eHOME CARE – FOR SAFETY AND COMMUNICATION IN EVERYDAY LIFE
THE PERSPECTIVES OF OLDER USERS, RELATIVES
AND CARE MANAGERS

Charlotta Åkerlind
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School of Health, Care and Social Welfare
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Charlotta Åkerlind

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Fakultetsopponent: Professor Maria Engström, Högskolan Gävle
Abstract
The overall aim of this thesis was to examine how eHomecare affects the daily lives of older users and their relatives, with a focus on safety and communication. A further aim was to explore care managers' perspectives, expectations and experiences of eHomecare and its implementation. Methods: Participants in study one and two were older people with granted eHomecare and eight relatives and, care managers in study three and four. Data were collected through four qualitative studies, using individual interviews in the first and second studies before the introduction and after six months' use of eHomecare, by individual vignette-based interviews in the third study, and with focus-group interviews in the fourth study. Data were analysed using different qualitative content analyses. Results: The participants described safety as a part of everyday life. eHomecare was found to facilitate a 'new safety' for older people and a 're-established safety' for relatives, yet its use raised concerns about ethical considerations and reduced human contact. Participants could attain feelings of togetherness and affection through communication, although this was also considered a vulnerable activity due to physical changes and loss of other people. Used correctly, eHomecare increased communication and thus closeness and participation for the participants. For older participants unable to use the technology as hoped, eHomecare led to disappointment. Care managers expressed that eHomecare can increase older peoples' everyday life-quality if they receive the right tools at the right time. Care managers, however, have difficulties with eHomecare's management process. While they struggle with their own attitudes, lack of time and high workloads, their decisions are also influenced by surrounding organisations and the older people's relatives. Care managers' own organisations, work situations, relevant stakeholders and society in general can hinder them in managing eHomecare as a new homecare service. Widespread information about eHomecare and opportunities for relevant stakeholders to participate in its implementation are good preconditions for fulfilling the mission of care managers. Conclusions: The findings describe eHomecare from the perspectives of its older users, their relatives and the care managers responsible for managing the service. Used correctly, eHomecare increases possibilities for communication and provides safety. However, care managers have a complex mission when managing the service and they express a need for support and knowledge. The findings can be used clinically to develop older peoples' utilization of eHomecare and to develop support for the fulfilment of care managers' mission.

Keywords: care managers, content analysis, communication, eHomecare, experiences, information and communication technology, older people, participation, perceptions, relatives, safety, welfare technology
To my parents
Abstract

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**Keywords:** care managers, communication, content analysis, eHomecare, experiences, information and communication technology, older people, participation, perceptions, relatives, safety, welfare technology
List of publications

This thesis is based on the following studies, which will be referred to using the Roman numerals I–IV:


IV. Åkerlind, C., Martin, L. & Gustafsson, C. (2017). Care managers’ expected and experienced hindrances and preconditions when eHomecare is implemented: A qualitative focus group study. (submitted)

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<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>CM</td>
<td>Care manager (Biståndshandläggare)</td>
</tr>
<tr>
<td>HSL</td>
<td>Health and Medical Service Act (Hälso- och sjukvårdslag)</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communication technology (Informationss- och kommunikationsteknik)</td>
</tr>
<tr>
<td>LOV</td>
<td>Freedom of Choice Act (Lag om vårdvalssystem)</td>
</tr>
<tr>
<td>NBHW</td>
<td>National Board of Health and Welfare (Socialstyrelsen)</td>
</tr>
<tr>
<td>QoL</td>
<td>Quality of life</td>
</tr>
<tr>
<td>SoL</td>
<td>Social Services Act (Socialtjänstlag)</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations (Förenta Nationerna)</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization (Världshälsoorganisationen)</td>
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Preface

During my time as a nursing student, my interest in the care of older people was already being aroused, and before long I made the choice to educate myself further as a nurse specializing in elderly care. Thereafter I had the privilege to work at a nursing home for older people with dementia. Here the contact with relatives became a part of my work and very soon I learned about the importance of family and friends in the care of older people. Another experience from this period, and from previous work in a hospital ward, was collaboration with the municipal elderly-care organization, especially with care managers and assistant nurses. This collaboration was perceived as significant in the process of care planning, in which we shared our experiences to ensure good elderly care. I have also had the opportunity to supervise nursing students, which in turn led to a job as a teacher at Mälardalen University in the spring of 2011. I soon understood that I needed to learn more about care sciences and the research process. In autumn 2012 I had the opportunity to become a PhD student in a project focusing on older people and technology. To me this was a golden opportunity because the target group was within my area of interest. At the same time, it was a great challenge because I had never before reflected on technology as a part of homecare, and had little knowledge of products such as safety alarms and motion sensors. Therefore, it was with feelings of curiosity and excitement that I started the journey by exploring a new field of knowledge.
1 Introduction

This thesis belongs to the field of health and welfare and focuses on an emerging part of the Swedish welfare system: welfare technology as a part of homecare for older people. There are high expectations of welfare technology, which is understood as one important solution for ensuring future elderly care. However, the introduction of welfare technology in elderly care will also imply organizational changes and that traditional care will be performed in new ways. Older people will receive care that there is only little knowledge about. In addition, Care managers (CMs) will face a new mission, becoming responsible for giving information about, offering and granting welfare technology to older people. Central goals for the Swedish welfare system are to ensure older people’s safety, their access to good health and social care and opportunities for participation. Relatives’ part in the older person’s care are also considered. In order to know if these goals can be reached with the support of welfare technology, older peoples’ and their relatives’ experiences of how this care affect their everyday lives are required. It is also of interest to consider the role of CMs since this is significant in older people’s access to this new form of social service. The thesis is based on four studies that took place in a municipality in central of Sweden when welfare technology was introduced as electronic homecare (eHomecare). The focus of the thesis is on the older users, their relatives and the CMs.
2 Background

2.1 The health and welfare perspective

The population of older people in Sweden is growing. This is a global phenomenon because of improved living conditions and advancements in public health and medical treatment and technologies. Between 2015 and 2050 the global population of people aged 60 years or over is estimated to increase from 906 million to 2.1 billion. During this period, the number of people aged 80 years or over will increase from 125 million to 434 million (United Nations [UN], 2015). In Sweden, the number of people aged 65 years or over will increase from 20% to approximately 25% of the population between 2014 and 2050 (Statistics Sweden [SCB], 2015). People living longer is an important demographic achievement but it will also be a great challenge for health and welfare systems. The growing number of older people will have implications for different sectors of society. For example, there will be changes in the labour and financial markets because of fewer people of working age (UN, 2015; World Health Organization [WHO], 2011). In Sweden, the prognosis for 2030 is that there will be a shortage of around 65,000 full-time staff in elderly care (Government Offices of Sweden, 2010). The demands for health and social care will increase (UN, 2015; WHO, 2011), as a great number of the growing population of older people will be dependent on help and support in daily life. How these challenges are handled will have consequences for public expenditure, but above all, it will affect the wellbeing of the aging population (European Union [EU], 2014; Government Offices of Sweden, 2013).

The goal of welfare is to help citizens to reach their basic needs by countering the effects of unemployment, old age, disease and disability (Giddens, 2006). To avoid a gap between needs and provision governments are urged to have a proactive approach in designing innovative policies and different kinds of public services, targeting the needs of aging populations (UN, 2015; EU, 2014; National Board of Health and Welfare [NBHW], 2016a). Information and communication technology (ICT) is highlighted as one response to many of Europe’s societal challenges and as a contribution for a sustainable healthcare system (EU, 2013; EU, 2014). ICT is already being used successfully worldwide to ensure cost effectiveness and to improve access to and quality of healthcare services (WHO, 2015). A plurality of different pilot pro-
jects, some of them in Sweden, indicates that the technology can promote independent living, provide better healthcare and deliver effective public services for older people’ (EU, 2013; Swedish National Council on Medical Ethics (2014). The Swedish government emphasizes and promotes the use of welfare technology in elderly care (Ministry of Health and Social Affairs, 2014 & 2015). During the period 2010–2014, the Swedish government allocated stimulation funds to develop municipal eHealth and welfare technology services (National Board of Health and Welfare, 2017a). Sweden has a vision of being a world leader in digitization and the use of eHealth to achieve good and equal health and well-being (Ministry of Health and Social Affairs & Sweden’s municipalities and county councils, 2016).

2.1.1 Health

Health is understood from different philosophical viewpoints and is described differently as being, for example, a state, a result, a process, a goal, quality of life, wellbeing or happiness. From the holistic perspective, often described as the humanistic perspective (Willman, 2009), humans are understood as a whole (Nordenfeldt, 1995). The World Health Organization (WHO) describes health ‘as a dynamic state of complete physical, mental, spiritual and social wellbeing and not merely the absence of disease or infirmity’ (WHO, 1998). Health is a human right, and health promotion is a significant element of health development (WHO, 2009). The WHO’s definition of health is used by the NBHW, for example in the IBIC model (individens behov i centrum). The model is a support for social workers in identifying and describing individual needs, goals and outcomes in the daily lives of older people and their relatives (NBHW, 2016c).

2.1.2 Older people’s health

Older people’s health is a prominent goal for Sweden’s social services NBHW, 2017b) and welfare technology is expected to be a support in reaching this goal by providing safety and participation (NBHW, 2017a). Older people’s health is affected by age-related physiological changes and diseases (Larsson & Thorslund, 2006). Social issues such as isolation and loneliness are also common health problems among community-dwelling older people (Nicholson, 2012; NBHW, 2016d). Due to older people’s possible physiological limitations and the fact that they can suffer from isolation, one health promotion strategy for older people is to stimulate their social networks (Golinowska, Groot, Baji & Pavlova, 2016). The maintenance of social interactions and good communication are elements in ageing well (British Medical Association, 2009). People communicate to meet their needs in daily life and to establish and maintain social roles and belonging (Yorkston, Bourgeois &
Baylor, 2010), which is why older people need opportunities to communicate, as this enables participation and thus wellbeing. Social ties and frequent social contacts are also meaningful for older people’s safety (De Donder, De Witte, Buffel, Dury & Verté, 2012). Having a social network and someone to rely on are prerequisites for older people to feel safe, especially for those who live alone (Pettersson, Lilja & Borell, 2012). Central goals for the Swedish welfare system are to ensure older people’s safety and to provide them with opportunities, to participate, to have influence over their everyday lives and to have access to good health and social care (Government Offices of Sweden, 1998).

2.1.3 Care of older people by relatives

In Sweden, almost 1.3 million adults care for a close relative because of the relative’s old age, long-term illness or disability. The care performed includes household work, transport, shopping, taking care of bills and contact with authorities and health and social care providers, together with personal care and check-ups (NBHW, 2014). There is no legal obligation for children to care for an older parent (NBHW, 2016b), but relatives’ participation and care are supported by the Health and Medical Service Act (HSL, SFS 2017:30) and the Social Services Act (SoL, 2001:453). Relatives’ own health is important when caring for a close relative as it affects their ability to care. Those who provide extensive care are at a risk of suffering decreased everyday-life quality and thus decreased health. People living with and caring for a close relative with extensive care needs are often in need of great support. However, relatives living in another household than the one they care for can also experience decreased health (Winquist, 2016). Well-functioning elderly care can increase relatives’ safety and welfare technology is expected facilitate their everyday life (Government Offices of Sweden, 2017).

2.2 Homecare for older people

In Sweden, municipalities are responsible for providing social care for all individuals in need of care, including residential and home-based care for older people (Szebehely & Trydegård, 2012), governed by the Social Service Act (SoL, SFS 2001:453) and the Health and Medical Service Act (HSL, SFS 2017:30). Homecare is provided to almost 230,000 people over 65 years of age (NBHW, 2017a). Since older people are often at an advanced age when entering the elderly care system (Lagergren, 2013) and a greater number of older people with extended needs in health and social care receive help in their own homes (NBHW, 2017b), homecare has become more advanced (Thorslund, 2013). The majority of Sweden’s municipalities are also responsible for home healthcare in ordinary housing (NBHW, 2017b). It can be understood from these facts that welfare technology, in becoming part of homecare, has...
entered and will be developed in a rather complex area of the Swedish welfare system. Since homecare users are often at an advanced age with extended needs, technology must be able to meet these users’ specific needs and must be appropriate to their ability to use new products.

