

Integrated Health Care for Older People in Denmark -Evaluation of The Skaevinge Project "Ten years on"

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Abstract

In 1984-87, the Skaevinge Municipality applied Integrated Home Care based on self-care theory and using the action research method. After 10 years (1997) the Municipal Committee, requested the Danish Institute of Health Care to undertake an impartial investigation of what effects the Skaevinge Project, had on the older population of the Municipality compared with the rest of the county and nationally.

The goals were: 1) Health care was to be made available to all citizens in institutions and in their own homes. 2) Prevention and support to maintain and strengthen the citizens' own health and quality of life, were to be prioritised. The method used meant that citizens had jointly decision-making and the staff were given autonomy and competence, built on trust from the policymakers. The results derive from the perspectives of the citizen (questionnaires), the staff groups (interviews) and the society at large (interviews and statistical analysis). More older people in 1997 (40.8%) assessed their own health as better in comparison with those of same age in 1985 (28.9%). The interviews seen from the staff perspective, the leadership and the politicians today, were a success due to: A long and thorough preparatory process; involvement in decision-making and the feeling of ownership and responsibility. The number of days citizens spend in hospital (67+ years) fell by >30% and the municipality did not over the past 10 years experience waiting days for returning to the Health Care Centre or to get immediate home care when needed.

Keywords

integrated health care, older people, action research, self-care

1. Introduction and background of the Skaevinge Project from 1984 to 1987

Virtually all health and long-term care services in the Danish national health care system are financed through general taxation. All residents have equal access, free-of-charge, to almost all of these services. According to a 1997 study conducted by the London School of Economics for the Economic Union (EU). The level of the Danish people's satisfaction with their health system is greater than in any other EU country including France or Germany where much larger health care expenditure per capita can be seen. Health care expenditure in Denmark (including long-term care) is currently app. 7% of the Gross Domestic Product (GDP), with public expenditure accounting for 6% and private expenditure for only 1%.

Denmark, with its 5 mill. inhabitants, is considered one of the most decentralised governments in Europe today, giv-

ing substantial autonomy to its 275 municipalities (Lund Pedersen 1998). This may well explain why a little municipality like Skaevinge, with a population of 5,000 inhabitants, was in a position to invest in a three year project which mobilised all its health resources to improve the health of its residents, some 16 years ago. The project drew considerable interest from around Denmark as well as from other countries and attracted visits to the municipality by several Ministers and parliamentarians interested in learning more about the new development (Wagner 1994, 1998). The project was considered revolutionary for its time.

In 1984, the Skaevinge Municipality reorganized its departmentalised care for older persons and 2 1/2 years later in 1987 was fully implementing one of the first integrated care initiatives in the country. This reorganization did not just result in a change of structure but also in the perception of people's needs, and introduced an active, prevention-ori-

ented care policy for older people by using action research as a method to change attitudes (Habermas 1984, 1987, Kalleberg 1992). Later in this article I will highlight 10 years of experience with the Skaevinge Project

(1) Aims

The original aims of the Skaevinge Project were as follows:

- i) Municipal health services were to be made available to all its citizens, regardless of the type of residence in which they live; and
- ii) Preventive measures were to be prioritized with a view to supporting the individual's own possibilities to maintain and strengthen his/her own health status and quality of life.

The action research methods resulted in shift of the following resources:

- * Health personnel from previously independently functioning units were grouped within a multidisciplinary structure; and
- * The nursing home, in its current form, shifted to a Health Care Centre with private residences for rent, and a 24-hour Integrated Health Care Service were put into operation and made accessible to the entire municipality.
- * The multidisciplinary personnel went through training programmes to develop their professional competencies, which within the new structure were used in a different way to that traditionally planned; and not at least
- * self-care was encouraged and health personnel educated to understand the values and effects of developing and supporting citizens in the self-care principle (Orem 1999).

(2) Hypotheses

The basic hypotheses behind the Skaevinge Project included the following: A) If one separates the issue of housing from that of care, and introduces a 24-hour care service, citizens would have equal access to health care services, regardless of whether they reside at home or in an institution. B) Health personnel would achieve a higher level of understanding about holistic care if they use the self-care principle as a basis for their work with citizens and the citizens would experience a better quality of life by having more influence on the care which they receive and on their own

situation in general. C) By taking a preventive approach to care and giving early and individualised care, better health status and fewer hospital admissions would result in the long-term. D) By structuring work through autonomous groups, with increased responsibility and level of competence assigned to each group member, better organized care without delaying hierarchical interference could be achieved and E) by integrating the traditionally segregated health care areas into a common structure, better use of collective resources (in economic and personnel terms) could be achieved.

