

## Research and theory

# What happens to quality in integrated homecare? A 15-year follow-up study

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## Abstract

**Objectives:** To explore the impact of structural integration on homecare quality.

**Methods:** A case study in an organisation comprising a before–after comparison with baseline and four follow-up measurements during 1994–2009, using interviews with clients (n=66–84) and postal inquiries to relatives (n=73–78) and staff (n=68–136).

**Results:** Despite the organisational reform involving extensive mergers of health and social care organisations and cuts in staff and service provision, homecare quality remained at almost the same level throughout the 15-year follow-up. According to the clients, it even slightly improved in some homecare areas.

**Conclusions:** The results show that despite the structural integration and cuts in staff and service provision, the quality of homecare remained at a good level. Assuming that the potential confounders did have inhibiting effects, the results suggest that structural integration had a positive impact on homecare quality. To obtain firmer evidence to support this tentative conclusion, further research with a randomised comparison design is needed.

## Keywords

**integrated homecare, merger of health and social care organisations, homecare quality, older people**

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## Introduction

A lack of and need for integration of homecare for older people is widely acknowledged in policy and research in many countries [1–4]. Integrative arrange-

ments in homecare are justified by claiming that they bring benefits to older people in terms of improved quality of life, functional ability, and care quality [5–9]. Moreover, integration of homecare services is assumed to bring benefits to other stakeholders,

above all to service providers and financiers, who in a tax-based funding system comprise all tax-paying citizens. These benefits are assumed to be the consequences of decreased use of hospital and other services together with increased system efficiency and cost-effectiveness [8–11]. As Pieper [12, p. 26] points out, in any discussions concerning health and social system reforms ‘the perspective of integrated care is typically concerned with the quality of care’. However, our literature review shows that in the research on integrated homecare, the quality of life, functional ability, cost-effectiveness [8, 9], use of hospital and other health services [8, 9, 13, 14], and reduction of costs or cost containment [14] have received much more attention as outcome indicators than quality of homecare.

Numerous studies have examined different integrative arrangements in homecare, without relating them to quality of care. The most commonly studied arrangements in these studies are various coordinating activities, partnership working, interdisciplinary collaboration, team work, joint working, networking, care and case management and other coordinating roles [2–7, 15]. Thus, the integrated arrangements and delivery of homecare has often been the focus of research, but not their outcome in terms of quality. Homecare quality has also received much attention in research, but again without relating it to integrative arrangements [15].

Finnish studies [15–20] that have explored the impact of integration on homecare quality have identified the following deficiencies: staffs are too hasty, not enough time for the client, lack of psychosocial support, insufficient help with clients’ errands, cleaning, and supporting mobility at home. On the other hand, attributes of good quality homecare according to these studies include: good interaction between client and staff, enough time for the client, continuity, safety and reliability of care, and adequate medication, nursing procedures and social support. Similar attributes have been found in studies conducted in other countries [21, 24–26]. The Finnish studies have measured homecare quality from the perspectives of clients, relatives and professionals [15–20]. To conclude, considering the richness of studies either on quality or integration of homecare, it is striking how little the relationship between these two phenomena has been investigated.

Given this background, the aim of this article is to explore the impact of structural integration on homecare quality. Only some results from a larger follow-up study [the Kuopio project, 16–20] on integration of homecare and its outcomes will be reported here.

The lack of a commonly accepted definition of integrated care is widely acknowledged [e.g. 27, 28]. This is natural, because the conceptualisation and measurement depend on the differences in the context in which homecare is delivered. The provision of homecare varies considerably between countries [21, 22] and the services range from help for housekeeping and daily living activities to nursing care at home, and emotional, psychological and social support to maintain independence and autonomy [21].

There are also large differences between countries in the division of tasks and responsibilities among the staff, such as the role of GPs, nurses, social workers, and managers, and in the education of homecare workers. The differences are determined by many factors, including organisation and funding (private–public mix), type of service provision and whether the integrative arrangements stress processes or structures. In Finland the major part of homecare is delivered by multipurpose organisations which are publicly owned, financed and run. These organisations are (1) primary care health centres<sup>1</sup>, (2) social care organisations and (3) joint health and social centres as is the case in the site of our study.

Given these differences in homecare between countries, we have created a definition from several previous definitions [e.g. 2–4, 27, 28] to fit the specific homecare context and the purpose of this paper. According to this definition, integrated homecare is a coherent and comprehensive set of services coordinated by a single management structure and delivered to older people to enable them to live in their own homes regardless of their dependence on help, care and other services. It includes funding, administration, organisation and service delivery designed to create coordination and collaboration within and between the professionals, agencies and other actors in the health and social sector and their service provision as well as with other services, such as housing, barrier-free environment, transportation and culture, which are necessary for older people to cope at home and maintain at least some quality of life.

<sup>1</sup> The Finnish primary care health centres are multipurpose organisations. Their service provision includes primary medical services by GPs and nurses; health protection and preventive services; rehabilitation; mental health outpatient services; home health care consisting mostly of home nursing; health centre hospitals; dental care and monitoring of health of the local population [31, 32]. When the health and social care organisations are joined (merged) as happened in the site of our study, the service provision is much more extensive, also including social care services, e.g. child protection and those social services which belong to homecare such as homemaking, housekeeping, and providing emotional and psychosocial support [15].

## Organisational context and site

Finnish municipalities have a statutory obligation to arrange health and social services including homecare for their residents [31, 32]. They can fulfil this duty either by producing services through their own organisations or by purchasing them from other municipalities or from private or third sector (not-for-profit) providers. Despite the increasing privatisation, the public sector municipalities are still the main providers of homecare in Finland [15, 33]. In addition, they also control the major part of private provision of homecare through purchases and by monitoring service quality. In the 1990s the Finnish municipalities initiated an extensive merger process of primary level health and social care organisations [15, 32, 34], including homecare, which has continued up to the present. The site of this study was among the first to start this trend by merging its entire health and social care systems, including homecare, as shown in Figure 1. The site is a city of just over 92,000 inhabitants located in eastern Finland.