Homecare is also an area that is constantly affected by legal and economic factors and new working conditions. Since municipal homecare services were introduced in the 1950s (Szébehely & Trydegård, 2012), there have been significant changes in the division of responsibility and what homecare should include (Thorslund, 2013). Through the Adelreformen in 1992, municipalities took over the healthcare responsibility for the long-term care and elderly-care settings for older people with dementia, thus putting economic pressure on the municipalities. Elderly care has also suffered economically when other groups in need of support have been given priority (Szébehely & Trydegård 2012). Since the Freedom of Choice Act (LOV, 2008:962) was introduced, 56% of municipalities offer homecare according to a customer-choice model. This model gives homecare users the right to choose care provider (Swedish Association of Local Authorities and Regions, 2017). For municipalities working according to Freedom of Choice Act (LOV), this means that welfare technology will be introduced in the municipality by different homecare providers with different preconditions for offering the service.

Homecare is performed by assistant nurses with an upper secondary education, or care assistants with little or no care education. They are governed by the SoL (SFS 2001:453) and are required to provide homecare that complies with the National Board of Health and Welfare’s general guidelines (NBHW, 2011:12). When welfare technology is introduced in homecare, assistant nurses and care assistants will be given new tasks. While learning the technology themselves, they will also be a support for the older person and relatives.

2.2.1 The role and mission of care managers
Based on the older person’s needs, care managers (CMs) investigate, assess and make decisions about social care, guided by and operating under the Social Services Act (SoL, 2001:453), Municipality Act (SFS, 1991:900) and local guidelines (Rönnbäck, 2011). When welfare technology is introduced in homecare, CMs are given a new mission to handle. Consequently, it is CMs’ mission to present, offer and grant this new form of service as a complement to traditional homecare. CMs have diverse professional and educational backgrounds (Lindelöf & Rönnbäck, 2004; Government Offices of Sweden, 2017), and are expected to have theoretical knowledge and practical skills in aging, assessment and decision-making, conversations and relationships, collaboration and coordination, regulation and laws, homecare services, methods of follow-up and service evaluation (SOSFS, 2007:17). Since eHomecare is so new
there is only sparse knowledge of how this service can best be used and of the management process of the service. At the same time municipalities are encourage and guided to implement welfare technologies (NBHW, 2017a), while CMs have a heavy workload with little time for performing many application cases (Norman, 2010). CMs are expected to be loyal to the own organization, at the same time they are expected to show considerations for citizens and to have an expert role (Rönnbäck, 2011). Tighter resources for municipalities’ elderly care have made guidelines for care services more stringent, and CMs are urged to consider the municipal budget and make priorities when managing homecare (Szebehely & Trydegård, 2012). Hence, they develop ‘balancing act’ techniques for decision-making, where limited resources are balanced with the older person’s needs, wishes and demands (Duner & Nordström, 2006). Since the introduction of welfare technology in homecare is a new mission for CMs to handle, this will be a new element in their balancing act. To the best of our knowledge, there is no previous research that highlight CMs’ role or, emphasize the importance of giving them support in this matter.

2.3 Information and communication technology (ICT), eHealth and welfare technology

2.3.1 ICT and eHealth

ICT is technology that provides possibilities for humans to communicate and gather information easily and quickly, despite time and distance (Melander-Wikman, 2012). There are a variety of concepts relating to the use of ICT in the literature. The term eHealth was first used in a research article in 2000 (Pagliari, Sloan, Gregor, Sullivan, Detmer, et al., 2005) and several literature reviews have been performed without reaching a consensus regarding the definition of eHealth (Oh, Rizo, Enkin & Jadad, 2005; Pagliari et al., 2005). WHO defines eHealth ‘as the use of information and communication technologies (ICT) for health’, being the technology that in various ways supports and improves information flow, management of health systems and delivery of health services (WHO, 2012). The Swedish government’s definition of eHealth is based on WHO’s definition of health (‘a state of full physical, mental and social well-being’), concerns ICT used in social services, healthcare and in some parts of dental care, and also includes the concepts of digitalization and welfare technology (Ministry of Health and Social Affairs & Sweden’s municipalities and county councils, 2016).
2.3.2 Welfare technology and social services in ordinary housing

Welfare technology includes a large variety of technologies, such as those for communication support, compensatory technology, assistive technology, remote treatment, disease monitoring, social and emotional support and stimulation, that are supposed to reduced risk and increase safety, thus making it possible to age in place, give better and more focused care and avoid harm (e.g. falling) (Hoffman, 2013). According to the National Board of Health and Welfare (2017a), welfare technology is digital technology that can help individuals having or at a risk of functioning disability to maintain or increase their activity, participation, safety and independence. Welfare technology can also be used by relatives and care providers and can be bought on the consumer market or distributed as granted assistance or assistive technology. Examples of welfare technology are digital safety alarms and ICT such as monitoring cameras, videophones and global positioning systems (GPS) for sending alarms and for tracking the user (NBHW, 2017a). In this thesis, welfare technology is understood according to this definition of the National Board of Health and Welfare (See Figure 1 for examples of welfare technology).

The implementation and development of welfare technology in Swedish municipalities is slowly increasing with an uneven distribution between the municipalities. Digital safety alarms are the most commonly used welfare technology in Sweden, with 160,000 alarms in use, followed by passive alarms. More than half of the Swedish municipalities uses video- and web-camera communication in care planning meetings. Cameras for night supervision have increased between 2016 and 2017, being utilized in 88 out of 238 municipalities with 513 users, compared with 382 users in 2016. GPS alarms have also increased, with 509 users in 123 municipalities in 2017. Only eight municipalities offer daytime videophone supervision (NBHW, 2017a). (See Table 1 for Swedish municipalities’ use of welfare technology in 2017)

Table 1. Municipalities that use welfare technology and the numbers of users in 2017 (National Board of Health and Welfare, 2017a).

<table>
<thead>
<tr>
<th>Welfare technology</th>
<th>Municipalities (n = 238)</th>
<th>Municipalities (%)</th>
<th>Number of users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital alarms (n=236)</td>
<td>167</td>
<td>71%</td>
<td>160,000</td>
</tr>
<tr>
<td>Passive alarms</td>
<td>204</td>
<td>86%</td>
<td>No information</td>
</tr>
<tr>
<td>Camera, night supervision</td>
<td>88</td>
<td>37%</td>
<td>513</td>
</tr>
<tr>
<td>Videophone, day supervision</td>
<td>8</td>
<td>3%</td>
<td>No information</td>
</tr>
<tr>
<td>GPS alarms</td>
<td>123</td>
<td>52%</td>
<td>509</td>
</tr>
<tr>
<td>Videophone, care planning</td>
<td>141</td>
<td>59%</td>
<td>No information</td>
</tr>
</tbody>
</table>
Figure 1. Examples of welfare technology.

(Pictures are used with permission. See page 73)
2.3.3 The introduction and use of ICT in elderly care

The literature (e.g. Loh, Flicker & Horner, 2009; Walsh & Callan, 2011; Postema, Peeters & Friele, 2012; Peek et al, 2014; Kapadia, Ariani, Li & Ray, 2015) shows that there can be difficulties when introducing ICT in elderly care. The usability of the ICT is important for the older person’s acceptance (Loh et al., 2009; Peek et al, 2014). There can be fear of difficulties in using or activating the technology (Peek et al., 2014). Surveillance with ICT can be seen as obtrusive and violating privacy (Kapadia et al, 2015). There can also be a fear of stigmatization influencing the older person’s acceptance. Technology might be observed by others as an assistance or a care device, and thus create worries regarding being perceived as frail or in poor health (Walsh & Callan, 2011; Peek et al., 2014; Kapadia et al., 2015). Key figures within the older person’s social environment, such as children, family, professional caregivers and friends, influence the acceptance of the ICT (Peek et al., 2014). There can also be reluctance to using ICT due to older peoples’ fear of social isolation and the idea that ICT might reduce person-to-person contact (Postema et al., 2012; Kapadia et al, 2015). Cost is also a challenge in the adoption of technology by older adults (Peek et al., 2014; Kapadia et al., 2015).

*Older peoples’ experiences* of various ICT products for supporting their safety have been previously studied. In a number of studies that have explored ICT for fall prevention older people expressed that technology can improve their safety (Hawley-Hague, 2014). Mobile safety alarms with an inbuilt fall-sensor and GPS for tracking the older person in case of an incident provided possibilities for mobility and for testing the individual’s own limits (Melander-Wikman, Fältholm & Gard, 2008). Older people with mild dementia and with a desire to be alone outdoors expressed GPS as a useful future tool for safety, increased freedom and independence (Olsson, Skovdahl & Engström, 2016). Essén (2008) found that ICT surveillance that detects changing activity patterns of older users provided safety and was experienced as freeing and protecting privacy. Older people can stay safe in their own homes and feel cared for, knowing that a certain homecare worker who they trust is watching them (Essén, 2008). However, ICT surveillance can also be experienced as a privacy violation (Essén, 2008), which is why it must be the user of the ICT who decides how and when to use the technology (Melander-Wikman et al., 2008; Olsson et al. 2016).

Previous research has found that ICT that offers communication with sound and picture by means of a videophone or a computer with a web camera can be useful for *relatives and family caregivers* living with and caring for an older person. Family caregivers living in rural areas can get flexible and available caregiver support, and feelings of social isolation can be reduced. ICT
support creates opportunities for caregivers to ‘virtually’ leave the house and develop new networks when it is difficult for them to physically leave the house and the person they are taking care of (Blusi, 2014). ICT and video-phones are also found to support social interactions for family caregivers, giving them the opportunity to exchange experiences and helping them to ease their minds (Torp, 2008; Lundberg, 2014), and allowing possibilities to focus away from their stressful situation (Torp, 2008). ICT-based support-group services can have a positive impact in reducing the burden of family members who care for a relative with dementia (Lee, 2015). Videophone communication can also be of help in maintaining relationships between relatives and an older person with dementia who lives in a nursing home. This ICT communication can also give relatives a new way to be involved in the care of the older person (Sävenstedt, 2004; Hensel, Parker & Demiris, 2007). Being able to see the older person without needing to leave home, and being able to choose the time for communication is perceived as a freedom (Sävenstedt, 2004). Visual information gives a picture of how the older person is being treated and cared for, and makes it possible to meet the older person despite an illness that presents an infection risk (Hensel, Parker, Demiris & Rantz, 2009).