(3) Results

The project results proved multifarious. The physical structure changed to become a Health Care Centre with independent residences located within the confines of the existing nursing home. Health personnel were now gathered under the same roof, shared a common leadership and a common budget. A 24-hour Home Care Service was launched for use by the entire municipality.

Attitudes towards care delivery changed during the time-frame of the project so that earlier interventions and preventive measures took priority over treatment. There was more joint decision-making and an increased level of responsibility taken by older persons, and a holistic care, which considers physical, psychological and social aspects, was practised. Also the first common training programme ever to be established in a Danish municipality was introduced and allowed, for example, the right for personnel to read professional literature during working hours. It became the norm to participate in regular training sessions during daily working hours and to become involved in educating new personnel/students in the general goals, self-care and care principles used within the municipality.

A multi-disciplinary, citizen-led consultative group was established as an integral part of the project and was later replaced by the Senior Citizens' Council. In hindsight, ten years following the launch of the project a new evaluation took place.

2. Evaluation of the Skaevinge Project - 10 years on in 1997

The evaluation described below was carried out as a shared initiative between the Skaevinge Municipality and the Danish Institute for the Health Care System (DSI) (Knudsen et al. 1999).

As former Project Leader for the Skaevinge Project, I was involved in the planning of the evaluation. I was furthermore responsible for the preparation of the Citizens' investigation. The remaining data was collected and analysed by the researchers: M. Knudsen, S. Friis and J. Christensen from DSI.

(1) Aims

The aims of the investigation were:

- * to evaluate the long-term results of the Skaevinge model; and
- * to share these results with a larger number of municipalities with a view to transferring and implementing the practice model in these municipalities in the future.

Some of the cardinal questions included were: What were the consequences of the Skaevinge project on the health status and satisfaction level of the citizens?; What were the pros and cons of the new organisational structure and working methods for the personnel? ; What were the economic implications for the Municipality, and how did the new system link with county-level functions?

(2) Methods

The evaluation, which was undertaken as a triangulation, focused on the Skaevinge project from different perspectives and used different methods. The individual investigations were first undertaken independently from each other and separate reports were prepared for each. The results were then collectively analysed. The purpose of this synthesis phase, amongst other factors, was to evaluate whether the different parts of the investigation would result in concurrent statements.

(3) The Triangulation Model

The investigation combined qualitative and quantitative methods. The qualitative part of the investigation used interviews (individuals and focus groups) while the quantitative part used data available from the Health Care Centre's annual reports (Skaevinge 1987-1997), accounts and health registers as well as a questionnaire survey undertaken amongst the older people in the Municipality. The information was collected and treated as separate investigations.

i) The Citizens' perspectives

A repetition of earlier questionnaire surveys undertaken in 1985 and in 1987 - one year before and one year following the intervention was made. The new survey was carried

out in Autumn, 1997 and was compared with the 1985 survey. A trial was limited to all 75+ year olds, born on odd dates. This survey focused on the older people's life conditions, health status and attitudes towards the services provided by the Health Division.

ii) The Personnel's perspective

Three focus group interviews were conducted amongst multidisciplinary personnel groups as well as one further focus group interview comprising both selective policy-makers and managers from the municipality's Health Division. One of the two doctors who, predominantly had patients in the Skaevinge Municipality, was furthermore interviewed. The interviews focused on these actors' attitudes toward and experiences with the Skaevinge project both with respect to its consequences on the target group (i.e. the older people) and to the organisational consequences for the municipality Health Division.

iii) Analysis of annual reports and other relevant source material

Annual reports of the Health Care Centre as well as other textual sources were reviewed with the aim of describing developments over the past ten year period, but will not be described in this article.

iv) The Societal perspective

Analysis of registers on the population's use of hospital and health services as well as health insurance benefits amongst the older people in Skaevinge Municipality were compared with levels of usage in other parts of the country. To this end, social registers (i.e. including the socio-demographic variable) were co-ordinated with service registers (i.e. hospital services and health insurance benefits). By establishing control factors, the co-ordinated registers were able to provide an evaluation of the "Skaevinge effect" on the population by sex, age and socio-economic status.