The reasons presented by the Finnish municipalities for merging their health and social sectors have often been efficiency arguments related to the municipalities' shrinking economy and needs for cost containment. These were also the reasons underlying the decision made by the city council of our site to merge its health and social sectors, including homecare, as can be seen in the objectives set up by the city council for the merger in question (see Figure 1). According to this reasoning, integrated structures remove boundaries between professions, units and other actors, and create and promote other forms of integration, e.g.

integrative processes, such as coordination, information sharing, interdisciplinary teams and other forms of collaboration. Consequently, they are expected to produce positive outcomes in terms of homecare quality, reduced gaps and overlaps in service provision and hence increased cost-effectiveness, productivity and cost containment.

Figure 1 depicts the type and magnitude of the organisational reform, including mergers, the impact of which on homecare quality is examined in this article. The reform was implemented in the 1990s. The city council set up 11 objectives in 1992, which can be grouped into four categories: (1) streamlining or rationalising and flattening the organisational structure; (2) improving coordination, interdisciplinary cooperation, collaboration and information sharing within and between units; (3) improving cost-effectiveness and productivity; and (4) improving the quality of services, especially from the clients' perspective [34, p. 100; 35, p. 3–5].

As seen in Figure 1, all municipally provided health and social services including homecare were gradually transferred 'under one administrative roof', in Leutz' terminology [36]. In 1993, the separate municipal health and social boards, which are important policy making, controlling, and evaluation bodies at strategic policy making level (part of local democracy), were combined, as was the operative level management of both sectors with their top executives (CEOs), governance and fiscal departments, including a single joint budget (pooled funding). Strict financial frames are set and compliance with them is controlled by the city council and the combined municipal health and social

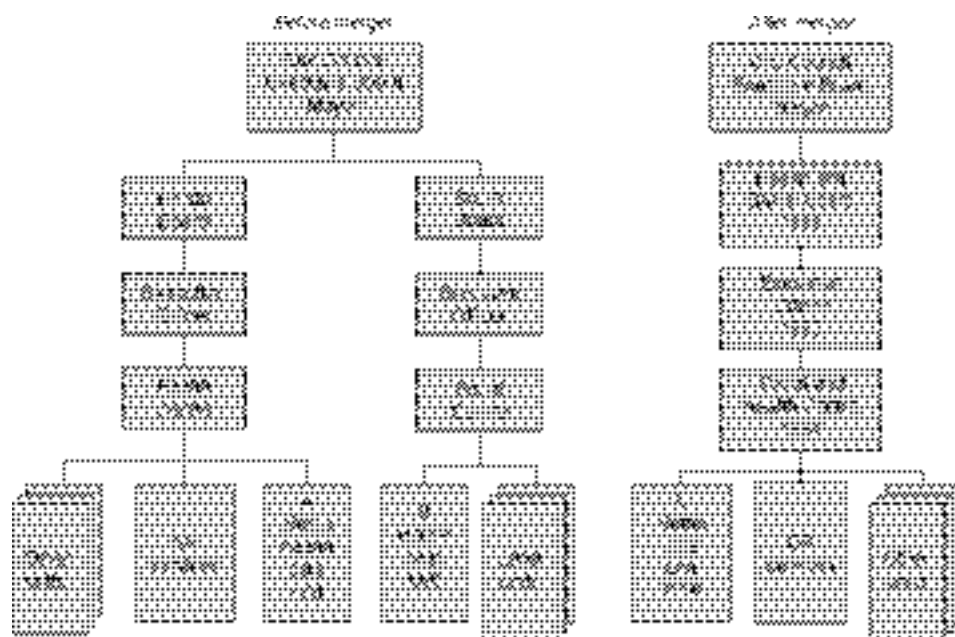


Figure 1. Organisational structure at the primary level of municipal health and social care before and after the merger in the site of this study.

board. Funding is mainly public, the major part coming from municipal tax revenue.<sup>2</sup>

The two service units of home healthcare (A in [Figure 1](#)) and home help (B) were merged during 1994–1995 and a joint homecare unit (C) was established to replace the two previous ones. After the merger, the integrated structures of the health and social sectors cover functions from the highest sectoral policy-making echelons (municipal health and social board) down to the practice level of service delivery, the new homecare unit (C in [Figure 1](#)). To summarize: integrative arrangements of homecare comprise structural integration in formalised, horizontal and vertical forms [37] manifested in single units at all levels of the unified municipal health and social care system.

## Methods

### Definition and measurement of homecare quality

Homecare quality is considered here to be an outcome of the integrative structural arrangements described above. An instrument to measure it was developed in the baseline study in 1994 [16]. At that time no appropriate measure of homecare quality was available. Therefore, theories and measures of service quality in general [e.g. 39] were applied for defining and measuring quality. We assumed that high-quality care satisfies the needs for care and assistance of care-dependent older people living in their own homes. This approach emphasises the responsiveness and sufficiency of care from the client perspective. For this article, only three aspects of the broad concept of homecare quality were chosen: (1) sufficiency of care and time given to the client; (2) responsiveness to clients' needs; and (3) quality of the guiding, counselling and informing of clients.

These aspects were measured with several items (Tables 3–6) and their face validity was determined by the expert consensus of a multidisciplinary team

comprising practitioners, managers, researchers and teachers from the health and social sectors. Studies [e.g. 21, 23] published after the constructions of our questionnaire have applied partly similar concepts and measures. The expert consensus indicates face validity of both our definition of homecare quality and its measure. In addition, several other studies [e.g. 5–7, 24–26] on homecare quality published after the construction of our instrument have identified similar characteristics of homecare quality. They also provide some evidence of the content validity of the items of our measure. To ensure the comparability of different measurements, the same questionnaire was used for all groups, with different wording when necessary, and in all five sub-studies.