The perceptions of healthcare staff of ICT in elderly care have also been of interest in earlier research. Sävenstedt, Sandman and Zingmark (2006) have found that healthcare staff express a duality in their perceptions of using ICT in elderly care. ICT can provide possibilities for older persons to remain at home, yet at the same time a vulnerable older person can be trapped at home. The older person’s integrity, autonomy and freedom are therefore either increased or decreased. ICT is understood as helpful when caring for a large number of older persons but is also seen as a way to reduce the number of homecare staff and thus cut costs. Older healthcare staff can have a lack of interest in introducing ICT and, healthcare staffs’ workgroups are often making a collective decision about whether the technology is a support or a threat (Sävenstedt et al., 2006). Postema et al. (2012) also found a duality in the use of ICT by healthcare staff. Healthcare staff appreciate personal contact with those to whom they provide care and are therefore reluctant to virtual assistance. On the other hand, they express the benefits of ICT in the contact it allows with older persons at a distance (Postema et al., 2012). Nilsen, Dugstad, Eide, Knudsen Gullslett and Eide (2016) found that homecare staff could see ICT as a threat to maintaining a professional standard, as reduced attentive observations and reduced face-to-face communication impair their ability to get an overall impression. They also had concerns that the older person’s privacy was threatened by digital night surveillance, although privacy concerns changed with increasing experience of ICT, and regular night visits were understood as a more serious invasion of privacy (Nilsen et al., 2016).
Previous research has highlighted how different kinds of ICT can be a support for older people and relatives. However, there are also ethical concerns and healthcare staff may perceive a duality when ICT is used in elderly care. Ethical issues mentioned above are issues that must be reflect upon when welfare technology and ICT are introduced in the Swedish homecare context. Even if ICT is emphasized as an important resource in future elderly care, an ethical awareness is necessary in order to produce care according to the older persons’ individual needs. The importance of ethical discussions when ICT is introduced as a part of caring, for making judgements about the best alternatives to promote the older person’s well-being and dignity, has been emphasized (Sävenstedt et al., 2006). Ethical assessment prior to introduction and follow-up and evaluation of technology use after introduction is essential when welfare technology is to be used in the homecare context (Swedish National Council on Medical Ethics, 2014).
3 Theoretical perspectives

This thesis is within the field of health and welfare and the theoretical perspective is derived from care sciences. Care sciences have a health-related perspective on welfare, with an interest in how people can maintain or regain optimal health when receiving care from the welfare system. One focus of this is on the older people receiving eHomecare and their relatives, with an interest in whether and how the service can support their safety and communication in daily life, and thus their health. A second focus is on the perspective of CMs and their working situation when managing eHomecare. Segesten’s conceptual framework of safety (1994) is used to explain what safety is and serves as a theoretical basis in the question of how eHomecare can affect the safety of older people and relatives. The second theoretical perspective is the concept of communication, which is explained using references to literature on the subject so that it can be understood in the eHomecare context. These theoretical perspectives will be used in the discussion section of the thesis.

3.1 Safety

The sense of safety is an important phenomenon related to human wellbeing in everyday life (Dahlberg, Segesten, Nyström, Suserud, & Fagerberg, 2003). It is also a central goal in elderly care, and welfare technology is highlighted as one solution to maintain or increase the older person’s safety (National Board of Health and Welfare, 2017a). A theory or model of safety was sought within the area of care sciences. With Segesten’s conceptual framework of safety (1994) it is possible to explain how eHomecare can affect older peoples’ and relatives’ safety from a care-sciences perspective. According to Segesten (1994), safety is explained as external or internal safety. Internal safety is a state of being in peace, feeling harmonious and having trust, while external safety is relations with others, material security and safe environments. Quality of life (QoL) has a major impact on safety. When individuals can ensure QoL for themselves there is safety. However, the individual must possess certain resources and be able to control them to attain QoL. With the knowledge of having these resources, feelings of safety are created. Safety resources are all safety-producing components that can contribute to the individual’s optimal QoL. Besides resources for physical needs, such as food, housing, protection and access to health and welfare, there are also components concerning
love and care. These latter resources are social relations in participation, solidarity and fellowship. The third component is the necessity to develop as a person, to integrate in society and to be able to control one’s own life and environment. The individual’s basic safety is also contributing to the feeling of safety. Factors that cause individuals to lose resources or control over resources are disturbances that threaten QoL. Individuals strive to be free from these threats in various ways. Threats can be repealed by elimination or materialization. When the threat is eliminated resources are reset, there is control and safety is re-established. In materialization, the threat becomes actual, and the individual has to seek new safety. Safety and QoL are always relative and mean different things for different individuals (Segesten, 1994).

3.2 Communication

A key concept in the thesis is communication. Communication is a part of all daily activities (Fiske, 1997) and can simply be described as a way of sending and receiving messages. Human communication occurs in situations where a person transmits information that is received by another person’s sensory organs (Allwood, 1986). According to Watzlawick, Bavelas & Jackson’s theory of interpersonal communication (1967), humans cannot not communicate, meaning that everything a human does in an interaction in the presence of another human is a message. Words or silence, activity or inactivity, influence the other human, who in turn cannot not respond, and thus communicate by words or silence, activity or inactivity; in other words, humans always communicate in the presence of others (Watzlawick et al., 1967). Interpersonal communication can be both digital and analogical, which complement each other in the communication. The digital communication is the verbal part, what people say and what the words mean, while the analogical communication is the non-verbal part, how something is said through voice nuance, rhythm and body language (Watzlawick et al., 1967).
4 Rationale

Welfare technology is highlighted as a response to the demographic challenge of an ageing population, with an increasing need in the future for health and social care. The Swedish government emphasizes and promotes the use of technology in elderly care, since there will be a lack of care workers in the near future. However, welfare technology is not only a solution for freeing resources and for compensating for future staff shortages. Technology is also expected to maintain or increase older individuals’ activity, participation, safety and independence, and thus be a support for older people who choose to live and age in their own homes, and for their relatives. Older people’s sense of safety is an important phenomenon related to their wellbeing in everyday life. Maintaining social interactions and good communication are also elements for ageing well. Since welfare technology represents a new form of elderly care is it therefore relevant to explore whether homecare services and ICT can provide safety and facilitate communication for participation in social interactions. Furthermore, studying welfare technology as a part of ordinary homecare can generate knowledge from the profession that offers and grants the homecare service. Managing and offering ICT as a part of homecare is a new mission for CMs, meaning that research concerning their role in the implementation of eHomecare is sparse. By exploring CMs’ role and importance in the implementation of technology in homecare, their experience can contribute to the body of knowledge that can help develop the management of ICT in homecare services for the benefit of older people, relatives and CMs.
5 Aim

The overall aim of the thesis is to examine how eHomecare affects daily life, with a focus on safety and communication for older users and their relatives. Further, the aim is to explore CMs’ perspectives of eHomecare, and their expectations and experiences in its implementation.

The specific aims are:

Study I  To extend descriptions of how older patients with granted eHomecare and their relatives understand safety, and further to describe how they experience safety in everyday life.

Study II To explore how older people with granted eHomecare and their relatives experience communication.

Study III To describe CMs’ perceptions of eHomecare.

Study IV To explore CMs’ expected and experienced hindrances and preconditions affecting their role and mission when eHomecare is implemented.
6 Methods

Different methods were used to reach the aims of the four studies that form the basis of the thesis. All four studies have a qualitative approach, designed with a variety of data collection and analysis methods. Studies I and II focused on the older people with granted eHomecare and their relatives, while studies III and IV explored CMs’ perspectives of eHomecare. An overview of the four studies is presented in Table 2.

Table 2. Overview of the four studies of the thesis.

<table>
<thead>
<tr>
<th>Study</th>
<th>Participants</th>
<th>Design</th>
<th>Data collection</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>12 persons ≥ 65 years and 8 relatives</td>
<td>Explorative qualitative design</td>
<td>Individual interviews</td>
<td>A deductive and an inductive qualitative content analysis</td>
</tr>
<tr>
<td>II</td>
<td>12 persons ≥ 65 years and 8 relatives</td>
<td>Explorative qualitative design</td>
<td>Individual interviews</td>
<td>A deductive qualitative content analysis</td>
</tr>
<tr>
<td>III</td>
<td>12 CMs managing homecare</td>
<td>Descriptive qualitative design</td>
<td>Individual interviews, vignettes</td>
<td>An inductive qualitative content analysis, manifest</td>
</tr>
<tr>
<td>IV</td>
<td>6 CMs with experience of eHomecare and 12 CMs without experience of eHomecare</td>
<td>Explorative qualitative design</td>
<td>Focus-group interviews</td>
<td>An inductive qualitative content analysis, latent</td>
</tr>
</tbody>
</table>
6.1 Setting and participants

All four studies were conducted in one municipality, with an addition of participants (CMs) from three other municipalities in Study IV. Participants in the four studies were older people with granted eHomecare (studies I & II), relatives of older people with granted eHomecare (Studies I & II) and CMs managing eHomecare (studies III & IV). All the older participants and most of the relatives lived in the studied municipality. One relative was living in northern Sweden and one was living abroad.

6.1.1 The municipalities

The main municipality, included in all four studies (I–IV), is in central Sweden. Social services in the municipality are provided based on the customer-choice model. In addition to municipal homecare providers, there were 10 private providers in 2015. Approximately 2,420 older people were receiving homecare at that time and 93 of them were receiving eHomecare. When studies III and IV were conducted there were 28 CMs working with cases involving elderly care.

The three municipalities added in Study IV were chosen by convenience sampling within a radius of approximately nine Swedish miles from the main municipality. In two of these municipalities, the numbers of inhabitants were similar to that of the studies’ main municipality. The third was a smaller municipality with one-fifth of the population of the main municipality. One of these three municipalities provided social services based on the customer-choice model. One of the municipalities was planning to offer eHomecare in the near future. When Study IV was conducted, the numbers of CMs working with cases involving elderly care in the two municipalities with similar numbers of inhabitants as the main study were 24 and 15, plus 3 CMs employed on an hourly basis. In the smaller municipality there were six CMs managing elderly care.

6.1.2 eHomecare in the main municipality

eHomecare was introduced as a part of homecare in the studied municipality in November 2013. The municipality’s two eHomecare managers installed the technology in the older persons’ homes and explained the use of the equipment to them. eHomecare provides homecare support and assistance from a distance via ICT. Initially there were four different pieces of equipment offered. A ‘Night Patrol’ night camera (Joicecare AB), an ‘Arctic Touch’ videophone (Tunstall), a ‘Giraffe’ mobile videophone (Joicecare AB) and an ‘ippi’ electronic mailbox (In View AB).
The night camera provides one-way communication monitoring at night (see Figure 1[d]). This service is offered to people at risk of falls or who do not want homecare visits at night. The camera is usually placed in the bedroom and the user decides where it is placed in the room and how many times the monitoring should be performed per night. Supervision is done only at pre-agreed times. Each monitoring takes about 30 seconds and there is no audio recording. At an appointed time an assistant nurse performs the monitoring of the older person. If the older person is not in bed and does not come back within a certain time, the assistant nurse will raise an alarm. The alarm reaches the itinerant night-worker who will then visit the older person. Based on the older person’s and relatives’ request, relatives can be contacted instead of the night staff. Only authorized staff can use the camera for viewing and no recording takes place.

The videophone provides two-way communication with broadband access (see Figure 1[e]), and includes a touch screen. A moving image is shown on the screen and the user can see and talk to homecare staff, relatives and others who can respond via the Internet and web cameras. This service offers information, social interactions and reminders such as when to take medicine and attend check-ups. The videophone is installed based on how the user wants the call to be connected. There can be an automatic function by which homecare staff or relatives are connected when they call without the older user needing to do anything to activate the call. The videophone can also be installed so that the older person needs to accept or decline the call by touching the screen. For each user a prearranged plan is made so homecare staff know what to do if the call is not answered. In addition to the homecare staff, three more people can have access to communicate with the user via the videophone, most commonly relatives. The videophones can be installed so that the older user can both receive and make calls. In the present study, there were only two users who had the videophone installed for making their own calls. The other users lacked the knowledge of how to do this and therefore only received calls.

The mobile videophone has the same functions as the videophone, and additionally it can be moved around in the older person’s home (see Figure 1[f]). The mobile videophone consists of a box on four wheels with an engine that drives it, and a shank with a monitor. Exchange of information, social interactions and check-ups can take place wherever in the house the older person is at a given time. When the videophone is not in use, it is docked in a charging station where it remains until the next use. During the periods of studies I and II there were no mobile videophones in use.
When eHomecare started in November 2013 the service included ‘ippi’ (see Figure 1[gi]), an electronic mailbox that connects to an ordinary TV and includes the possibility to email and send and receive SMS and MMS. Communication was possible with anyone who had a mobile phone or a computer. The service was offered for social interactions, reminders and encouragements.ippi was removed from the system after six months because of contract matters.

When the last participant was recruited in May 2015, 64 cameras and 29 videophones were in use in the municipality. The cost of eHomecare was included in the homecare fee, with a maximum fee of approximately 1800 SEK per month in 2015.