3. Results

The Citizens' investigation was undertaken by a questionnaire survey to a selection of older citizens in Skaevinge Municipality in November 1997. The trial captured a random group of approx. 50% of the 75 year olds as well as all of the residents in the Health Care Centre (the earlier nursing home) who were able to answer. (Tabel 1)

The aim of the Citizens' investigation was to collect information from the Municipality's older citizens regarding

their life condition, health status, use and experiences with health services and other municipal services. The questionnaire prepared for this investigation comprised questions regarding the older person's: Demographic and social status; health status; use of services; social contacts / activities (e.g. family, friends, pensioner club); need for services / knowledge about available services; and opinion of actual growth in the Municipality.

(1) Demographic and social status

The most dominant impression from the demographic and social status data was the fact that there were no significant displacements during the period 1985-97. The average age and age distribution were almost identical in the two population groups. There was a slight change in the living arrangements of the older people. Fewer of them lived in the Health Care Centres private residents for older people while more lived at own farms, houses and fewer in apartments.

(2) Health status

The older people's perception of their own health compared with that of their peers showed to be more positive in 1997 than in 1985 (see tabel 2).

The older people's perception of own health is not an objective measure of the presence or absence of illness or health-related shortcomings. It is rather a subjective assessment of their own health which, as experience shows, has a strong correlation with the objective health findings.

The main conclusion reached was that the older people's physical health had been slightly affected during the period 1985-97. Circulatory system illnesses were significantly reduced in 1997 as compared with 1985. The general trend showed that perhaps a slight reduction in the frequency of health-related problems occurred, however, this is non significant. In nine health-related problem areas, a reduction occurred while in five other areas slight increase was noted.

Table1 Subjects in the interview investigations in 1985 and 1997

	1985		1997	
	Number	%	Number	%
75-79 years	45	45.5	49	40.8
80-84 years	29	29.2	43	35.8
85-89 years	18	18.2	16	13.3
90+ years	7	7.1	12	10.1
Total	99	100.0	120	100.0
Average age	81.55		81.47	

One possible reason why the self- assessments of health results were higher in 1997 (41%) than in 1985 (29 %) could have been that the older people, through improved treatment, activation or otherwise, experienced a higher quality of life rather than improved health status. Collectively, there was a trend which showed that the older people generally felt better.

(3) Use of services

There was no significant change amongst the older people in the use of health services in general. However, there was a significant reduction in the number of home visits by general practitioners and in the number of related telephone consultations. Moreover, there were no large changes in the proportion of older people who received home nursing or home-help. The older people's social contacts/activities (with family, friends, pension clubs) showed that those who did not have children held a pattern of social contact with another family and friends which was comparable with that of older people who had children. There was no trend shown of the older people experiencing more isolation than before.

(4) Activities of Daily Living

The ability to look after oneself on a daily basis, without assistance from another person, enhances independence and strengthens one's assessment of own health. Contrarily, if one or more functions cannot be done without the assistance of another person, that dependence means reduced ability to make own decisions and an increased risk of diminishing quality of life. Most of the activities of daily living were not significantly different in 1997 from 1985. However a slight positive trend, as seen in tabel 3, could be seen in the older people looking after them selves in 1997, and especially to their improved ability to prepare food and wash clothes. These positive developments could also have had a positive influence on the self-assessment of health results.

(5) The societal analysis

Table2 The older citizens ' perception of their own health 1985 and 1997

	1985		1997	
	Number	%	Number	%
Perception of their own health				
Better	28	28.9	49	40.8
The same	50	51.5	52	43.3
Worse	19	19.6	19	15.8
A total of Elderly	97		120	

Table3 Activities of Daily Living(ADL), 1985 and 1997

They are able to:	Cook (Men)		Cook (Women)	
	1985	1997	1985	1997
Yes - no trouble	37.0%	49.0%	50.0%	69.0%
Yes - with some trouble	19.9%	8.2%	6.3%	5.6%
Yes - with a lot of troubles	2.2%	2.0%	4.2%	4.2%
No - not at all	50.5%	40.8%	39.6%	21.1%
A total of Elderly	46	49	48	71
They are able to:	Do their laundry (Men)		Do their laundry (Women)	
	1985	1997	1985	1997
Yes - at home	40.0%	61.2%	49.0%	64.8%
Yes - at a laundry	13.3%	2.0%	9.8%	5.6%
Yes - other possibilities	20.0%	6.1%	5.9%	8.5%
No	26.7%	30.6%	35.3%	21.1%
A total of Elderly	45	49	51	71