### Study design

There were several reasons for a long 15-year follow-up. As described above the mergers were implemented gradually in the 1990s (see [Figure 1](#)). Moreover, it takes a long time for outcomes to appear especially after an extensive organisational merger involving different professional, organisational and work cultures [e.g. 34] as in our study. This has been even the case in smaller-scale integrative processes [e.g. 5].

At baseline (1994) it was not possible to find a municipality for a matched comparison setting, e.g. with similar relevant characteristics of population and homecare clients. Nor was a randomised comparison design with several municipalities possible, because the merger wave had just begun [15, 32, 34]. Therefore, a non-randomised before–after design was used with baseline measurements serving as a point of comparison ('control'). The study design comprised a 15-year follow-up with five cross-sectional case-studies: the baseline measurement was in 1994, with follow-ups in 1997, 2000, 2003, and 2009.

### Subjects and data collection

To get a multifaceted picture of homecare quality, three different groups of important stakeholders were chosen; clients, relatives and staff, based on the stated inclusion criteria. The clients had received regular homecare for at least six months, were aged 65 years or over, and had the cognitive ability needed for the interview. Such relatives of clients were recruited, who had observed the homecare of their elderly relatives and were able to evaluate its quality; these included relatives of clients who could not be interviewed. Homecare staff assisted in finding and recruiting the clients and relatives. The staff members were recruited from among those who worked regularly in

<sup>2</sup> Health service organisations and their management at primary level in Finland are exceptionally decentralised [31], perhaps the most decentralised in the whole world [32]. The strong self-government related to this decentralisation is determined by the Constitution and implemented by the municipal decision-making bodies ([Figure 1](#)) representing municipal self-government/local democracy. Finnish municipalities have extensive duties and obligations to provide health, social and other welfare services, education, cultural services and physical infrastructure at local level and also the right to levy taxes to cover the costs of providing these services. The major part of the health and social services are run and funded publicly by municipalities and supported with other funding. In 2008, for example, 35% of the total health care costs was funded by municipal taxes, 24% by national taxes, 15% by mandatory sickness insurance and 19% by households (out of pocket), and 7% from other sources (Facts about Social Welfare and Health Care in Finland 2010).



homecare in direct client contact. The entire home healthcare staffs (mainly nurses) were recruited. A sample of home help staff (homecare providers, counsellors) was drawn from groups stratified according to geographic area using random or systematic random sampling with an interval of 2 or 3. In 2009, however, the questionnaire was sent to all employees because of particular circumstances of the time (see Discussion section).<sup>3</sup>

A structured questionnaire with the same questions for all three groups was used. Data were collected from relatives and staff by postal questionnaires; one follow-up questionnaire was sent to non-responders except in 2009, as mentioned above (see the Discussion section). The interviewers filled in the questionnaire for the clients. Most of the interviewers were nursing students but in some sub-studies, social work students or health management students interviewed some clients. The students received training in interviewing techniques, and were given information about the questionnaire and the study. The questionnaire consisted of 29–32 structured questions, most with several items, and 4–5 open-ended questions, not reported in this article. Sufficiency of care was assessed on a 1–3 point scale (Table 3). The other questions measuring homecare quality had a 5-point Likert scale ranging from strong disagreement to strong agreement. For statistical analysis, these responses were recoded from 1 to 4 and the response alternative 'undecided' as 2.5 (Tables 4–6, Figure 2a–c). Cases with missing values were excluded from the analyses.

## Ethical issues

To ensure informed consent, letters were mailed to clients to explain the study. Thereafter permission for an interview was requested by telephone and the right to refuse was emphasised. Relatives and staff received a letter explaining the study with the postal questionnaire. Voluntary participation was emphasised to all groups. The anonymity of respondents was ensured throughout the research process. Permission for the study was obtained from the City Council and the relevant management. No permission by an external body was required. The researchers followed the guidelines on research ethics issued by the Finnish National Advisory Board on Research Ethics.

<sup>3</sup>GPs were not included because homecare managers (mostly nurses with master's degrees) are responsible for homecare: GPs usually meet clients 'indirectly' when nurses consult them concerning clients' medication or illnesses. GPs do not usually make house calls: clients are taken to health and social centres for GP consultations or laboratory, X-ray and other tests. This practice differs from that in some other countries, where the importance of GPs' involvement in the care of community dwelling older people is emphasised [e.g. 5 and 29].

## Statistical methods

The three sum-scales presented in this article to measure the three aspects of homecare quality investigated were constructed from the items in Tables 4–6 by factor analyses of combined client data for 1994 and 1997. Internal consistency of the scales was estimated by Cronbach's alpha, 0.60 being considered adequate. Two scales had good (0.87, 0.85) and the third acceptable (0.64) internal consistency.

Changes in background characteristics and care quality (outcome) between the different follow-ups were estimated by  $\chi^2$  test or by one-way analysis of variance (ANOVA) followed by Dunnett's test to compare every subsequent year with the base-line year, 1994. In the case of ordinal scale variables, significant differences were also subjected to the non-parametric Kruskal–Wallis analysis of variance. The significant p-values shown in the tables and the figures were also significant at  $p < 0.05$  in the Kruskal–Wallis test, unless otherwise indicated. The numbers of respondents in all groups and in all measurements were sufficient for the methods applied in the data analyses. The SPSS Statistics 17.0 package was used.

