OPPORTUNIES AND CHALLENGES IN THE MANAGEMENT OF AN OLD PEOPLE´S VIRTUAL SERVICE IN THE ARCHIPELAGO AREA

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Abstract: *The ageing of the population is one of the greatest challenges facing Finnish society in the near future. This article looks at the possibilities and challenges associated with the introduction of interactive audio-visual virtual technologies in preventive care for the elderly. The subject is examined from the perspective of service provision. Its core concepts are e-government and, on the other hand, home care as part of the Finnish welfare state model. The research data consisted of 15 semi-structured group discussions (N=67). The results indicate that at best, an interactive virtual service for the elderly may work well as a tool for preventive and participatory work with the elderly and improve the equal availability of services. However, there are challenges arising from the actual technology, cost-effectiveness, public administration operating culture and deficiencies in the functional ability of elderly customers.*

Keywords: *home care, preventive care, e-government, virtual service*

JEL Classification: *I19, I38, O32*

1. INTRODUCTION

Over the next few decades, the population in Europe will age rapidly. The decline of the working-age population and changes in the dependency ratio will make it increasingly difficult to balance state budgets. Organising services for the elderly will also be more challenging. It has thus been suggested that the public sector alone will be unable to respond to this challenge, and a reallocation of caring responsibilities will be needed.

This challenge also applies to home care of the elderly. According to Nadine Genet et al. (2012a, p. 108), while in most European countries the current capacity will be inadequate for responding to the demand for home care, a key to the solution could be found in a combination of innovations and improved efficiency. The government's communication on Finland´s national innovation strategy to the Parliament (2008) highlighted the fact that as the population ages and resources diminish, an ability for maximal exploitation of investments made in innovations will be needed. The basic premise of the report is a wide-based innovation policy where technological innovations are combined with structural reform and determined change management.

One strand of innovation activities is developing virtual services. This article looks at the possibilities and challenges associated with the introduction of audio-visual and interactive virtual services in preventive care for the elderly. We will discuss the subject from the perspective of service provision. Our theoretical premises are related to the concept of *e-government* and, on the other hand, examining *home care* as part of the Finnish *welfare state model.*

2. THE FINNISH HOME CARE MODEL AND TRENDS OF THE FINNISH WELFARE STATE

The conceptual definition of home care is not clear-cut, and home care has different meanings in different countries (Boerma & Genet 2012, p. 9-10). Similarly, the ways in which home care is organised in different European countries varies (Tarricone & Tsouros 2008). The basic premises of home care in Finland are linked with the Nordic welfare state model that underpins the Finnish system, which stresses universal welfare services for everyone and the key role of the state in organising and providing services. From the perspective of services for the elderly, this has meant that the families' responsibility for their elderly relatives is not emphasised in Finland as much as, for example, in many Southern European countries. In practice, this has resulted in the development of in-home services for the elderly in Finland. Finnish home care combines the traditions of social welfare and health care: the origins of home care go back to an integration of home services and medical home care. In addition to services provided by the municipality, home care may also refer to social welfare and health care services delivered at home for the customers that the municipality outsources either to other municipalities, the state or private service providers.

After the integration of home services and medical home care, old and new work practices have coexisted in home care. According to Merja Tepponen (2009, p. 94-95), the challenge in the integration of home care lies in persuading the employees and units to work for shared goals regardless of their different development histories, cultures and professional ethics as well as dissimilar administrative control mechanisms and occupational structures. This is also a question of management and leadership. General social policy priorities have naturally also had an impact on the way home care has developed. Three key trends can be seen in the recent development of Finnish social welfare services (Toikko 2012). Firstly, the role of the customer has changed. The customers are expected to be active subjects whose choices influence the services and the way they are provided. In services for the elderly, this has also meant stressing the citizens' personal responsibility and a shifting of responsibility for every-day care to family carers or, in practice, usually the spouse or children (Anttonen et at. 2012).

Secondly, the share of private social welfare services has continuously increased in the 2000s, and it has also become necessary to coordinate public and private services in home care. Municipal home care has become fragmented, as parts of it (including cleaning, meals and transport services) can now be purchased from the private market. This has meant that a home care customer may encounter a number of different service providers in his or her own home. (Eräsaari 2011, p. 185.) In the meantime, the possibilities of families having services provided to them in their homes have been considerably limited as a result of the senior citizens' increasing needs for services.