In this section, the results of the registers investigation are described as well as the survey of the citizens' use of hospital and health insurance benefits during the years following the implementation of the Skaevinge Project. One of the hypotheses of the project was that the preventive model would not only positively impact the health and quality of life of the older people but that some economic savings could be had in the form of released health care system resources. The investigation related to the registers was done in collaboration with the Centre for Population Insurance Registers.

i) Bed occupancy rate

The average bed occupancy rate per citizen was used as a measurement of hospital use and was corrected for differences between population sizes. Tabel 4 presents data of Skaevinge's 60+ year olds with the extended reference area captures 10,000 randomly selected citizens.

Table4 Beddays by area in 1990 and 1994

Area	Skaevinge		The county		Rest of Denmark	
	1990	1994	1990	1994	1990	1994
Numbers of 60+ year olds	803	845	10.000	10.000	10.000	10.000
Beddays (sum)	1,764	1,751	36,325	36,055	37,138	37,337
Average per citizen	2.20	2.07	3.63	3.61	3.71	3.73

The table shows that consumption amongst the 60+ year olds in Skaevinge Municipality is considerably under the level of use in comparison with the County and with the rest of the country. Moreover, the table shows a decline in bed occupancy days per citizen from 2.20 to 2.07 between times (6% decrease).

ii) Health Insurance Use

In parallel with the analysis of the bed occupancy rate per admitted citizen, a regression analysis of health insurance expenditures per citizen was undertaken. The largest effect seen by the analysis was in relation to the urbanisation variable, which basically demonstrated that population groups in larger urban areas had more frequent visits to the doctor than did rural citizens.

iii) The Municipality's health economics

An economic overview prepared by the Municipality (Tabel 5) showed that expenditures were contained in the Health Division at an unaltered level, when taking into account normal salary and cost of living increases in society in general.

In 1986, the Municipality had collective running costs totalling 25.526 million Danish Kroner (DKK), calculated at 1986 prices. This expenditure in 1996 amounted to 20.009 million DKK. When taking the Health Care Centre's income into consideration, it can be stated that the Health Care Centre was less of a burden on the tax payers in 1996 than in 1986.

4. Discussion and conclusions

(1) The Citizen's perspectives

The investigation of the citizens' perspectives showed

Table5 Economic expenses of the health department in skaevinge municipality

Year	1986 (DKK)	1991 (DKK)	1996 (DKK)
Payment	22,065	23,415	23,307
Properties	1,517	1,176	1,178
Payment to other municipalities	142	0	0
Other expenses	4,685	3,355	3,460
User's payment	-2,311	-3,143	-4,091
Payment from other municipalities	-573	-390	-3,845
Working expenses ex income	28,410	27,947	27,946
Net working expenses	25,526	24,415	20,009

that a large range of conditions had not changed. The citizens' investigation highlighted the 75+ year olds' life condition, health and equity, knowledge about and use of the health services as well as their attitudes towards the Municipality's assistance. The response received in 1997 was comparable with an identical investigation carried out in the Skaevinge Municipality in 1985. In 1997 compared with 1985, there was a larger proportion of older people who informed that within the past year, they had not been in contact with the health care system (e.g. general practitioners, specialists, hospitals).

The comparability of the older people, measured by their ability to undertake activities of daily living is generally unchanged, although there is a larger proportion of older people in 1997 who felt that they were able to make food themselves and wash their own clothes without problem. More older people in 1997 assessed their own health as better (40.8%) in comparison with their peers than in 1985 (28.9%). The lack of comparable investigations prevents an eventual generalisation of this claimed development.

From the citizens' own estimation, their health had improved, however, the investigation was not able to prove this fact directly as a measurable health impact. The citizens did benefit from a range of results: 1) Differentiated care and nursing. 2) Smooth and quickly organised measures. 3) Reduced use of hospital services and 4) minimal wait-listing.

Moreover, it should be noted that the perception of the Municipality's Health Division's clients, and especially those who resided in the Health Care Centre (the earlier nursing home), was that they had increased quality of life.

(2) The Personnel perspectives

The newly established system with its autonomous multidisciplinary working groups and absence of formal leadership, continues to be used. The interviews leave little doubt that the Skaevinge project is seen as a success today by the personnel, management and policymakers.