## Results

### Background characteristics of respondents

The numbers of respondents and response rates of the three groups at different measurements are given in Table 1. Response rates were high, especially among the clients. Staff had the lowest response activity in the first (1997) and the last (2009) follow-ups (see the Discussion section), although even these rates were high for postal inquiries.

Despite the different numbers of respondents at baseline and at the four later measurements, the background characteristics of respondents were fairly similar in all groups throughout the 15 years (Table 2). In all sub-studies, the majority of clients were women, and widows and living alone. The mean age remained almost the same. In all measurements the majority of clients needed home care because of illness, and 26–53% had difficulties in mobility at home. The most significant differences between the clients' background characteristics from baseline to last follow-up were in the percentage of clients needing care after 4 p.m.; this increased from 13% (1994) to 55% (2009), which is a consequence of targeting services to those needing much care and help. The average length of the time the clients stayed in homecare ranged from 3.8 to 4.7 years.

**Table 1.** Sample sizes and response rates in the baseline and four follow-studies (N=interviews planned/questionnaires sent, n=interviews/questionnaires completed, %=response rate)

Methods of data collection	1994			1997			2000			2003			2009		
	N	n	%	N	n	%	N	n	%	N	n	%	N	n	%
Interviews of clients	77	66	86	81	67	83	84	84	100	80	74	93	80	80	100
Postal inquiries to relatives	86	74	86	100	73	73	100	73	73	100	78	78	100	76	76
Postal inquiries to workers	105	84	81	104	68	65	100	87	87	100	76	76	207	136	66

**Table 2.** Characteristics of respondents in 1994–2009

	1994	1997	2000	2003	2009
<b>Clients</b>					
Age: mean±SD	80±9	81±6	81±7	82±7	82±6
Gender: % women	88	78	85	81	76
Marital status: % widows	76	67	64	70	70
Living alone %	84	79	92	85	86
Self assessed health: mean±SD (5=best)	3.4±1.0	3.5±0.8	3.5±0.9	3.4±1.0	3.1±0.9
Difficulties with: %					
Mobility at home	53	26*	44	57	41
Sight/hearing	14	11	6	22	21
Memory loss	8	6	10	22*	20*
Loneliness	20	5*	12	20	8
Insecurity	0	2	4	22*	7*
Mental problems	5	2	4	12	4
Self reported illness %	89	88	75*	80	70*
Receives care after 4 p.m. %	9	6	37*	41*	56*
Needs care					
Between 4 and 9 p.m. %	13	9	40*	40*	55*
After 9 p.m. %	5	8	8	9	19*
<b>Relatives</b>					
Age: mean±SD	61±15	52±11*	56±12*	59±11	59±9
Gender: % women	68	56	58	69	65
Marital status: %					
Single	9	15	3	14	9
Married	73	64	78	72	73
Divorced	8	7	12	9	13
Widowed	0	14	7	5	5
Client's relation to relative: %					
Spouse	23	6	1	6	1
Parent	58	76	79	67	72
Mother/father-in-law	0	1	0	4	8
Other	19	17	19	23	15
<b>Staff</b>					
Age: mean±SD	46±9	47±8	46±8	46±9	44±10
Gender: % women	100	100	100	99	99
Marital status:					
Single	10	6	2	9	5
Married	70	82	80	80	82
Divorced	12	8	16	7	11
Widowed	8	5	1	4	2
Professional education: %					
Short course	23	18	10	9	1
Vocational school	51	54	58	76	91
Polytechnic/college	26	27	30	15	8
University	0	0	2	0	0
Working time: %					
Full time, one shift	86	56	44	42	31
Double shift	6	24	48	51	66
Other, part time	8	21	8	7	3
Experience in years in the present position: mean±SD	12±7	12±8	12±7	12±7	12±9

\*p<0.05 compared to 1994 (Dunnett's test or  $\chi^2$  test).

Most of the relatives were daughters of the clients in their 50s and early 60s. As to the staff, a notable change was in the proportion of those working double shifts, which had increased significantly from 6% in 1994 to 66% in 2009. This increase is consistent with the increase in the number of clients who received care after 4 p.m. The effect of observed dissimilarities in respondents' characteristics within each group between baseline and last follow-up as potential confounders will be assessed in the Discussion section.

## Homecare quality

### Sufficiency of care

The quality of homecare was conceptualised and measured first as sufficiency of the amount of care

and help provided in the most important homecare domains presented by the items in Table 3. During the whole follow-up time, sufficiency was best, according to clients and relatives, in home healthcare (e.g. dispensing medicines, giving injections), but according to staff, it was best in nursing procedures (e.g. wound care, taking samples for testing). Assisting clients with two important activities of daily living (ADL), such as meals and personal hygiene was also considered to be highly satisfactory by all three groups throughout the follow-up period; staff especially considered personal hygiene to be adequate. Care and help was less sufficient in assisting clients with mobility at home and especially in discussions with clients (giving psychosocial support). The sufficiency ratings on discussions with clients were unexpected, because staff evaluated

**Table 3.** Items in the sum-scale measuring sufficiency of homecare assessed by clients, relatives and staff: means and standard deviations. (If the client needed assistance, then: 1=no assistance, 2=insufficient, 3=sufficient)