Thirdly, Finnish social policy has become more local: responsibility has been shifted from the state to municipalities. As a result of this decentralisation, the ways in which social welfare services are organised vary in different municipalities. The organisation and practices of home care have also become dissimilar in different municipalities, depending on their size, population structure and other features. Services for the elderly have also tended to become centralised in urban areas. Care work vacuums have emerged in the more remote areas of the municipality, which are difficult to fill. (Tedre, Ilmarinen & Nuutinen 2010, p. 33-34; cf. Genet et al. 2012a.) Archipelagos are an example of areas that are a challenge to service provision.

Along with social policy changes, the relationship between the home care employees and the customer has expanded into a network where various actors have different roles. The advancement of welfare technologies has made the operational environment more complex than ever: interactive virtual services, the associated hardware and support service subscriptions and content production necessitate cooperation with new actors. This will also mean management challenges in public administration. A key issue is emerging: how public administration can manage processes where the citizens' rights are increasingly highlighted and the municipal actors are working alongside various companies, NGOs and development organisations. We will examine this question from the viewpoint of the e-government concept.

3. WHAT IS E-GOVERNMENT?

E-government is a wide concept associated with activities and technological applications of many different types (e.g. Kaylor et al. 2001). The quality of an e-service has been structured in different ways (Zaidi & Qteishat 2012). Typically, an e-service aims for efficiency, speed and transparency as well as citizens' equal access to services. According to a definition formulated by Zhiyuan Fang (2002),"E-government is defined as a way for governments to use the most innovative information and communication technologies, particularly web-based Internet applications, to provide citizens and businesses with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in democratic institutions and processes." In Fang's analysis, e-government is combined with a partner system of a new type, at the core of which is not only the relationship between the citizen and the public service (G2C & C2G) but also the relationship between the government with various commercial (G2B & B2G) and non-profit (G2N & N2G) actors and the central authority (G2G) (see Figure 1).

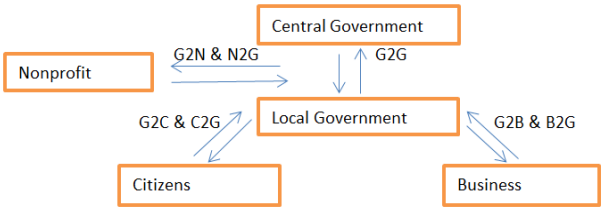

Figure 1 A broad schematic system for e-government models (Fang 2002, p. 10)

The concepts *e-health* and *e-service* are well established in the Finnish discourse. However, the concept of e-government is more apt to describe the fact that the introduction of virtual welfare services changes the service's entire field of operation. This is not only about using technology in working with the customers or in customer service, as the concept brings together many different perspectives: service perspective, technical viewpoint, view on people, security aspects, legal issues, organizational aspects, social and political aspects as well as view on data and information (Wimmer 2002, p. 154).

This article does not look at the extensive range of e-government in home care in its entirety, and such areas as technology for medical care in the home and versatile security technologies for the elderly are excluded from our discussion. Our examination will be limited to the use of an interactive online TV channel in home care. Tele-care for the elderly at home has so far mainly been developed in various pilot projects (Genet et al. 2012b, 90). The target group of the Virtu project (*Virtual* Elderly Care Services on the Baltic Islands), for example, was the elderly population in Finnish and Estonian archipelago areas. This project developed working methods of preventive home care, in particular interactive TV broadcasts and bilateral communication, relying on virtual technology.

4. STUDY DESING

What interested us in this study was the criteria for an interactive TV channel working as a solution to increased need for home care. The question was: what challenges and possibilities are associated with using an interactive TV channel in the home care for the elderly from the perspective of public service provision?