6.1.3 Participants of Studies I and II

The first two studies focused on the experiences and understanding of older people and their relatives and had the same participants, who were recruited by purposeful sampling. Inclusion criteria for the older participants were that they must be aged 65 years or over and have granted eHomecare. The inclusion criteria for the relatives were that they must be a relative of an older person with granted eHomecare. Participants were also required to have the ability to understand and express themselves in Swedish. Potential participants were asked to participate in the study by the municipality’s eHomecare managers after the older person had been provided with eHomecare. Relatives who were present when the eHomecare manager installed the technology, or who had telephone contact with the managers about an older relative’s eHomecare, were asked to participate in the study. The researcher then contacted those who said they wanted to participate and gave further information about the project and the two studies. The selected participants were 12 older persons with granted eHomecare, and eight relatives of older persons with granted eHomecare, either living with the older person (n = 1) or living elsewhere (n = 7). Participant demographic data is presented in Table 3. Four of the relatives were related to four of the older participants in the study, as spouse (n = 1) or as offspring (n = 3). The other four were relatives of older persons granted with eHomecare but not taking part in the study.

All the older participants were already receiving homecare before they were introduced to and offered eHomecare. This meant that they already had regular contact with and assistance from the homecare service. Two of them were just having check-ups and help with laundry and cleaning. The others had a more comprehensive need for help, receiving cooked meals and personal care, for example. All the older participants had recently experienced a deteriorated state of health and therefore a new care plan was established. Most of them expressed that they were affected by their physical condition due to diseases...
such as heart problems, stroke, chronic obstructive pulmonary disease (COPD), etc. Some of them reported symptoms such as fatigue, coughs and pain, which were also observed during the interviews. The older persons who did not participate in the study, but had relatives (n = 4) who did participate, also had a deteriorated state of health and a new care plan. All older participants, except for one, had a desire to stay in their own residence with homecare for as long as possible. The participants were granted eHomecare and the night camera for supervision because of fall incidents, anxiety or not wanting homecare staff to come at night. The videophones were granted for check-ups, reminders, information provision and social calls to increase the older persons’ participation in social interactions. One of the older participants was granted the text-messenger for reminders and for showing which homecare staff member would be coming next time. Technologies used are presented in Table 3.

Table 3. Participant demographic data and eHomecare technology used.

<table>
<thead>
<tr>
<th>Older persons in studies I and II</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men/women</td>
<td>7/5</td>
</tr>
<tr>
<td>Median age in years (age range)</td>
<td>82.5 (71–93)</td>
</tr>
<tr>
<td>Night camera only</td>
<td>4</td>
</tr>
<tr>
<td>Videophone only</td>
<td>4</td>
</tr>
<tr>
<td>Mobile videophone</td>
<td>0</td>
</tr>
<tr>
<td>Night camera and videophone</td>
<td>3</td>
</tr>
<tr>
<td>Electronic mailbox, night camera and videophone</td>
<td>1</td>
</tr>
<tr>
<td>Relatives in studies I and II</td>
<td>8</td>
</tr>
<tr>
<td>Men/women</td>
<td>3/5</td>
</tr>
<tr>
<td>Median age in years (age range)</td>
<td>61 (48–82)</td>
</tr>
<tr>
<td>Spouse (wife)</td>
<td>1</td>
</tr>
<tr>
<td>Daughters</td>
<td>4</td>
</tr>
<tr>
<td>Sons</td>
<td>3</td>
</tr>
<tr>
<td>Night camera only</td>
<td>1</td>
</tr>
<tr>
<td>Videophone only</td>
<td>3</td>
</tr>
<tr>
<td>Mobile videophone</td>
<td>0</td>
</tr>
<tr>
<td>Night camera and videophone</td>
<td>3</td>
</tr>
<tr>
<td>Electronic mailbox, night camera and videophone</td>
<td>1</td>
</tr>
</tbody>
</table>

6.1.4 Participants of Study III
In study III CMs’ perceptions of eHomecare were of interest. The study was conducted in the main municipality. Inclusion criteria were that the CMs should manage homecare for older people and have experience of granting
eHomecare. The CMs’ department managers mediated information about the participants. All 28 CMs (27 women and 1 man) responsible for approving homecare for older people in the main municipality were invited by email to participate in the study. Twelve CMs decided to participate. The CMs’ ages ranged from 27 to 54 years, with experience in the role of CM between 7 months and 24 years. CMs’ educational backgrounds differed, with most having a bachelor’s degree in social work or social care, or a bachelor’s degree in behavioural sciences with a social focus. One CM had university courses in leadership (15 credits (European Credit Transfer System [ECTS])) and in care management (7.5 credits [ECTS]). All CMs were women and colleagues working in the same office. Experience of managing eHomecare ranged from 7 to 16 months.

6.1.5 Participants of Study IV

In Study IV it was of interest to further explore what CMs expected and experienced as hindrances and preconditions in their mission when managing eHomecare as a new form of homecare. By considering inexperienced CMs’ perspectives of eHomecare in relation to the views of experienced CMs, expectations relating to its implementation may be addressed and made more realistic. Preparedness for handling a variety of potential challenges can proactively be put in place, and hence can be of help when introducing eHomecare. The inclusion criteria for all participants were that the CMs should manage homecare for older people and that the participants should include both those with and without experience of managing eHomecare. CMs with experience were sought in the main municipality, and CMs without experience of eHomecare were sought in the three other municipalities. Department managers in all municipalities mediated information about the participants, and CMs were asked to participate by email. A total of 18 CMs participated. All participants were women, aged 23–60 years, who had worked as CMs for periods ranging from 8 months to 17 years. The participants were divided into four groups, one of which consisted of those who had experience of eHomecare (n = 6), subsequently referred to as ‘experienced CMs’, while the other three groups consisted of those who had no experience of eHomecare (n = 4 in each group), subsequently referred to as ‘inexperienced CMs’.

6.2 Data collection

Data for the four studies were collected through individual interviews (studies I–III) and focus groups interviews (Study IV). The qualitative interview is a professional conversation with the purpose of gathering knowledge that emerges in the interaction between the participant and the interviewer (Kvale
When conducting a qualitative interview there is an assumption that the participant’s perspective is meaningful, knowable and can be made explicit (Patton, 2015). In studies I–III the individual interviews were an entrance to the participants’ perspectives and made it possible to gather their stories and find out what was on their minds. In Study IV, interviews in focus groups seemed the right choice for data collection, as this method can be used to explore perceptions and thoughts about organizational issues and services (Krueger & Casey, 2015). Most of the participants did not have any experiences of homecare technology, which is why group interviews were chosen in this case, as they were likely to generate more insights than individual interviews.

6.2.1 Individual interviews in Studies I and II

In order to describe how safety is understood and experienced (Study I) and how communication is experienced (Study II) by older people and their relatives before and after the implementation of eHomecare in their everyday lives, individual interviews (Kvale & Brinkman, 2009) were conducted. Data were collected at the same time (studies I & II) by conducting individual semistructured interviews in the period between November 2013 and January 2016. Participants were interviewed on two occasions, before the introduction of eHomecare and after six months’ experience of eHomecare. By interviewing before using the technology, the participants could focus on the phenomena of safety and communication, and could also express their expectations of eHomecare. In the second interview, the participants could express their experiences of technology related to eHomecare. The interviews took place in the participants’ homes (n = 22), at the university (n = 6) or by telephone (n = 4). Five of the older persons did not participate in the second interview because of an impaired health condition (n = 3), the cancellation of eHomecare (n = 1) or death (n = 1). Three of the relatives declined further participation and the second interview because of the older person’s impaired health condition (n = 2) or personal reasons (n = 1). To open up the conversation the interviews began with the question ‘Can you tell me how a typical day for you looks?’ Then the participant was asked ‘What is the meaning of safety and security for you in your daily life?’ (Study I), followed by probing questions such as ‘When do you feel safe?’, ‘Can you tell me more?’ and ‘Can you explain?’ Then the next question, ‘What is the meaning of communication for you in your daily life?’, was asked (Study II), followed by questions such as ‘Can you tell me more?’ and ‘Can you explain?’ Participants were also asked about their expectations of eHomecare related to safety and communication. After six months’ use of eHomecare, the participants were interviewed a second time. On this occasion they were asked about their experiences of the service related to communication and their safety and security. The interviews
lasted 20–45 minutes and all interviews were audio recorded and transcribed verbatim.

6.2.2 Individual interviews in Study III

Data for Study III were collected through 12 individual interviews with CMs in the studied municipality during spring 2015. The interviews took place at the CMs’ workplace (n = 8) or at the university (n = 4), depending on the participant’s choice. Vignettes consisting of three scenarios (see Table 4) were used to open up the interviews (Barter & Renold, 1999), but also to give the participants the possibility to spontaneously mention eHomecare. The three scenarios describe an older couple’s living situation on three different occasions. The chosen vignettes had been used before (Brunnberg & Johansson, 2015) but were also pretested by the researcher in two pilot interviews to validate the stories. After each scenario, questions based on the vignette were asked and the participants assessed the situation according to their role as a CM. Some of the original questions were excluded due to their lack of relevance. Once the three scenarios had been worked through, five follow-up questions with a focus on eHomecare were asked (see Table 5). Depending on whether the participant had mentioned eHomecare or not, there were two alternatives for the first question. The following four questions were given to all participants, each followed by probing questions. The interviews lasted 30–70 minutes and were audio recorded and transcribed verbatim.

Table 4. Descriptions of the vignettes.

<table>
<thead>
<tr>
<th>Three different scenarios describing an older couple’s living situation on three different occasions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st scenario</strong></td>
</tr>
<tr>
<td><strong>2nd scenario</strong></td>
</tr>
<tr>
<td><strong>3rd scenario</strong></td>
</tr>
</tbody>
</table>
Table 5. Scenarios and questions asked.

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Vignette questions</th>
</tr>
</thead>
</table>
| 1st scenario | What kind of help and support can older people need?  
|            | Do you set up a formal application for Sture and Viola?  
|            | What are their problems?  
|            | If the application is in question what would you do?  
|            | What do you consider Sture and Viola need?  
|            | What kind of support and help do you consider justified?  |
| 2nd scenario | Would this mean a formal case?  
|            | What thoughts arise from this information?  
|            | What do you think Sture needs?  
|            | What kind of support and help do you consider motivated for Sture?  
|            | What do you think about the children's role?  |
| 3rd scenario | Would you establish a formal case?  
|            | What do you think Sture needs?  
|            | What kind of support and help do you consider motivated for Sture?  
|            | What do you think about the children's role?  |
| Questions focusing on eHomecare |  
| 1. | Do you believe that technical equipment could be used to support Sture? What motivated you not to choose technology to support Sture?  
| Alt. | 1. You have chosen a technical solution for Sture. What motivated your choice of technology? Could you have made a different choice?  
| 2. | What are your thoughts about when you will offer Sture technological support?  
| 3. | How do you present the eHomecare service to Sture?  
| 4. | How do you think Sture and his children may react to a suggestion of eHomecare services?  
| 5. | What do you think of offering technology as homecare today? Has your thinking changed in the last year?  |
6.2.3 Focus-group interviews in Study IV

In Study IV focus-group interviews (Krueger & Casey, 2015) were used to explore CMs’ expectations and experiences of hindrances and preconditions. Four focus-group interviews including 18 CMs were performed in four different municipalities between April and May 2015. Based on the participants’ wishes, three interviews were performed at the CMs’ workplaces (n = 3) and one interview at the university (n = 1) located in the current municipality. A moderator team, consisting of the researcher as the moderator together with an assistant moderator, conducted the interviews. All focus groups were guided by the moderator, who introduced the topic and encouraged everyone to participate in the dialogue. Participants were told that everyone’s input was of interest and important, that opinions might differ and there were no right or wrong answers. Initially, when introducing the topic, photos of the night camera and the videophones were shown by the moderator, and explained for the inexperienced CMs. This was followed by a discussion based on semi-structured questions (see Table 6) in five categories according to Kreuger and Casey (2015). The assistant moderator was responsible for the audio recording and also took notes and gave a short summary of the discussion at the end. The interviews lasted 50–90 minutes and all interviews were audio recorded and transcribed verbatim.

Table 6. Interview guide.