Type of care, assistance	1994	1997	2000	2003	2009
<b>Assistance in instrumental activities of daily living (IADL)</b>					
Home making: cleaning client's home					
Clients	2.5±0.7	2.6±0.7	2.1±0.9*	1.8±0.8*	2.4±0.8
Relatives	2.6±0.8	2.5±0.7	2.1±0.8*	2.1±0.8*	1.9±0.8*
Staff	2.6±0.5	2.6±0.6	2.1±0.7*	1.8±0.8*	1.7±0.8*
Performing client's errands (e.g. shopping, pharmacy)					
Clients	2.7±0.6	2.7±0.7	2.3±0.9*	2.3±0.9*	2.4±0.9
Relatives	2.6±0.7	2.7±0.7	2.5±0.8	2.5±0.8	2.2±0.8*
Staff	2.8±0.4	2.8±0.4	2.3±0.7*	2.1±0.6*	1.5±0.7*
<b>Assistance in activities of daily living (ADL)</b>					
Meals, eating					
Clients	2.5±0.8	2.8±0.6	2.7±0.6	2.7±0.7	2.9±0.4*
Relatives	2.7±0.7	2.9±0.5	2.8±0.6	2.7±0.6	2.8±0.4
Staff	2.8±0.4	2.8±0.4	2.8±0.4	2.9±0.4	2.8±0.4
Personal hygiene					
Clients	2.4±0.8	2.6±0.8	2.7±0.6	2.5±0.7	2.8±0.6
Relatives	2.6±0.7	2.7±0.6	2.6±0.6	2.7±0.5	2.6±0.6
Staff	2.9±0.3	2.8±0.4	2.9±0.3	2.9±0.3	2.7±0.4*
Mobility at home					
Clients	1.6±0.9	1.9±1.0	1.9±1.0	2.3±0.8*	2.5±0.8*
Relatives	2.3±0.9	2.4±0.8	2.4±0.7	2.3±0.8	2.4±0.8
Staff	2.4±0.5	2.4±0.5	2.2±0.4*	2.2±0.4	2.3±0.5
Clothing (e.g. laundry, ironing)					
Clients	2.4±0.9	2.6±0.7	2.3±0.9	2.3±0.9	2.7±0.7
Relatives	2.3±0.9	2.6±0.7	2.4±0.8	2.4±0.8	2.9±0.4*
Staff	2.6±0.5	2.5±0.5	2.3±0.5*	2.4±0.5*	2.3±0.6*
<b>Social support (meeting psychosocial needs and related to psychosocial functional ability)</b>					
Discussions with client					
Clients	2.5±0.6	2.4±0.6	2.2±0.7	2.3±0.6	2.3±0.8
Relatives	2.4±0.7	2.5±0.6	2.2±0.7	2.3±0.7	1.8±0.8*
Staff	2.1±0.3	2.1±0.4	2.0±0.4	2.1±0.3	2.0±0.4
<b>Home health care: home nursing</b>					
Nursing procedures (e.g. wound care, sampling for lab tests)					
Clients	2.4±0.9	2.9±0.5* <sup>a</sup>	2.8±0.5* <sup>a</sup>	2.7±0.7	2.8±0.6
Relatives	2.8±0.6	2.7±0.7	2.7±0.7	2.8±0.6	2.2±0.8*
Staff	2.9±0.2	2.9±0.3	3.0±0.2	3.0±0.2	2.9±0.3
Medication (e.g. dispensing medicine, giving injections)					
Clients	2.7±0.8	2.8±0.6	2.9±0.5	2.9±0.4* <sup>b</sup>	2.9±0.3* <sup>b</sup>
Relatives	2.6±0.8	2.8±0.5	2.8±0.6	2.9±0.4	1.9±0.7*
Staff	3.0±0.2	2.6±0.6*	3.0±0.1	3.0±0.1	2.7±0.5*

\*p<0.05 compared to 1994 (Dunnnett's test). <sup>a</sup>p=0.056, <sup>b</sup>p=0.073, Kruskal-Wallis test.

them lower in all measurements than did the clients. This reflects the differences in expectations concerning discussions with clients and the criteria used to evaluate their sufficiency. Relatives also evaluated sufficiency in this domain more highly than did the staff in all measurements except in the last follow-up, when there was a significant deterioration according to the relatives. Since 2000 there was a continuous reduction in sufficiency regarding help with the instrumental activities of daily living (IADL): in doing client's errands (e.g. shopping, banking) according to all groups, and also in cleaning, with the exception of the last follow-up, when clients rated sufficiency in cleaning more highly than in the two preceding measurements. A deterioration in sufficiency in two domains was observed in the last follow-up: assistance in mobility at home, according to clients and staff, and clothing (e.g. laundry, ironing), according to relatives and staff.

Sufficiency of care overlaps the three other items measuring homecare quality in the time given to clients (sum-scale in Figure 2a and its items in Table 4). These quality indicators were fairly stable throughout the follow-up period; there was only a small decrease according to all three groups in 2000, according to clients in 2003, and according to relatives in 2009 (Figure 2a). The items in Table 4 show that clients perceived significant improvements from the baseline to the last follow-up in the item 'homecare workers arrive at the

time agreed'. The largest difference in clients' and staff ratings was in the item 'homecare workers are in a hurry': the clients assessed the workers as much more hasty than did the workers.

### Responsiveness of care

Responsiveness was measured by a sum-scale (Figure 2b) calculated from the six items shown in Table 5. On this sum-scale, quality remained at the same high level throughout the follow-up period according to all groups, and clients assessed it as being much better than did the other two groups. Small fluctuations during the follow-up time were found in some individual items (Table 5). Clients and relatives perceived responsiveness as being best on the item 'client received help needed' whereas staff thought it was best on the item 'client received help as promised'. The greatest deterioration in responsiveness during the follow-up time according to clients was on the item "homecare workers find solutions to clients' needs", and according to staff on the item 'client received the help requested', whereas in clients' ratings no deterioration was observed on this item.