The data was collected as part of the three-year Virtu project (2010-2013). In the course of this project, interactive content was provided for the elderly (content related to their personal health, local and historical broadcasts, musical broadcasts etc.) using dedicated Virtu hardware about three times a week. The hardware also enabled private communication between a municipal employee and the customer, and interaction between users. Some one hundred devices were used, which in the beginning of the project were distributed to users in coastal and archipelago areas of Finland and Estonia (Åland Islands, Naantali, Saarenmaa, Sipoo, Turku archipelago). As the users spoke different native languages (Finnish, Swedish, Estonian), content was produced in all of these languages. Local universities of applied sciences played a key role in content production.

Many different types of research and evaluation data were collected during the project. In this article, we will

focus on group discussion material, which was collected in two phases: in summer 2012 (8 groups, a total of 39 participants) and in early 2013 (7 groups, a total of 28 participants). One half of the groups consisted of municipal employees taking part in the project, and one half of employees of a university of applied sciences. The interviews focused on four themes: technology, users, cooperation and "mission and vision". The duration of the group discussions was some 1½ hours.

Analysing qualitative data is a two-step process: initially, the material is arranged or categorised, and then interpreted by linking it to theoretical concepts and research questions (for ex. Mason 1996). In this study the study material was firstly categorised thematically, after which a systemic analysis described by Fang (2002) was used, paying attention on the significance and challenges of virtual technology from the perspectives of various partner relationships. The material was also interpreted in terms of key trends of the Finnish social welfare services.

All those who were interviewed represented actors in a single development project, either developers or home care employees. The material is thus selected, and the results cannot be generalised. However, all of the interviewees have taken part in developing virtual services for the elderly and are thus familiar with the relevant problems. The material is also diversified by the fact that the backgrounds of the actors are different (areas, language groups, organisations).

5. ACTORS´VIEWS AND EXPERIENCES OF THE POSSIBILITIES AND CHALLENGES OF VIRTUAL SERVICES

All in all, the interviewees felt that the significance of the interactive virtual channel was in particular associated with supporting the inclusion of the elderly and preventive care: ”*The social isolation of the users was relieved*” and ”*the aspect that was realised the best was prevention in its various forms*”. The interviewees brought up many types of development possibilities, which were for example associated with expanding the user groups and working methods, accessibility of the users and increasing the utilisation ratio. As a further direction of development was also cited games that promote rehabilitation and functional ability.

At best, interactive virtual services enable equal access to services for citizens (G2C) regardless of where they live. However, our material indicates that there are considerable technical problems associated with the internet services, especially in sparsely populated rural areas and in the archipelago, or areas where the availability of services is also poor in other respects: ”*There is 99% coverage in Finland, but the archipelago areas, precisely where the project was implemented, are in a blind spot with 1% coverage. Wireless connections should be improved.*” Secondly, in the actors' experience, elderly users of technology are a very heterogeneous group regarding their capacity and functional ability, and thus there were problems in *"finding a suitable target group"*. According to the interviewees, various types of dementia practically exclude users from these activities. It thus appears that in order to profit from a virtual service, the customers need to have a reasonably good functional ability and a social nature, and they need to live at a long distance from services.

Another precondition for the full exploitation of an online service would be a review of home care operating methods and also a reallocation of responsibilities. This is a must before home visits can be replaced by a virtual service. In the experience of the interviewees, the reduction in the number of home visits achieved by using the virtual channel was insignificant: ”*broadcasts on x were produced for the residents in this area, mainly exercise programmes led by a physiotherapist and checkup visits (=replacement visits) for two elderly persons*”.

Flexible virtual services that meet customer needs also require close cooperation between the municipality and the company in charge of the technology (G2B & B2G). Based on the interviewees' experiences, this did not always go smoothly. They mentioned shortcomings in the manuals, induction training and fast-response help desk services, especially those provided in Swedish. In addition, *"in cases of hardware faults or installations of new hardware, there were long delays (weeks)"*.

The interviews also revealed a slightly inconsistent picture of the actual technology, its performance and its usability. Many actors stressed that *"the technology works well, it is usable and suitable for elderly people."* On the other hand, the material showed that downtime, disruptions and problems with sound and image had occurred in the hardware. Ultimately, the interviewees felt that the technology provider did not show enough interest in developing the hardware, and it was presumed this was due to the small scale of the activities. It thus seems essential from the perspective of companies to find a sufficiently large potential body of users. Will it be possible to expand the service from the around one hundred devices of the trial phase to a service that covers senior citizens or at least the customers of home care more extensively?