The reason for the success can be attributed to the action research design. There were expectations of a long and in-depth process of attitude changing: 1) To motivate personnel through active involvement in joint decision-making throughout the developmental processes; and 2) To ensure that everyone felt ownership and accountability (Holter and Schwatz-Barcott 1992, Hart and Bond 1995).

One benefit of the re-organisation which relieved the personnel was that the new structure allowed more flexibility for multidisciplinary collaboration and strengthened holistic care. A citizen in need of various types of assistance was provided with a better and faster process of care because those services were functionally integrated with the Health Care Centre. The personnel experienced this both in relation to internal and external collaborators (e.g. general practitioners, hospitals).

Another benefit with the re-organisation was that the new structure allowed strengthening of the multidisciplinary approach amongst the personnel, in part through increased joint decision-making competence in relation to treatment. The absence of formal management was seen as a drawback with the re-organisation. However, the majority of the personnel felt that the basic ideas regarding prevention through the "self-care" approach and activation, continue to thrive, however, not totally without daily problems. Amongst the practical barriers to furthering these ideas contained resources, a lack of co-ordination in relation to the activation function.

The autonomous groups were able to resolve some of the problems which, prior to the shift, were resolved by formal management. In this regard, the organisation of the Skaevinge Project in itself is an interesting experiment with further prospects beyond that of prevention which largely considers job satisfaction through work expansion and joint responsibility. The example of the Skaevinge Municipality shows that it is possible to replace hierarchical organization with a democratic organisation which springs from the citizens' own needs.

(3) The Societal perspective

The societal perspective was investigated through an analysis of the Health Care Centre's annual reports as well as through an investigation of the registers. The total population, and a proportion of the older people in particular, had increased in 1996 from 1986; the Health Division's gross running costs (excluding aids/devices) slightly decreased when measured at fixed prices; increased earnings received from other municipalities from renting income on available residences at the Health Care Centre positively affected the net expenditure, when measured at fixed prices. The personnel resources in 1996 remained at the same level as in 1986, when corrected for a reduction in working hours dur-

ing the period. However, it should be noted that the composition of the personnel did change. The need for residents in the Health Care Centre (earlier nursing home) was reduced at the end of the 1980s and some of the released resources were used to expand acute, interim measures and as mentioned to accommodate out-of-town applicants in residences at the Health Care Centre.

Despite an increased number of older people, the Municipality experienced economic improvement in its running costs compared with at the start of the project. Capacity development, one of the project's original intentions, was used to ensure flexible measures in relation to supporting illness, amongst other factors.

(4) The Investigation of the Registers

The investigation of the registers took a closer look at the frequency of contact with the hospital as well as at the bed occupancy rate and health insurance costs per citizen. Tables provided by the Skaevinge Municipality were compared with those of the rest of the County and the rest of Denmark. From 1984, a marked reduction could be seen in the bed occupancy rate amongst the 75+ year olds in Skaevinge Municipality - a development which was unseen in the County and in the rest of the country. The difference between Skaevinge Municipality and the reference areas is a combined effect of, partially the likelihood of hospital contact and the bed occupancy rate amongst those who came in contact with the hospital sector. By using information related to social services/benefits, it was investigated whether usage during 1990 and 1994 was attributable to the population's basic size and composition. However, we had to conclude that no difference in the population could explain the usage.

Analyses of hospital use in the 65-74 year old group did not show as marked a difference between the Skaevinge Municipality and the reference areas whereas amongst the 75+ year olds alone, the usage patterns were markedly divergent. Data from 1984 shows that citizens aged 75+ living in Skaevinge Municipality before the intervention used the hospitals as often as other citizens living in the county. After the intervention the use of hospitals was drastically reduced. In the late 1980's the Health Department's effort has been focused on preventive initiatives and nursing offers as an alternative to hospitalization. This fact presents a logical explanation on the statistically unexplainable low

use of hospital services.

By using the released resources, the Municipality was able to establish some interim measures, i.e. guest placements which support the County hospital's function. That decision was taken in anticipation of what would be best for the citizens, regardless of possible related Municipality expenditure being incurred. The Municipality is in an ongoing process of new developments - latest opening of a day care facility for training demented old people (Swane 1999).

In light of the fact that an integrated health care model was implemented which was recognised to be time-demanding for the personnel in terms of their daily activities with citizens, it is noteworthy that the Health Division was able to reduce the running costs at a time when the number of older people in the municipality was clearly growing (30 % in the 75+ year old age group). This fact can be most likely attributed to organisational effectiveness.

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