### Guidance, counselling and informing clients

Guiding, counselling and informing clients was measured by a sum-scale (Figure 2c) formed from the five items shown in Table 6. Although the two other

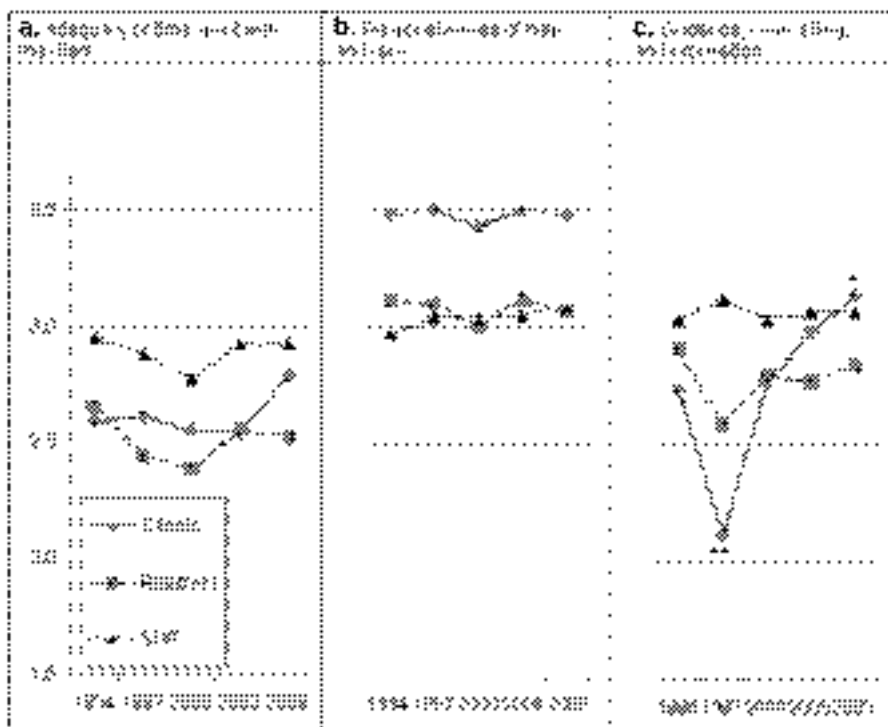


Figure 2. (a–c) The sum-scales measuring the three dimensions of homecare quality as assessed by clients, relatives, and home care staff. 1=poorest, 4=best quality. In Figure 2c, client's responses show significant differences between years (ANOVA  $p < 0.001$ ). \* $p = 0.02$ , \*\* $p < 0.001$  compared to 1994 (Dunnett's test).



**Table 4.** Items of care sum-scale measuring adequacy of time spent with clients assessed by clients, relatives and staff: means (4=best) and standard deviations

Items	1994	1997	2000	2003	2009
Home care workers have allocated enough time for the clients					
Clients	2.9±1.1	2.8±1.0	2.6±1.2	2.5±1.2	2.9±1.2
Relatives	2.7±1.0	2.5±0.8	2.3±0.9	2.6±0.9	2.6±0.9
Staff	2.9±0.6	2.9±0.7	2.6±0.7*	2.9±0.8	3.0±0.6
Home care workers are not in hurry					
Clients	1.9±1.1	1.8±1.1	1.7±1.0	1.8±1.0	1.9±1.2
Relatives	2.1±1.0	1.8±0.8	1.8±0.9	1.9±1.0	2.0±0.8
Staff	2.7±0.9	2.5±0.8	2.5±0.9	2.6±0.9	2.6±0.8
Home care workers arrive at the time agreed					
Clients	2.9±0.1	3.2±0.8	3.4±0.9*	3.3±1.0	3.4±1.0*
Relatives	3.2±0.7	3.0±0.7	2.9±0.7*	3.2±0.8	3.0±0.7
Staff	3.3±0.6	3.3±0.6	3.2±0.6	3.3±0.7	3.2±0.6

\*p<0.05 compared to 1994 (Dunnett's test).

**Table 5.** Items of responsiveness sum-scale, assessed by clients, relatives and homecare workers: means (4=best) and standard deviations

Type of care and assistance	1994	1997	2000	2003	2009
Client has received help needed					
Clients	3.6±0.6	3.7±0.6	3.5±0.8	3.6±0.8	3.6±0.7
Relatives	3.4±0.8	3.2±0.7	3.1±0.6	3.3±0.8	3.1±0.7
Staff	3.1±0.6	3.2±0.6	3.1±0.5	3.3±0.6	3.1±0.7
Client has received help requested					
Clients	3.4±0.8	3.7±0.5	3.4±0.9	3.5±1.1	3.5±1.8
Relatives	3.2±0.8	3.1±0.6	2.8±0.7*	2.9±0.9	2.9±0.7*
Staff	2.8±0.7	2.9±0.6	2.5±0.8*	2.6±0.8	2.5±0.8*
Client has received help promised					
Clients	3.6±0.7	3.7±0.7	3.6±0.7	3.6±0.8	3.6±1.0
Relatives	3.2±0.8	3.1±0.9	3.3±0.9	3.3±0.8	3.3±0.8
Staff	3.6±0.5	3.6±0.6	3.6±0.6	3.6±0.6	3.6±0.6
Home care workers recognise client's needs					
Clients	3.4±0.9	3.3±0.7	3.4±0.9	3.2±0.9	3.3±0.7
Relatives	2.7±1.0	2.8±0.8	2.8±0.8	2.9±0.9	2.8±0.9
Staff	2.9±0.5	2.9±0.7	3.1±0.6	2.9±0.6	3.1±0.6*
Home care workers understand client's life situation					
Clients	3.4±0.7	3.5±0.7	3.5±0.6	3.5±0.7	3.6±0.7
Relatives	3.1±0.9	2.7±0.8	3.0±0.8	3.1±0.8	3.3±0.8
Staff	3.0±0.7	3.1±0.7	3.3±0.6*	3.2±0.6	3.4±0.6*
Home care workers find solutions to client's needs					
Clients	3.5±0.8	3.2±0.8	3.2±0.9	3.4±0.8	3.2±0.7
Relatives	3.1±0.8	2.8±0.7	2.8±0.6	3.0±0.8	2.9±0.7
Staff	2.4±0.5	2.6±0.8	2.7±0.6*	2.6±0.6	2.8±0.5*

\*p<0.05 compared to 1994 (Dunnett's test).

sum-scales (Figures 2a,b) indicate rather stable quality throughout the follow-up period, a major decrease in quality was noted on this dimension in the first follow-up (1997; Figure 2c) according to clients and to some extent also according to relatives. Unlike clients and relatives, staff assessed this aspect of quality to be very good and also as the best in all measurements. Notably, staff reported that clients had been adequately informed especially at the first follow-up, and also in the other follow-ups (Figure 2c, Table 6).

