services. Greater attention to changes in aspects of care such as its quality, perceived sufficiency (i.e., under-met need), and recipient satisfaction are also important next steps.

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