From the point of view of home care employees, the development of the interactive virtual channel also involved communication breakdown, unclear roles and plenty of meetings, which took up time from other work. There were differences in attitudes towards developing virtual services based on the person's position in the work organisation. As a generalisation, we can say that supervisors had a more positive attitude towards virtual services than *"practical actors"*. The material also shows that responsibility for the activities was concentrated on certain individuals.

In practice, a precondition for continuing interactive broadcast activities is now and in a near future the availability of project funding or the involvement of organisations or NGOs (N2G). Municipal social welfare services do not have staff for virtual services, and hiring new staff is not possible because of the poor financial situation of municipalities. During the development projects, virtual content was produced by the universities and students who took part in the development efforts. All in all, the cooperation between the municipality and university was found effective, and *"the staff feels that they have learnt a lot during the project"*. However, there were disruptions in the information flow: *"The municipality would also have liked some information about the customers, to know who took part in the programmes (active users)".*

A precondition for providing financially competitive interactive services that meet customer needs is that individual service and, on the other hand, production that targets a wider customer base can be combined in the content production. From the perspective of content production, individual archipelago municipalities are too small a unit. Cost savings can only be achieved through municipal cooperation (G2G). Based on the interviewees' experiences, however, municipal cooperation has its problems, at least with its current structures. In addition, closer cooperation would mean a turning point in the social welfare service trends, a shift from decentralisation towards centralisation.

6. DISCUSSION

More meagre financial resources have resulted in a medicalisation of services that support coping with every-day life (Palola & Parpo 2011, p. 69-74): the elderly are now expected to have a medical diagnosis in order to receive home care. This has also meant less focus on early intervention and preventive work, or in practice, home care customers that are in an increasingly poor condition. On the other hand, the usefulness of a service based on an interactive TV channel is mainly limited to preventive home service and customers who are in good condition. Even at their best, virtual services can thus only be a partial solution to the increased need for services of the elderly and the geographical inequalities of home care.

In terms of extensive introduction of virtual welfare technology, the key question is if cost savings can be achieved through the technology. However, drawing up a cost-benefit analysis is a challenging task. In addition to direct and indirect impacts, the introduction of technology also has various longer term financial and human knock-on effects (Kachwamba & Makombe 2011). In a comprehensive cost estimate these, too, should be taken into account. Further, another key question in terms of the cost-effectiveness of these activities is how the costs should be divided between the municipality and the customers.

For technology companies, virtual services for the elderly are a potential market area. However, it is not likely that a significant volume of new business will be generated in the sector before the service concept and issues related to its funding are ironed out. Preconditions for extensive enterprising activities associated with interactive virtual services for the elderly are likely to include a switch from dedicated devices used for a single purpose to multi-purpose terminal devices that also work as ordinary computers.

A key issue is associated with public sector operating culture. In the 2000s, there has been a shift in Finnish society towards a welfare mix model in social and health services, where public and private service provision is combined. Interactive virtual services would make this field of activity even more complex: they would require cooperation between the municipality and IT companies, and at least for the moment, the municipalities do not have adequate expertise for this. In addition, cost-effective content production would require, at least at the moment, cooperation with non-profit actors. The fast technological advancement and continuous transformations in the concept of an interactive service require a development oriented approach from the employees and the organisation. A precondition for this would be a shift towards a more open operating culture and innovation management. What adds to these challenges is the fact that the management culture in this field is undergoing a revolution due to the trend towards a fusion between the social welfare and health care sectors.

Exploiting virtual technology in services for the elderly can be seen as part of a new social policy that stresses the inclusion of citizens. It offers a channel for inclusion and communality for active senior citizens. However, certain risks are inherent in this trend that emphasises active participation of citizens According to Anneli Anttonen, Liisa Häikiö and Heli Valokivi (2012, p. 40), ”it is a significant departure from the universal social policy that has been predominant in Finland for decades that the policy on care for the elderly of the 2000s does not have room for citizens who cannot cope and are in need of assistance.”

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