To summarise: the level of homecare quality was best in responsiveness (Figure 2b, Table 5) and second best in guiding, counselling and informing clients except at

the first follow-up in 1997 (Figure 2c, Table 6) and poorest in sufficiency (Tables 3 and 4). The sum-scales on responsiveness especially (Figure 2b) and to a large extent also the sum-scale on adequacy of time spent with clients (Figure 2a) show that quality stayed at the same fairly high level throughout the follow-up period. However, the sum-scale measuring guiding, counselling and informing clients (Figure 2c) shows a reduction in quality at the first follow-up (1997) according to the ratings of clients and relatives but not according to those of staff. There was also some fluctuation in staff ratings during the follow-up time in the individual items measuring sufficiency and responsiveness (Tables 3–6).

**Table 6.** Items of sum-scale of guidance, counselling and informing clients; assessed by clients, relatives and staff: means (4=best) and standard deviations

Type of care, assistance	1994	1997	2000	2003	2009
Home care workers tell clients about services available					
Clients	2.8±1.1	2.2±1.2*	2.7±1.1	3.0±1.0	3.2±0.9
Relatives	2.8±1.0	2.8±0.8	2.9±0.9	2.8±0.9	3.0±0.9
Staff	3.1±0.7	3.1±0.6	3.1±0.7	3.1±0.6	3.1±0.7
Home care workers say whom the services are meant for					
Clients	2.7±1.1	1.9±1.1*	2.6±1.1	3.0±1.0	3.0±0.9
Relatives	3.0±0.8	2.6±0.7*	2.7±0.7	2.8±0.9	2.7±0.7
Staff	3.0±0.8	3.0±0.6	3.0±0.8	3.0±0.7	3.0±0.6
Home care workers tell how to get services					
Clients	2.7±1.0	1.9±1.1*	2.7±1.1	3.0±1.0	3.3±0.8*
Relatives	3.0±0.8	2.1±0.7*	2.7±0.8*	2.9±0.8	2.7±0.9*
Staff	3.0±0.8	3.0±0.6	3.0±0.8	3.1±0.7	3.0±0.7
Home care workers give guidance in health matters					
Clients	3.1±0.9	2.5±1.2*	3.2±1.0	3.2±1.2	3.4±0.8
Relatives	3.0±0.8	2.9±0.8	3.1±0.7	3.0±0.8	3.1±0.6
Staff	3.1±0.6	3.3±0.6*	3.2±0.5	3.2±0.6	3.3±0.6*
Home care workers help the client to maintain contacts with other people					
Clients	2.6±0.9	2.2±1.2	2.6±1.2	2.7±1.5	2.9±1.1
Relatives	2.7±0.8	2.5±0.9	2.6±0.7	2.5±1.0	2.7±0.7
Staff	3.0±0.7	3.2±0.7	2.9±0.7	3.0±0.7	3.0±0.8

\*p<0.05 compared to 1994 (Dunnett's test).

Some differences between the groups were revealed in their quality assessments. They were greatest in the sufficiency evaluations and quality assessments regarding guiding, counselling and informing clients (Tables 3–6). One noteworthy group difference concerned the item 'client received the help requested': there was a significant deterioration in this item since 2000 according to staff and to some extent also according to relatives, but not according to clients. Differences were also found in assessing the haste of staff as well as guidance, counselling and informing clients; in all these cases the clients perceived quality as being lower than did the staff.

## Discussion

The purpose of this article was to explore the impact of structural integration on the quality of homecare. The design was a before–after comparison with five measurements during a 15-year period. A matched or randomised comparison setup would have provided more reliable evidence of whether the structural integration of homecare improves its quality. Unfortunately, such designs were not possible at baseline (1994). However, along follow-up period combined with a before–after design without a matched comparison group does not allow drawing firm conclusions. A major problem in this respect is identifying the impact of potential confounders ('co-intervention').

The major possible confounders derive from the shrinking economy of the municipality, which was the

most important change in the environment of the studied homecare organisation. It compelled the site to reduce staff, as shown by the staff/client ratio, which was 0.23 in 1994 but only 0.12 in 2009. Another consequence of the shrinking economy was the limiting of eligibility for municipal homecare by targeting it at older people with the greatest needs for assistance in personal activities of daily living (PADL) and instrumental activities of daily living (IADL). Consequently, the share of those clients with poor functional abilities and multiple care needs increased, which can be seen in Table 2 as the increased share of clients receiving care for 24 hours per day. The effects of cuts in staff and services are visible in respondents' sufficiency evaluations of care and assistance. From 2000, sufficiency decreased continuously up to the last follow-up, according to all groups, in doing clients' errands, discussing with clients, dressing clients and cleaning their homes.

Other potential confounders may have affected respondents' evaluations of homecare quality. First, respondents' expectations regarding quality were likely higher in the last follow-up than at baseline because the younger client cohorts may expect and demand better quality than older ones [15]. Second, the improved education of homecare workers may have broadened their view on homecare quality and the criteria used by them in assessing quality. Finally, there have recently been heated public discussions concerning older peoples' homecare, showing increased concerns and demands of relatives for better homecare.