<table>
<thead>
<tr>
<th>Groups without experience of eHomecare M2-M4 n = 4/group</th>
<th>Group with experience of eHomecare M1 n = 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Opening question</strong></td>
<td></td>
</tr>
<tr>
<td>Tell us a little bit about who you are and what you think is best about your work.</td>
<td></td>
</tr>
<tr>
<td>Photos of eHomecare technology are presented</td>
<td></td>
</tr>
<tr>
<td><strong>2. Introduction question</strong></td>
<td></td>
</tr>
<tr>
<td>What are your thoughts when you hear the word eHomecare?</td>
<td></td>
</tr>
<tr>
<td><strong>3. Transition question</strong></td>
<td></td>
</tr>
<tr>
<td>What are your thoughts about eHomecare being introduced in your municipality?</td>
<td>What was your first thought when you found out that eHomecare was going to be introduced?</td>
</tr>
</tbody>
</table>
4. Key questions

- What do you think may be helpful to you in your mission if eHomecare is to be introduced?
- Can you see any difficulties in the process?
- How did you experience the process when eHomecare was introduced?
- What has been helpful to you during the introduction?
- Has anything been difficult in the process?
- How do you regard offering eHomecare today?
- What advice can you give to other municipalities and CMs as regards introducing eHomecare?

5. Ending Question

Based on what we have discussed, what has been most important for you?

6.3 Data analysis

All four studies were analysed qualitative.

6.3.1 Deductive and inductive content analysis in Study I

The interview texts of Study I were analysed using a qualitative content analysis (Elo & Kyngäs, 2008). The process was performed in two phases, a deductive and an inductive phase, inspired by Elo and Kyngäs (2008). The deductive approach, directed by previous research (Hsieh & Shannon, 2005) was used to explore safety in the eHomecare context. The inductive approach (Polit & Beck, 2013) made it possible to gain an understanding of the phenomenon, that is, the experience of safety in the eHomecare context. Initially the deductive analysis was performed and a structured categorization matrix was developed (see Table 7). The matrix was based on four key elements from the conceptual framework of safety (Segesten, 1994). The older participants’ and relatives’ interviews were analysed separately. Transcribed interviews were read several times, and text corresponding to the matrix was analysed by reference to the matrix. The text was marked and coded according the categories. All text corresponding to safety fitted well in to the four categories, thus no new category was formulated.
Table 7. Categorization matrix according to Segesten’s (1994) conceptual framework of safety.

<table>
<thead>
<tr>
<th>Perceived sense of safety</th>
<th>Text describing the participant’s perceived sense of basic safety and situation-related safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disturbance/threat</td>
<td>Text describing an event or a change that disturbs the participant’s sense of safety and becomes a threat</td>
</tr>
<tr>
<td>Re-establishing safety</td>
<td>Text describing safety threats that are eliminated, where the participant’s safety is re-established</td>
</tr>
<tr>
<td>New safety</td>
<td>Text describing how threats remain but the participant describes a new sense of safety</td>
</tr>
</tbody>
</table>

In the *inductive phase* the second aim of Study I was in focus: to describe how safety in everyday life is experienced by older patients with granted eHomecare and their relatives. The texts were divided and analysed from the perspectives of the older participants and from the perspectives of the relatives. The inductive analysis process was performed by an open coding, creating categories and abstraction. The analysis phase began with an open-minded reading of the text that referred to safety. This was done to get a sense of the whole content and to extend the understanding of the text. Texts were then abstracted into codes by the process of writing notes and headings in the transcripts. The codes were then transferred into a table structure. Categories were generated rather freely in this open coding. In the next phase these categories were reduced by organizing them under higher order categories. Data were grouped according to differences and similarities into subcategories. This was done by repeated comparison between the data in the different groups, to confirm that data placed in a group really belonged there. Subcategories with similar content were then combined, and after further abstraction, four generic categories emerged. Further abstraction continued in the process of searching for difference and similarities resulting in four generic categories and two main categories.
6.3.2 Deductive qualitative content analysis in Study II

In Study II a deductive content analysis with an unconstrained matrix (Elo & Kyngäs, 2008) was performed. With an unconstrained matrix, categories are created within its bounds in the analysis process, that is, there are no predetermined categories (Elo & Kyngäs, 2008). For this study the communication theory and the fourth axiom of Watzlawick et al. (1967) were used to extract statements referring to the theory. Initially, transcribed texts were given an open-minded reading several times to become familiar with the data. Thereafter the unconstrained matrix was used, by which all statements where the older persons and relatives talked about communication, described as either verbal or nonverbal communication according to the fourth axiom (Watzlawick et al., 1967), were extracted. The older persons’ and the relatives’ statements about communication were initially separated to explore the participants’ different perspectives. Since there are no predetermined categories within an unconstrained matrix, the next phase was to create categories, starting with grouping the text, with the study’s aim in mind. Long statements were first condensed and then all the statements were read several times in a search for patterns. The statements were then structured into subcategories, guided by commonality. To ensure that each data item was placed in the right subcategory, each subcategory was analysed searching for differences and similarities. This was done by interpretation and comparison to ensure that data were placed in the correct subcategory. Subcategories with similar content were then combined and, after further abstraction, the generic categories emerged. In this phase all data were analysed as a whole, in the sense that different participants were not considered. The phase resulted in three main generic categories and one main category.

6.3.3 Qualitative content analyses in Studies III and IV

For both Studies III and IV data were analysed using qualitative content analyses performed according to the steps described by Graneheim and Lundman (2004). An analysis example is presented in Table 8. The first step in the analysis process was to grasp the interviews in their entirety and essence by reading the text several times and listening to the recordings. During this process, meaning units corresponding to the aim of the study were identified. The meaning units, consisting of single words, sentences and paragraphs, were then condensed without splitting their content. Each condensed meaning-unit was labelled with a code. The codes were then further abstracted by comparing similarities and differences and were regrouped several times until nine categories emerged in Study III and seven categories in Study IV. From the categories and the visible content (Graneheim & Lundman, 2004) of the text, three themes were formulated to link the categories together in Study III. The content analysis in Study IV was taken further in the analysis process to found out
the underlying meaning of the text. By further discussion and reflection, the latent content in seven categories was formulated into four themes. Initially in Study IV, experienced CM data were analysed separately from the three other focus groups consisting of inexperienced CMs. However, similarities between the two groups were discovered when categories were formulated, therefore experienced CM and inexperienced CM data were brought together and then further analysed.

Table 8. An analysis example from Study III

<table>
<thead>
<tr>
<th>Meaning unit</th>
<th>Condensed meaning unit</th>
<th>Code</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actually, I'd like to turn it around so that you offer eHomecare as an alternative and perhaps not as the first option ... but, of course, you have to give them the information and talk about its advantages and many certainly want it but... yes, you have to work on yourself and struggle with ... this is the situation now and this is what we have to do, but ... (inf.4)</td>
<td>You have to work on yourself and struggle with your own wish to offer eHomecare as a second choice... but we shall inform and talk about the benefits when there certainly are many who want it ...</td>
<td>Counteract your own will and provide information about the benefits of eHomecare</td>
<td>Ambivalent attitude</td>
</tr>
</tbody>
</table>

6.4 Ethical considerations

All four studies were approved by the Regional Ethical Review Board in Uppsala, Document No. 2012/548. Studies I and II were approved on 16 January 2013. An amendment application was sent in September 2013 with a request to be able to conduct individual interviews as an alternative to focus groups in Study I. This was approved on 7 October 2013. A second amendment application was sent in March 2014 to get approval for changing the age criteria from 70 to 65 years or above in Studies I and II. This was approved on 4 April 2014. A third amendment application was sent in March 2015 to get permission to add two new studies, Studies III and IV, with new participants and locations for data collection. This was approved 2015-04-02.
All participants in Studies I–IV were thoroughly informed about the research, the voluntary nature of their participation and their right to withdraw from the study at any time. This was done orally and in writing. All participants could choose where and when the interviews would take place. All collected data were handled according to the Personal Data Act (SFS, 1998: 204). No names or social security numbers are visible in the text, and all participants’ identities have been coded with numbers. Quotations used in the results are presented without using the participants’ names. To protect the participants’ confidentiality (Swedish research council, 2017) only the research group have had access to the code keys, which were stored according to the Archive Act (SFS, 1990: 782).

During Studies I and II there have been ethical reflections concerning the older group of participants. Older people can be vulnerable because of a reduced autonomy due to physiological and psychological factors (Liamputtong, 2007). On this basis, special ethical consideration has been given to the participants’ daily condition. Older participants may have difficulties in refusing a booked appointment for an interview when fatigue or illness suddenly arise. Out of courtesy the person in question may begin or continue an interview despite bodily discomfort, which may affect their physical health. To avoid this, participants were contacted the day before the planned interview to allow them an opportunity to change the time or to withdraw from the study. Furthermore, before each interview the researcher ensured that it was a good day for the participant, and if it was not, the interview was cancelled. This required a sensitivity towards the older individual in assessing whether it was a suitable time for the interview, or whether it should be postponed to another day. On two occasions the interview times were changed the day before. During two of the interviews, the older adults seemed to be strained and for this reason the interviews were ended. In one of the interviews, an older lady participant lay down on the sofa for a while, but insisted on completing the interview. The older persons were also called the day after the interview to check whether everything was fine and whether there were any questions.

Regarding the focus-group study (Study IV) and confidentiality there was an ethical consideration of there being more than one participant dealing with the data produced. The participants were therefore encouraged not to speak about what was said in the discussion to anyone outside the group. It was also important for the moderator to explain that there were no right and wrong answers and that everyone’s thoughts and words were important for the discussion. The less talkative participants were not pressed to talk.
7 Results

7.1 Study I – the understanding and experience of safety

In the results of the **deductive analysis**, text corresponding to all four categories in the structured matrix was found. Older people and relatives’ *perceived sense of safety* was expressed by statements concerning self-safety and an awareness of confidence. Their situation-related safety reflected different safety-producing components for physical needs and care, for example relationships with family members and friends occurred in a number of the statements. Statements of *disturbance and threats* concerned older participants’ fear of crime, fear of future unsafe living conditions and fear at night. Relatives had worries about the older person’s health and inabilities, or that eHomecare would be used incorrectly. Statements of a *re-established safety* reflected relatives’ experiences of how eHomecare made them feel safe, knowing that the older person was supported by the technology. There were also statements describing how this safety affected the relatives’ lives and the interactions with the older person. Statements of *new safety* concerned the older participants’ experiences of how eHomecare affected the feeling of safety. The camera was frequently mentioned, and statements presented how older participants, despite their fear of falling (i.e., disturbance), for instance, expressed safety (i.e., a new safety) due to monitoring.

All the statements from the four categories resulted in two main themes in the **inductive analysis**: *safety as a part of everyday life* and *eHomecare as offering safety*. When the participants described safety, it was understood as *safety as part of everyday life*. The older participants talked about safety as an image of three safety dimensions; a social network, the external environment and an existential context. To be a part of a social network was expressed as important in the meaning of safety, as was to receive help and be cared for by spouses, children, grandchildren and homecare services. The older participant also needed to know that his or her children were well, and felt safe. Besides support from others, the external environment and one’s own home were essential for safety. Some of the older participants never felt unsafe, explained by the person’s existential context and approach to life. This could be due to religion and a strong faith, or an attitude that there is no need to worry. Rela-
tives expressed that there is safety in everyday life when everyday life is running smoothly. This includes having a job, a home and good relationships with others. It feels safe when family and friends are around, knowing everyone is all right and able to speak to them. Concerns about an older parent’s health or inability to manage daily life makes relatives feel unsafe.

