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# **MONITORING CALLS IN TELEPHONE ADVICE NURSING**

**PARENTS' AND TELENURSES' EXPERIENCES**

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Monitoring Calls in Telephone Advice Nursing  
Parents' and telenurses' experiences  
THESIS FOR LICENTIATE DEGREE (Lic.)

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*“Monitoring calls are the “Rolls Royce” of telephone nursing, it has been very satisfactory, and I have thought that I have done something useful for society”.*

Telenurse in study II.



## ABSTRACT

**Background:** Approximately 2 million of the 4.5 million calls made in 2016 to the 1177 healthcare advice line resulted in the telenurse providing self-care advice to the care seeker. In some of these calls, the care seekers were offered the possibility of receiving a monitoring call. In 2016, 275,000 monitoring calls were registered. A monitoring call is defined as when the telenurse monitors and supervises the course of the disease by telephone, i.e., the telenurse calls the care seeker back at regular intervals to follow the course of the disease and adapt the advice based on the care needs at the time of the call. In previous studies, the use of monitoring calls is mentioned as a method for telenurses to assess the need for care. An extended body of knowledge is needed concerning the phenomenon of monitoring calls. The overall **aim** in this thesis was therefore to increase knowledge of monitoring calls in telephone advice nursing from the perspective of care seekers and telenurses. **Methods:** This thesis consists of two studies that illustrate the experience of monitoring calls from different perspectives: those of the care seekers and those of the telenurses. The thesis focuses on the context, which is typical for qualitative research. Two different sets of data were collected using interviews. In study I, ten parents (nine mothers and one father) were interviewed. In study II, 19 telenurses were interviewed. The data were analysed inductively in both studies using qualitative content analysis. **Findings:** In study I, four main categories emerged: *convenience, confirmation, support and guidance*. In study II, the main category was: *aiming at patient-safe self-care*. The generic categories were *focusing on the parent aiming at increasing their feeling of security, focusing on the child for patient safety, learning for parents and telenurses* and *relieving care*. The parents' *sense of security* seemed to involve a core sense of being able to care for a sick child at home; security often means feeling safe in a specific situation. Security was seen as fundamental in both study I and study II. The parents' experienced that the monitoring call provided an opportunity to share their concerns about their child and the telenurses aimed to give the parents a feeling of security by calling them back. The telenurses described that working with a focus on *patient safety* was a factor in the monitoring call and that the calls contributed to good communication between themselves and the parents. The parents described a feeling of being taken seriously and that they experienced a sense of trust and security. It also seemed that the telenurses used monitoring calls for their own safety by following up on their previous advice and re-evaluating their assessment. Monitoring calls was perceived as a learning opportunity and an opportunity for feedback for both parents and telenurses. Relieving care was one of the aims of performing monitoring calls; the telenurses believed that parents should first try to perform self-care at home before going to a healthcare service. The parents seemed to perceive the monitoring call as a way to save time and it seemed to be more convenient for them to care for their sick child at home. The telenurses experienced, therefore, that by performing monitoring calls they reduced the need for visits to healthcare services.

**Conclusions:** The results show how people can receive expert self-care advice, support and guidance for care with the help of monitoring calls. Monitoring calls seemed to provide a sense of security for those seeking care and also seemed to increase patient safety. Monitoring calls also provides a learning situation for both parents and telenurses. The use of monitoring calls seems to be a patient-safe form of telephone advice nursing and contributes to sustainable healthcare.



## LIST OF SCIENTIFIC PAPERS

- I. Kvilén Eriksson E, Sandelius S, Wahlberg AC. Telephone advice nursing; parents' experiences of monitoring calls in children with gastroenteritis. *Scandinavian Journal of Caring Sciences* 2015; 29; 333-339.
- II. Sandelius S, Mattiasson A-C, Wahlberg AC. Telephone advice nursing; telephone nurses' experiences of monitoring calls to parents of children with gastroenteritis. Manuscript.

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# 1 INTRODUCTION

This thesis is based on the context of telephone advice nursing and the phenomenon of monitoring calls. Monitoring calls are described as telephone nurses (henceforth telenurses) calling a care seeker back after having received an initial call from the care seeker. The telenurse follows and monitors the course of a disease, such as gastroenteritis in children, by calling the care seeker on one or several occasions after the initial call. A monitoring call differs from a follow-up call since the latter deals with following up the patient after, for example, a hospital stay. The monitoring call follows the course of disease, supporting the care seeker with self-care advice and enabling reassessment of the status of the health problem.

My interest in this area started during my clinical work. I have a deep engagement in telephone advice nursing and have worked in this field for more than 10 years, partly in care and development, in recent years in teaching and research, and also in clinical practice at a healthcare centre. The telenurse's tasks and responsibilities in telephone advice nursing are to assess the acute care needs; provide self-care advice, support and training; assist with healthcare information; refer to the appropriate level of care; and coordinate care resources (Wahlberg, Cedersund & Wredling, 2005). Telephone advice nursing is in itself a complex and extensive field of nursing and almost every nurse in the healthcare sector works with telephone assessments. About 1000 telenurses work with answering calls to the 1177 healthcare advice line. Assessing and giving advice concerning health problems by telephone includes giving nursing care to care seekers directly but also indirectly to another person, and in this thesis the focus is on parents of small children with gastroenteritis.