One methodological issue concerns the lower staff response rate at the last measurement (2009) when no follow-up questionnaire was sent. This was because the staffs were going through a difficult time for due to the planned cost containment, including compulsory unpaid layoff for two weeks planned to occur just before the 2009 measurement. Eventually, the layoff was cancelled because the staffs were needed to deal with the sudden swine flu epidemic in the region. Despite the cancellation, the threat of a payoff probably worsened the work climate and staff morale and hence reduced their motivation to answer the inquiry in autumn 2009.

The staff response rate (65%) was also lower in the first follow-up (1997) than at baseline (81%) and in 2000 (87%). Before the first follow-up (1994–1997) extensive organisational reform was in progress, involving mergers at different levels of the health and social care system, as described above. Such reforms are difficult to implement, especially because of staff resistance [34, 35]. The acrimony and resistance among the health professions were visible in this reform [34, 35]. However, the last follow-up showed that despite staff resistance and other difficulties in implementation, the reform has been rather successful in terms of maintaining homecare quality regardless of cuts in staff and homecare provision.

In this article, we have tried to answer the question ‘what happens to homecare quality in different time periods (stages) after a large organisational reform involving extensive mergers of health and social care units and their whole organisational and policy-making environment?’ (Figure 1). The main results show that despite extensive mergers of health and social care organisations and the cuts in staff and services, quality of homecare was almost stable throughout the follow-up period in most areas investigated. In some areas there was even a small improvement in quality, e.g. in the recognition and understanding of client’s needs, and in possibilities to find solutions for them, especially according to the clients. These are very positive outcomes and consistent with the efforts to increase client orientation in homecare during the last years. A negative outcome was the reduction in quality in guidance, counselling and informing clients as perceived by clients and relatives at the first follow-up (1997). Likely reasons for this finding are the changes implemented in the site during the period 1994–1997 in homecare delivery, especially in the locations of service units. These changes may have increased the need for information among the clients, but decreased the opportunities or even the ability of staff to inform clients adequately.

Assuming the potential confounders do have inhibiting effects, the results actually suggest a positive impact

of structural integration. This is because these mergers further deeper integration which, in turn, has beneficial impact on care quality. This reasoning gains some support from a recent Finnish study conducted in 43 municipalities [15]. It shows that municipalities with an integrated home care structure (e.g. merged health and social care units) also used other forms of integration more often than did municipalities without integrated homecare structures. These other forms included integrative processes, such as shared information systems, information sharing, joint care and service planning, interdisciplinary assessment teams and other forms of interdisciplinary collaboration.

Results which are in line with those of previous studies [e.g. 15–21, 23, 40] provide lessons for practice. For example, homecare sufficiency was evaluated most critically in this and in some other studies [e.g. 40]. Accordingly, it may be concluded that the following services need improvement because of insufficient provision: discussions with clients, assistance with client’s errands and mobility at home, cleaning and to some extent dressing (e.g. laundry and ironing). Discussions with clients are important in mediating psychosocial support and satisfying clients’ psychosocial needs, especially considering that loneliness is a severe problem for older people with restricted mobility who are living alone [41], as were most clients in this study. Cleaning is often considered unimportant in homecare, as also indicated by the extensive cuts in municipal cleaning services in the site. However, from the perspective of clients’ quality of life, cleaning is important, as shown by a recent study conducted in five countries. It found that ‘a clean and tidy home’ was an essential indicator of good-quality homecare, because it had a remarkable positive impact on clients’ quality of life [21].

Our results also show that in some cases clients, relatives and staff use different quality criteria and perceive sufficiency and quality of homecare differently. Overall, clients evaluated homecare quality as being better than did staff and relatives. The group differences in service sufficiency evaluations in this study are consistent with those reported in earlier studies [e.g. 40], showing that professionals assess sufficiency lower than do clients. These results suggest that homecare quality should be evaluated also from the perspectives of all important stakeholders, i.e. clients, relatives and staff, as in this study, not only using clinical outcome measures.

## Conclusions

Our results should be seen as tentative due to the methodological weaknesses discussed above. However, they allow some conclusions to be made with caution.

Despite organisational changes and cuts in staff and services, homecare quality was at the same high level in the last follow-up (2009) as at baseline (1994) in most of the investigated areas. According to clients, quality, surprisingly, slightly improved. Thus, structural integration with massive organisational mergers had not impaired homecare quality, as had been assumed by some professionals in the early stages of the merging process. Moreover, taking into account the financial and other constraints that had caused cuts in staff, these results suggest that structural integration may improve homecare quality. This is because it removes obstacles from interdisciplinary collaboration and creates favourable conditions for deeper integration. However, to be successful, structural integration with organisational mergers requires strong change management. This was not the case in the early phase of the merger process [e.g. 34, 35]. Integrative structural measures can bring beneficial outcomes to clients in terms of care quality, and to providers and financiers in terms of cost effectiveness. This is indicated by the reduced staff-client ratio, although the needs and demands for care rose due to the increase in the number of clients with complex needs requiring much care and assistance.

To get firmer empirical evidence to support these tentative conclusions, further research is needed. To avoid the methodological problems encountered in

this study, a randomised comparison design should be used. Such a design, e.g. cluster randomisations with several municipalities, would now be possible because many municipalities have recently merged their home health and social care units [15, p. 94; 32].

The Finnish solution to integrate with extensive mergers of health and social service units [15, 32] is not enough to ensure comprehensive homecare for older people. Taking a holistic view of older people, many other services are needed besides health and social care, such as housing, easy-access or barrier-free living environments, transport, libraries and other cultural services, as well as access to leisure activities and outings [21, p. 170]. Full integration in terms of comprehensive high-quality homecare requires that municipal homecare agencies also coordinate these services.

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