After six months of use participants highlighted *eHomecare as offering safety*. The older adults described a new kind of safety, were eHomecare was expressed as meaningful for their safety in everyday life. To be seen by a camera was the major source for this safety, but there were also doubts expressed about whether they were really being seen. To see and hear each other during a video conversation at the same time means safety and generates a closer contact. For some older persons, the feeling of safety was unchanged after replacing homecare visits with eHomecare, in that they were still feeling safe. eHomecare also provided safety without being disturbed by homecare staff during the night. eHomecare provided a re-establishment of and a growing safety for the relatives. To know that the older person is monitored without being disturbed at night and having assistance when needed made the relatives feels safe. This brought forth a calm and a better night’s sleep for the relatives. To see and hear the older person on the videophone facilitated increased participation in the older person’s everyday life, thus increasing safety. Relatives can make e-visits between the homecare visits and make an immediate contact without travelling. To have the information directly from the older person instead of asking homecare staff about the older person’s situation is a part of the safety. eHomecare can also be used to a greater extent with new possibilities to increase safety, since the videophone can give relatives the opportunity to ‘visit’ the older person during breaks at work, for example. Relatives felt relieved to be able to watch everyday situations, which generated thoughts of increasing the number of cameras.

There were also ethical reflections and doubts about integrity concerning the question of whether it was acceptable to observe the older person in all situations. It was also said that technology might not be a solution for everyone, depending on the older person’s physical condition. Concerns about reduced human contact and that technology was a way to save money were also mentioned.

7.2 Study II – the experience of communication in an eHomecare context

Communication is understood as a vulnerable unifying interaction. The participants expressed different reasons for communication in their everyday life.
With communication they could attain *togetherness and affection*, by giving and receiving affection. Pleasant sharing of thoughts, interests and memories with others provided happiness and calm to the older participants. Communication was also used for providing support and for information exchange to know how relatives and friends are and, the older persons’ situation. Communication is also explained as a *vulnerable activity due to limitations*, such as a decreased communication capacity due to physical changes and fading social networks as friends pass away. Caring for a spouse could also mean a withdrawal from friends, as the caring left little or no free time. Communication was found to provide *increased closeness and participation with the right preconditions*. Both older persons and relatives looked forward to increased communication possibilities with eHomecare, especially with grandchildren. Some of the older persons had great expectations about this and talked about it as promising. After six months’ use, eHomecare was understood to support the participants’ communication and communicating by eHomecare was expressed as being ‘close’ despite the distances involved: seeing each other via a videophone generates a closer contact between the users. Relatives have a better overview of the older person’s health status, and the older persons expressed that they have more confidence in homecare staff when they see them. They become closer than they would via an ordinary phone call. Visual contact also provides a feeling of being more ‘into the older person’s life’, and thus makes it possible for relatives to support in another way.

Communicating by eHomecare also generated participation possibilities for the older persons, as interactions became possible without leaving their home. Relatives could communicate from different places, and the older persons could take part in their relatives’ lives from new perspectives, which was a mutual pleasure. eHomecare also provided participation possibilities for relatives living abroad, when eHomecare might be the only possibility for them to meet the older person. However, there were also cracked expectations due to older persons’ limitations in using the technology. The older persons could not choose when to communicate and could only receive incoming calls due to the videophone settings. Other older participants were unsure of how to use the technology, limiting their access and thus their communication. These limitations and worsened health made the older persons withdraw from the technology. Cracked expectations also dealt with broken promises and older persons’ disappointments when communication with relatives did not turn out as promised. One older participant expressed that this probably was due to the relative’s lack of time.
7.3 Study III – care managers’ perceptions of eHomecare

The decision of CMs to suggest eHomecare for an older person, or the active choice of an older person for eHomecare are affected by influences from surrounding organizations and relatives. Decisions are made by key determining aspects, such as CMs’ responsibility for economy and to save resources. There will also be future demands of eHomecare as the users become more experienced and develop preferences for technical solutions. How the media promote eHomecare affects the attitudes towards and acceptance of the service. Opposition from homecare providers to eHomecare is influenced by financial concerns because of the reduction in billable hours of approved homecare that it might lead to. CMs can also meet resistance from homecare providers who try to influence older homecare users not to accept eHomecare and try to persuade them to select traditional homecare. The attitudes of relatives also matter, as they influence the older persons’ decision-making, either by encouraging or discouraging eHomecare usage. Relatives encourage eHomecare use if they have technology skills, or if they will have benefits themselves from the service, for example increased contact via a videophone. Relatives who prefer traditional homecare visits and who discourage the use of the service do so because they are afraid of reduced contact or believe that eHomecare is only offered because of financial reasons.

CMs perceived that there were difficulties in managing eHomecare. This was due to their own initial negative perceptions of the technology, finding the design frightening and confusing, and doubting its reliability. CMs also had ambivalent attitudes they tried to counteract. At the same time as having positive expectations of eHomecare, they also felt that they had lack of knowledge and control. There were also varying levels of acceptance and commitment among the CMs, due to differences in knowledge and age. Having different views became an important part of the process in the organization, leading to the CMs becoming more united about the eHomecare service. CMs expressed a complexity in offering eHomecare. It was difficult to present and offer the service. At the same time they could meet opposition because of older peoples’ and relatives’ fear of technology. CMs said they lacked the knowledge, strategies and time for managing eHomecare. Older peoples’ needs for social interactions or privacy were a guidance for CMs in offering eHomecare.

CMs perceived that eHomecare can improve the quality of everyday life for older people. With eHomecare and the night camera quality in everyday life can increase for the older person. With the camera the older person can feel an increased safety at the same time as not needing to be disturbed during the night. This was expressed to increase the sleep and privacy. To increase quality in everyday life with eHomecare it was important to offer the right tools at
the right time. Symptoms of dementia or cognitive impairment were seen as possible obstacles, making it difficult to adapt and use eHomecare.

7.4 Study IV – hindrances and preconditions in eHomecare implementation

Both experienced and inexperienced CMs described a widespread resistance to technology in elderly care and expressed the importance of preparing society and relevant stakeholders to prevent a lack of support, which they described as a precondition for their mission. Experienced CMs expressed that there must be an acceptance of eHomecare in society before CMs present and offer the service. Inexperienced CMs believed that the technology could intimidate prospective users so there must be familiarity and credibility before eHomecare is offered. Society must be prepared by the media presenting satisfied users of the technology, by professional advertising and information campaigns nationwide. Both experienced and inexperienced CMs emphasized the importance of relevant stakeholders taking part in the implementation to create a positive attitude, so that eHomecare can be accepted and firmly established by the providers. Older people sharing positive experiences gives credibility and pensioner organizations should participate as potential information channels, informing about the service before it is needed.

CMs also expressed that good organization is a prerequisite for avoiding organizational concerns. Such organizational concerns were perceived by CMs to be a hindrance to their mission in managing eHomecare. Both experienced and inexperienced CMs expressed concerns about being the ones responsible for managing eHomecare in the organization. Experienced CMs also expressed that that Freedom of Choice Act (LOV) is a barrier when implementing eHomecare, since municipalities organized without Freedom of Choice Act (LOV) or with few private care providers are expected to implement eHomecare more efficiently compared to municipalities with a selection of different care providers. Inexperienced CMs expressed doubts about the municipality’s ability to finance eHomecare. Finances were perceived as likely to become an obstacle for developing and offering eHomecare equally.

CMs perceived their work situation as a limitation to or an opportunity for developing a trustworthy role, and as a precondition limiting or giving an opportunity for their maturing in their CM role. Experienced CMs expressed that time and information were of great importance in their mission. Lack of time due to high workloads was stated to be one of the main obstacles in experienced CMs’ mission during the implementation of eHomecare, resulting in a
deprioritization of eHomecare. Lack of regular service updates created confusion. An implementation group in the organization, with more time for eHomecare, had facilitated the experienced CMs’ mission when eHomecare was implemented. Discussion with colleagues with more knowledge was supportive. The inexperienced CMs expressed that the work situation was important for developing trustworthiness. To facilitate their mission, inexperienced CMs expressed they must be well informed, positive about the technology, show that they believe in it and be able to defend it. The working situation must give inexperienced CMs opportunities to explore and test the technology and to meet experienced CMs from municipalities that are already using eHomecare so that they can learn from proven experiences.

Inexperienced CMs’ expressed concerns about technology compliance which reflected their own individual doubts of eHomecare and distrust in older people’s technology skills. If inexperienced CMs are not so familiar with technology this might affect their confidence in using it. This may in turn influence their attitude towards the significance of eHomecare and the older person’s ability to use technology. Inexperienced CMs express that eHomecare is not for everyone. Older individuals are expected to have different preconditions when managing the technology. The preconditions for offering the service will differ from person to person. When eHomecare cannot be offered to everyone, this hindrance can be seen as an issue of equity. If there are practical problems with the technology, relatives are expected to be worried and become a hindrance when eHomecare is offered, therefore there must be a backup plan to present.

7.5 Summary of the results

In Study I it was found that eHomecare can promote safety for older people and for their relatives. The older persons experienced a new aspect of safety, and for relatives their safety was re-established. However, there were also some ethical concerns about the use of the eHomecare technology, such as safety threats. In Study II it was expressed that communication can be described as a vulnerable activity due to ageing and changes in older persons’ lives. However, with the right preconditions, eHomecare and communication can increase closeness and participation. The technology made it possible for older people to participate in social interactions without leaving their own homes, and relatives were found to become closer to and more involved in the older person’s life. There can also be issues regarding the use of eHomecare, understood as cracked expectations. In Study III eHomecare was perceived by CMs to improve the quality of everyday life for older people if the right eHomecare technology is offered at the right time. At the same time, CMs play a central role and face a challenging task when eHomecare is introduced.
in homecare. CMs expresses’ difficulties in the process of managing the service and their decisions are influenced from surrounding organizations and relatives. In Study IV it was found that there can be several hindrances to CMs’ mission when eHomecare is introduced. Society was seen to be unprepared for technology in homecare, therefore media information and the participation of relevant stakeholders in the implementation process were thought of as preconditions for CMs’ mission. CMs also have organizational concerns relating to finances, Freedom of Choice Act (LOV) and the question of whether their profession is best suited to managing eHomecare. CMs need a work situation that gives them an opportunity to develop a trustworthy role. Lack of time and high workloads were expressed as being a hindrance for their mission. Further, inexperienced CMs expressed that older person’s inability to use technology and relatives’ fear of technical errors can be hindrances to CMs mission.
8 Discussion

The overall aim of the thesis was to examine how eHomecare affects the daily lives of older users and their relatives, with a focus on safety and communication. Further, the aim was to explore CMs’ perspective of eHomecare. The main findings show that eHomecare can facilitate safety for older people and their relatives (Study I), provide opportunities for communication with an increased participation (Study II), and is perceived as bringing quality in older people’s everyday lives (Study III). At the same time, CMs highlight difficulties in offering eHomecare as a new homecare option (Study III). To manage eHomecare CMs need a society that is well informed about eHomecare and that relevant stakeholders are engaged in the implementation. They also need a supporting organization with good working conditions (Study IV). The discussion that follows is based on the main findings of the four studies and the overall aim.

8.1 eHomecare – a possibility for safety and increased participation

*eHomecare – a safety-producing component*

Most of the participants expressed that they felt safe when using eHomecare. For example, the camera could detect incidents in the older persons’ home and the videophone was a tool with which social interactions and check-ups were maintained, thus providing safety (Study I). Based on Segesten’s conceptual framework (1994), the camera and the videophone are understood as safety producing components, which made eHomecare a resource that offered the older person a new kind of safety and, the relatives a re-established safety in everyday life. However, although it was found that eHomecare can be a component for older people’s and relatives’ safety (Study I) it is important to understand that eHomecare itself does not mean safety per se. According to Segesten (1994), the resource itself is not enough to provide safety. The individual must be aware of the resource and be able to control it, in order to feel safe (Segesten, 1994). Therefore, to feel safe, the older person must have knowledge about the technology, must be able to use it and must find it useful. If not, eHomecare can even counteract its intended purpose. If the older person has been provided with a camera, for example, without knowing its purpose
or how it is used, it may be perceived as frightening, thus becoming a threat instead of a safety-producing component. Since monitoring with cameras can be experienced as causing serious feelings of violation (Zwijsen, Niemeijer & Hertogh, 2010), this must be considered and should be countered with relevant comprehensible information (Swedish National Council on Medical Ethics, 2014). If the older person is not able to handle a specific technology it might cause withdrawal from eHomecare (Study II) and the technology will not be used as intended, thus decreasing the possibilities for safety. The homecare staff responsible for the technology is another safety component, and they must use the technology in the correct way if eHomecare is to be a safety-producing component for the older person. Videophone and camera supervision must be performed with the same respect for the older person as with traditional care. The older person must trust that the technology works and is being used according to agreement.

Homecare staff also have an essential role in allowing relatives to feel safe with eHomecare. One prominent reason for relatives’ safety was the camera since it had relieved their concerns for the older person at night (Study I). This safety is understood as a re-established safety (Segesten, 1994), which is dependent on the technology and the homecare staff’s handling of the technology. This means that relatives must feel confident that the service works to achieve this re-established safety at night. In Study I relatives expressed that they were safe with the service since they got information about incidents happening at night and that staff had then visited the older person. The perspective of relatives and their needs for information should always be ensured (National Board of Health and Welfare, 2016b). However, since there are also doubts about eHomecare (Studies I, III & IV), relatives must initially be well informed about eHomecare and about all incidents that homecare staff have responded to and that have required physical visits. Relatives are in turn affecting eHomecare’s possibilities to be a safety-producing component for the older person. Seeing each other on the videophone makes the older person feel safe, but if not used as promised or expected (Study II), it can cause worries instead of safety. Based on these reflections it is highlighted how each person in some way involved in or using eHomecare affects its possibilities to be a safety-producing component for the older person or a relative.

Increased possibilities for participation
Both verbal and nonverbal communication (Watzlawick et al., 1967) were mediated from a distance by eHomecare, and visual communication was understood as the most significant. Both the older person and relatives had benefits from seeing each other, since the communication gave a feeling of closeness and facial expressions gave information about the older person’s health status (Study II), generating a sense of safety (Study I). eHomecare increased the older persons’ possibilities to participate in visual social interactions without
leaving their own homes, and the nonverbal and verbal communication made it possible for both the older person and relatives to take part in each other’s lives (Study II), consistent with the findings of Tsai and Tsai (2010). At the same time the video communication benefit both the older person and relatives, it can also pave the way for even more relatives to become family caregivers and thus a part of the older person’s care.

Relatives experienced the possibility of increased participation in the older person’s life as positive. The participation provided opportunities for being social with the older person, but it also meant increased possibilities to be involved in the care of the older person (Studies I & II). Relatives’ care has a significant impact on the older person’s health (Eriksson, 2004), and they are often expected to be a resource when the older person is in need of care and support (Swedish Society of Nursing, 2015). However, since relatives’ health is affected by the extent of the care they perform, their own wellbeing can be threatened (Winquist, 2016) if the technology is used incorrectly. As the videophone makes it possible to supervise the old person at any time and from anywhere (Studies I & II), relatives can take on greater responsibility, and thus it might become a burden. On the other hand, the video communication opens up possibilities for care to be shared between several relatives, and for it not to depend solely on one person.

Another concern is the extent of use. In Study I a relative described how the videophone could be used anywhere and how it was fun to watch the old person. At the same time there were concerns about whether it was okay to watch the older person in all situations. It is known that there are concerns about camera supervision and that people can be afraid that others will use the technology in the wrong way. However, questions remain about who decides when or if relatives’ supervision has gone too far, and whether the older person may have difficulties in saying no to relatives, since they are dependent on relatives’ affection to feel safe. There are also cracked expectations to be aware of (Study II). Due to information given when technology was granted, the older person can have high expectations of increased communication and participation with relatives, therefore there can be disappointment if this does not happen.

In order for eHomecare to be a safety-producing component and to increase older people’s possibilities for participation, it is equally important to have knowledge of how its use can counteract its purpose. With this knowledge, several ethical issues can be avoided. Considering ethical issues when welfare technology is introduced and offered to an older person is a high priority (Swedish National Council on Medical Ethics, 2014) in order to prevent harm. However, since eHomecare is a homecare alternative that can support safety and communication, older persons and relatives should not be deprived of
their right to be offered this support. Therefore, special attention must be paid to the management process of the service, in order to offer the service based on relevant knowledge.

8.2 eHomecare at the entrance of homecare

Although ICT is not a new phenomenon in healthcare work (Sävenstedt & Florin, 2013) the use of technology in the elderly care sector still seems to have difficulties in getting started. Except for digitization of security alarms, the introduction of welfare technology in the Swedish homecare service has increased at a slow pace (National Board of Health and Welfare, 2017a). Based on the findings in this thesis, it can be understood that one reason for this is that society is not really prepared to receive technology as a part of the homecare service. There is resistance among care providers, and CMs themselves are affected by their own attitudes and organizational conditions (Studies III & IV). At the same time, the older persons and relatives express some uncertainty and disappointment related to the technology (Studies I & II). Some of these findings are consistent with previous studies showing various factors that are important in the acceptance of technology in elderly care (Loh et al., 2009; Postema et al., 2012; Peek et al., 2014). However, the findings indicate that this can be due to lack of knowledge about eHomecare’s benefits and its use on several levels: the society level, the management process, the older users, the relatives and the homecare staff.

Knowledge required to trust the welfare system

One obstacle to eHomecare being accepted as part of traditional homecare may be a low level of trust in the Swedish welfare system. Both CMs with or without experience of eHomecare expresses that there is a resistance in society and a fear of using technology in elderly care. The media is expressed as a resource for informing people about eHomecare, yet at the same time people are frightened by reports about robots taking over care (Study IV). Since Sweden is faced with an aging population (SCB, 2015) with an increased need for health and social care (UN, 2015; WHO, 2011), the entry of welfare technology may be perceived as only a financial and practical solution, and therefore may generate resistance, as expressed in Studies III and IV. This can in turn damage people’s trust in the welfare system, making it even harder for the technology to be accepted as a part of social care. In order to enable older people and relatives to make steps towards using the technology, they primarily need to feel trust in the welfare system. They need to know that welfare technology plays a part in maintaining the future welfare system, but above all, they need to know the systems’ intention of introducing welfare technology because of its benefits for older persons’ needs. CMs consider the media for winning acceptance and credibility when eHomecare is introduced (Study
IV). Since the media can play a central role in generating trust and credibility in the various possible directions for social policies (Happer & Philoa, 2013), the media can help inform people about the intentions and benefits of eHomecare. At the same time, the media can also introduce confusion and doubt into a debate, and may reduce commitments to action (Happer & Philoa, 2013). However, this can also thought of as a good thing, since it can provide perspectives of different experiences of eHomecare, thus making the system more trustworthy. Concerning CMs’ statements, there is a need to increase society’s knowledge about this issue, in order to facilitate eHomecare to become a natural part of homecare. However, even if the individual CM has no control over this, it is important for municipalities and care providers to be aware of this resistance and to support CMs in managing eHomecare by disseminating information about the service in society.

Knowledge to provide access to eHomecare
The high expectations of welfare technologies for future use (EU, 2013; EU, 2014, Ministry of Health and Social Affairs, 2014 & 2015), financial issues and staff shortages (Government Offices of Sweden, 2010; WHO, 2011; UN, 2015) place high demands on CMs when eHomecare is introduced in the Swedish welfare system. Being perceived as trustworthy and possessing knowledge are essential for CMs in managing eHomecare (Study IV). CMs must have knowledge about and be aware of their own attitudes to the service. They must also have knowledge about the technology and about how to inform people about the service (Study III), and must regularly update their own knowledge about changes in supply (Study IV). In order to acquire this knowledge CMs need sufficient time (Studies III & IV), which was described as a shortcoming (Study IV) and thus affecting their mission to offer the service (Studies III & IV). Even though the CMs experienced positive support from a project group (Study IV) this could not compensate the lack of time, understood as a crucial factor for CMs to gather knowledge. It is already known that CMs often have a heavy workload with little time to perform their work, leading to rapid assessments and stress (Norman, 2010). This means that if and how the older person is offered the technology is most likely dependent on the CM’s own attitudes, knowledge and time. eHomecare is a part of homecare, and is expected to and was also found to provide safety and possibilities for participation (Studies I & II). These are factors that affect the older person’s health, and are central goals for the Swedish welfare system to ensure good social care for older people (Government Offices of Sweden, 1998). Good health and social care should be performed with knowledge and should be individually adapted, letting the older person participate in deciding about their own care (National Board of Health and Welfare, 2017b). If older persons are to be able to make their own decisions about eHomecare and to evaluate whether the service is an alternative, CMs must have the time and
knowledge to present adequate information. If not, the older person is prevented access to a welfare service that are unequal offered, because of CMs’ preconditions.

**Granting the right technology through a knowledge-based tailored introduction**

Offering and granting eHomecare can be understood as a tailored introduction based on knowledge, in order to grant the best suitable eHomecare service. Older persons can have doubts about their own ability and be unsure of how to use technology (Peek et al., 2014), which was also found in this thesis (Studies II & IV). Limited access to the videophone due to settings the older person had no control over, for example, was described. This made the older person withdraw from the technology. Worsened health was another reason for older persons to end their use of the technology (Study II). CMs expressed that older persons have different preconditions for managing technology (Studies III & IV) and cognitive impairment can affect the adaption and use of technology (Study III), therefore eHomecare is not suitable for everyone (Studies III & IV). If older people are to accept and use the technology, they must know how to use it and know that they are in control of it (Peek et al., 2014; Kapadia et al., 2015). This highlights the importance of the assessment to determine whether eHomecare is the right alternative for the older person. It also highlights the importance of proper information about the service and training, and for CMs to follow up granted eHomecare. CMs already work with a need-oriented and systematic approach that follows laws and guidelines (National Board of Health and Welfare, 2016c; Rönnbäck, 2011) to provide good assessments and regular follow-ups. However, since eHomecare is a new homecare alternative for CMs to assess, the issues mentioned above are relevant for them to reflect on.

The perspective of the individual old person is of great importance here. It is often assumed that older persons have problems in learning about and using technology, due to a lack of interest or physical capabilities (Wandke, Sengpiel & Sönksen, 2012). Even if normal ageing implies physiological changes (Larsson & Thorslund, 2006), and older homecare users are often at an advanced age (Lagergren, 2013), older people do not form a homogeneous group. With a person-centred approach (Swedish Society of Nursing, 2016), the older person’s interests, capabilities and needs can be assessed when deciding about eHomecare, and the older persons’ ability and limitations will guide the choice of technological tool. eHomecare must also be offered at the right time, for example at an early stage of dementia, so that the older person is able to use the technology (Study III, and in line with an earlier study by Boman, Rosenberg, Lundberg & Nygård, 2012). This also gives the older person the opportunity to decide for themselves about the technology (Olsson, Engström, Skovdahl, & Lampic, 2012), for example the use of a camera.
Information about eHomecare should be adapted to the older person’s ability to understand, and should be provided with adequate time to process the information given (Study III). Older people are often in need of technical assistance to learn and operate new technology, and available support will affect its continuing use (Lee & Coughlin, 2015). Therefore, it is suggested that homecare staff responsible for performing eHomecare are well trained and have knowledge about the technology, so that they are fully able to support the older person. Homecare staff in close contact with the older person can observe whether the technology fulfils its purpose, and can pay attention to needs or wishes for changes. However, as mentioned above, CMs regularly follow up granted services, and this also applies eHomecare. Since eHomecare is a new form of service for all actors involved, it might be crucial for CMs to follow up these grants at an early stage, until eHomecare is embedded in the daily working routines of homecare staff.

**Homecare staff need knowledge about a new work situation**

Voices that are not heard in this thesis are those of the homecare staff, although homecare staff were mentioned by the CMs as having a significant role in the eHomecare context. The negative attitudes of homecare staff to eHomecare are expressed as a hindrance for CMs when the service is offered and granted (Studies III & IV). It has been found that the resistance of healthcare staff to ICT in elderly care is due to fears about reductions in staff numbers (Sävenstedt, Sandman & Zingmark, 2006), lack of personal contact with the older person (Postema et al., 2012), a deteriorating professional standard when information gained through physical meetings may be limited and concerns for the older person’s privacy (Nilsen et al., 2016). In addition to financial concerns (Study III), these thoughts are likely to be the reasons for the resistance of homecare staff to eHomecare, therefore they need to be provided with knowledge about these issues. They need to know how eHomecare can benefit the older users and relatives, and how the service will affect their work situation. CMs emphasize the importance of informing and educating homecare staff about eHomecare, and enabling their participating in the implementation of the service, in order to reduce resistance (Study IV). In addition, it can be wise to let them reflect upon their own work situation, considering the reasons for resistance mentioned above. Since there is a duality of attitudes in using ICT among healthcare staff (Sävenstedt, Sandman & Zingmark, 2006; Postema et al., 2012) and since attitudes can be changed with knowledge acquired through experience (Nilsen et al., 2016), these are issues for the homecare staff to discuss with colleagues experienced in eHomecare. Being involved in a co-creation process and being motivated by a positive attitude towards technology have been found to decrease care providers’ resistance to welfare technology (Nilsen et al., 2016).
It was found that there are several knowledge gaps that must be filled to facilitate the embedding of eHomecare in the homecare service and to provide the older person with the right technology support. At the same time, there are high expectations that the use of welfare technology in the municipalities must grow. Knowing that there is resistance to introducing welfare technology in elderly care (Studies III & IV) it can be understood that CMs carry a heavy responsibility when eHomecare is introduced. The question is whether they have the ability and the right preconditions to shoulder this task, since they have a heavy workload with little time for their assignments (Norman, 2010). Both CMs and homecare staff must initially be given time and resources to acquire knowledge of how the new services work and what their role is in relation to the new service. Initially, it may be wise to counteract negative attitudes of individuals and groups with relevant knowledge, while giving room for ethical reflections. It is essential to remember that when introducing eHomecare, a part of traditional care is replaced, therefore it is natural to reflect on this new form of care. There must be opportunities to practically train for their new roles and to exchange experiences with each other. Both CMs and homecare staff need to understand how technology works, which individuals will benefit most from the technology and how to best use it. Furthermore, CMs must have the ability to explain and offer the technology in a trustworthy manner, and at the same time must be aware of the relatives’ doubts or concerns about the technology. Finally, CMs must acquire knowledge of how to best follow up the use of the technology. Here, homecare staff have a major responsibility in assisting the CMs, as they are the ones that will have contact with the older person via the technology. The suggestions mentioned above are not intended to be a schedule to follow when eHomecare is implemented in a municipality, since each municipality has its own prerequisites for introducing the service based on finances and the possibility of technical solutions. However, the findings of this thesis highlight how complex this issue is and that CMs need support in their mission to manage eHomecare.
9 Methodological considerations

Due to the aims of the studies, a qualitative approach was chosen for all four studies to highlight the participants’ experiences and perceptions. With a qualitative approach a deeper knowledge can be captured by meeting the participants in their real-world settings, and giving them the opportunity to talk about their experiences. Therefore, individual interviews (Studies I, II & III) and focus groups (Study IV) were conducted, by which the older participants, relatives and CMs have expressed their experiences and perceptions of eHomecare. To assure trustworthiness (Lincoln & Guba, 1987) of the thesis, there have been an ongoing work to achieve credibility, dependability and transferability of the four studies.

The selection of participants is crucial to achieving credibility in a study (Graneheim & Lundman, 2004). All participants were selected by purposeful sampling (Studies I–IV). The municipality’s eHomecare managers asked all older persons (Studies I & II) within the criteria to participate in the studies. Since the eHomecare managers were not in contact with all relatives (Studies I & II), only those who were present when the older person met the eHomecare manager, or who for some reason had telephone contact with the eHomecare manager, were asked to participate. This meant that only a few relatives were asked to participate. In Studies III and IV it was easier to reach the participants but there was still a limited number of CMs that could attend due to their work situations. However, all the participants met the criteria, they were all eloquent and all had the ability to share their different opinions.

The amount of data also affects credibility (Graneheim & Lundman, 2004), and therefore a slow recruitment of participants in Studies I and II was an issue. As data were collected on two occasions with a six-month interval and there were only a few individuals to ask to participate, time became a limitation. In Studies I and II it would have been desirable to have a larger number of participants, since some did not attend the second data collection. Even though it was experienced a saturation (Polit & Beck, 2013) in the data, the loss of the participants who could not attend the second time probably affected the result.

In Study III vignettes were used for data collection. At the same time as the story helping to open up the conversation, it gave the CMs the possibility to
highlight eHomecare spontaneously. There is a risk that the vignette stories were not realistic, and therefore a threat to the study’s trustworthiness (Hughes & Huby, 2004). To avoid this, vignettes that had been used previously by other researchers interviewing CMs in elderly care (Brunnberg & Johansson, 2015) were selected for this study. The stories and the questions were also pre-tested by interviewing other CMs, and they achieved good results in that they were experienced as realistic and relevant.

Focus groups (Study IV) can generate a wide range and form of understanding of an issue through the communication between the participants. In a focus group, the members can be of help to overcome embarrassment and can provide feelings of support. The members also influence each other to speak and respond to ideas and comments (Kitzinger, 1994). The recommended number of focus groups and number of participants differs (Kitzinger, 1995; Krueger & Casey, 2015). To achieve credibility (Graneheim & Lundman, 2004), the recommendation to have at least three focus groups with a minimum of four participants in each (Krueger & Casey, 2015) was followed in Study IV.

However, a weakness of Study IV was that it only had one focus group of CMs with experience of eHomecare, due to CMs lacking time to participate. What may be beneficial and a strength was that the CMs who participated in this group were the ones who had worked most with eHomecare, hence the most experienced. This group also consisted of six participants instead of four, which was the number of participants in the other three groups. The number of participants in each group was found to be appropriate since everyone had the time and opportunity to share their opinions. The interactions between the participants generated different views and questions. In one of the groups there were one participant that initially appeared to be shy but became more talkative after support from the moderator.

A successful focus group interview requires well prepared questions, therefore a question route (Krueger & Casey, 2015) consisting of five categories of questions was developed and used as a guide. The different categories in the guide served as a support to drive the interviews by opening up the conversation, introducing the topic and leading the conversation to more specific questions, and then bringing closure to the discussion. Since a question guide was used and followed, all the participants got the same questions, thus strengthening the dependability (Graneheim & Lundman, 2004). After the first introduction question, pictures of eHomecare equipment were shown. Pictures can be of help in engaging participants and at the same time they allow things to be understood in a different way than with words (Krueger & Casey, 2015). The pictures shown were found to provoke thoughts and stimulate discussion.
In Studies I and II data were collected over two years. For a study to be trustworthy there must be dependability (Graneheim & Lundman, 2004), that is, a stability of the data over time. There is a risk of inconsistency during data collection if the collection extends over time and when data is extensive. It was therefore important to follow the same routines of data collection and to make sure that all of the participants have questions within the same areas. All interviews were also performed by the same author to further strengthen the dependability.

To achieve credibility when data are analysed, the interaction between researchers in the process is essential (Graneheim & Lundman, 2004). To achieve credibility in the analyses there were discussions and reflections between the authors to determine and make agreements about the way data were labelled and sorted. The four analysis processes (Studies I–IV) are also described with examples and representative quotations are presented to strengthen the credibility. The transferability of the four studies of the thesis can only be judged by the reader (Graneheim & Lundman, 2004), therefore each step of the research process has been described. Participants and context are also described to ease the reader’s judgment if they can recognize themselves in the context and apply the result within their situation.

A weakness of Studies I and II was that the data collection started at the same time as eHomecare was introduced. The service was offered and explained by CMs, and supported by homecare staff with little or no experience of the technology. This might have affected the older person’s choice of using eHomecare. It could be that only those who were interested in or who were used to using technology decided to use the service. If the studies had been conducted when eHomecare was embedded in the daily routines, the results might have been different. If there had been more experience of offering and supporting the service at all stages, probably a larger number of older people would have chosen eHomecare. This probably would have meant a greater variation in the data with a broader result.
10 Conclusion and implications

This thesis provides new information of older peoples’ and relatives’ experiences of eHomecare. It also describes the complexity for CMs in managing this service as a new form of homecare. The main conclusions of the thesis are:

- eHomecare can provide safety and increase older people’s and relatives’ possibilities for participation if it is introduced and used correctly. Each person involved in or using eHomecare affects its possibilities to be a safety-producing component for the older person or a relative. In order to prevent harm, ethical issues must be reflected upon when eHomecare is introduced and offered to an older person.

- An enlightened society can help prevent resistance to welfare technology in elderly care, therefore the media can be used to deliver knowledge and support CMs in their mission.

- CMs need time to gather knowledge and learn about the service before eHomecare is implemented. All professions involved in the service need time to reflect on ethical issues and on their own attitudes towards technology in elderly care.

- Offering and granting eHomecare should be performed through a tailored introduction based on knowledge, in order to grant the most suitable eHomecare service. Since eHomecare is a new form of service, it is crucial for CMs to follow up granted eHomecare at an early stage, until eHomecare is embedded in the daily working routines of homecare staff.

The findings of the thesis can be of use to all health and social workers in their work with older people and their relatives. When health and social care is carried out through collaboration between different professions, it is important that everyone has knowledge of eHomecare and its benefits, as well as of issues concerning its use. In this way, each profession can contribute to ensuring that the older person will have adequate information about the service, in order to make a decision about whether or not to use the service. The findings also provide information that is of interest for older people and relatives. Since
knowledge about eHomecare is sparse, the findings can, along with other sources, be of use when eHomecare is implemented.
11 Future research

In this thesis the voices of homecare staff are not heard, and their perspective is therefore of interest for future research. This group can probably give information about difficulties in using the technology and present suggestions for how eHomecare can best be performed. Hospital ward or medical station nurses form another important group, and it is of interest to discover what they know about eHomecare, what their attitudes towards it are and how they talk about the service to older patients and relatives. Since the studies of this thesis only included a small number of participants, it could be relevant to make similar studies in a municipality with other CMs, older eHomecare users and relatives.
12. Summary in Swedish

Populärvetenskaplig sammanfattning
Välfärdsteknik förväntas vara ett sätt att möta utmaningen med en allt växande äldre befolknings behov av en fortsatt god vård och omsorg av äldre. Under hösten 2013 introducerade elektronisk hemtjänst (eHemtjänst) i Västerås, som stöd och hjälp i vardagen via informations- och kommunikationsteknik [IKT]. Teknik som erbjuds var en elektronisk brevlåda, nattkamera samt fast och fjärrstyrd bildtelefon. eHemtjänsten innebar då dag- och nattillsyn, påminnelser, svar på larm samt sociala interaktioner. Även anhöriga kunde ta del av tekniken för att kommunicera med den äldre.

Syftet med avhandlingen var att undersöka hur eHemtjänsten påverkar det dagliga livet för äldre och deras anhöriga, med fokus på trygghet och kommunikation, samt att utforska biståndshandläggarnas perspektiv på eHemtjänst; deras förväntningar och erfarenheter av implementeringen av eHemtjänsten. Avhandlingen inkluderade två studier om äldre och anhörigas erfarenheter av trygghet och kommunikation, före och efter 6 månaders användning av eHemtjänsten. Två studier utforskade biståndshandläggarnas föreställningar om eHemtjänsten, samt deras förväntningar och erfarenheter av hinder och förutsättningar i uppdraget att handlägga eHemtjänst. Genom individuella och fokusgruppsintervjuer kunde äldres, anhörigas och biståndshandläggarnas perspektiv lyftas fram. Totalt deltog 12 äldre (<65 år), 8 anhöriga samt 30 biståndshandläggare.

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References


In View AB. Retrieved 2016-08-23 from: www.ippi.se


Kitzinger, J. (1994). The methodology of focus groups: The importance of interaction between research participants. *Sociology of Health, 16*(1), 103-121.


Tunstall AB. Retrieved 2016-08-23 from http://www.sttcondigi.com/


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