The focus in this thesis is to increase knowledge of telephone advice nursing by researching the phenomenon of monitoring calls. Monitoring calls have, in previous research, only been mentioned in larger studies in which the aims were other than studying monitoring calls, and the phenomenon has therefore not been explored.



## 2 BACKGROUND

### 2.1 MONITORING CALLS

Approximately 2 million of the 4.5 million calls made to the 1177 healthcare advice line in 2016 resulted in a telenurse providing self-care advice to a care seeker. In some of these calls the care seekers were offered the possibility of receiving a monitoring call (see Figure 1). In 2016, 275,000 monitoring calls were registered (1177a, 2016). A monitoring call is defined as when the telenurse monitors and supervises the course of disease by telephone, i.e., the telenurse calls the care seeker back at regular intervals to follow the course of the disease and thus adapt the self-care advice based on the needs at the time of the call. In some of the calls, the care seeker could be referred to a healthcare service before or after a monitoring call (Wahlberg et al., 2005).

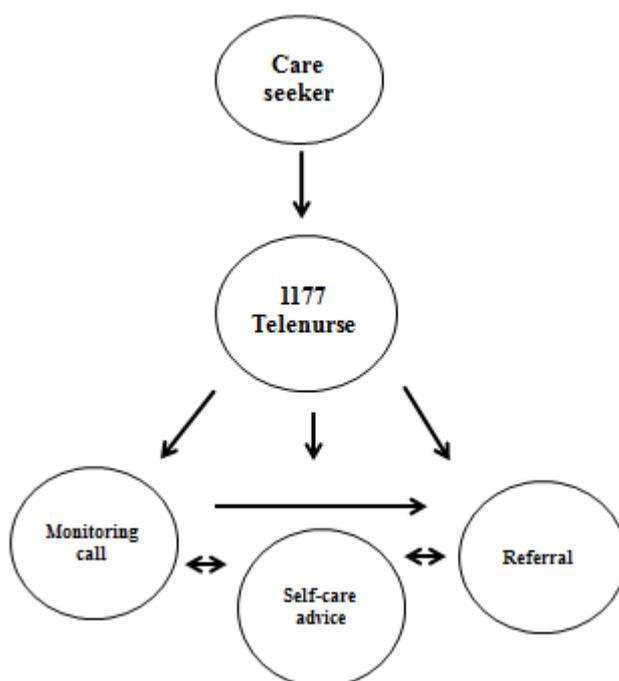


Figure 1. Illustration of the process of the monitoring call.

Usually, the telenurse who takes the first call makes the monitoring call, but a different telenurse could also perform the monitoring call. The description in the Dictionary of Nursing (6th ed. 2014) of monitoring is: the periodic observation of a patient's condition, which may be by visual, manual, or electronic means. In Swedish child healthcare, the concept of health monitoring (hälsoövervakning) is defined as a method of working that includes regular follow-up of children's health and development in order to detect anomalies in early childhood (National Board of Health and Welfare, 2017a).

Since Florence Nightingale established monitoring and observation as part of the nursing profession and thus gave an incentive for trained nurses, the profession has been associated

with "watchful care" i.e. assessing signs of deterioration or improvement in health and protecting the patient's safety and well-being (Nightingale, 1970; Sandelowski, 1998). In Wahlberg et al. (2005) showed that telenurses used 22 criteria as a basis for assessing the need for care; one of these criteria is monitoring the care seeker by following the course of the disease through one or more monitoring calls. Telenurses have described how they use the monitoring call to ensure that the original assessment and self-care advice given were adequate.

### **2.1.1 Self-care advice**

Orem defines self-care as a person's function in life and as their experience of health and wellbeing through caring for themselves. The theory of self-care expresses the view of human beings attending to themselves. This in itself is complex in that the individual, the self, is both the agent of the action and the object of the action in self-care (Denyes, Orem & Bekel, 2001). Self-care is the practice of activities that individuals initiate and perform on their own behalf to maintain life, health and wellbeing (Orem, 1991). In Sweden, the National Board of Health and Welfare (2017 b) defines self-care in accordance with the Self-care regulation (Egenvårdsföreskriften): *A healthcare measure that licensed healthcare professionals have assessed that a patient can perform for him/herself. Self-care is not healthcare according to the healthcare law, but self-care is the assessment of healthcare needs, healthcare planning and the follow-up of the self-care.* In telephone advice nursing, one can relate self-care advice to Orem's supportive and educational care system, which means teaching the care seeker to perform actions so that his/her own needs are met. This can be achieved by creating an enabling environment in the form of, for example, a monitoring call. The goal is to help the care seeker become an independent individual as soon as possible with the help of nursing care (Orem, 1991). When a care seeker has a knowledge deficit, it can prevent the care seeker from meeting all of his/her self-care needs. The telenurse's role is then limited to helping the care seeker to make decisions and communicating knowledge and skills, including teaching the care seeker (Cavanagh, 2002).

In 2016, self-care advice was given in approximately 45% (2 million) of the calls made to the 1177 advice line at Swedish healthcare call centres and in almost half of the calls concerning patients between the ages of 0-9 years. The advice given was followed in approximately 90% of the calls that result in self-care advice (1177a, 2016). Before giving advice, the nurse has to assess the care seeker's need for care. The assessment needs to include questions about whether the care seeker can perform self-care by themselves or with the help of relatives (Wahlberg, 2004).

### **2.1.2 Monitoring calls versus follow-up calls**

There is a difference in definition between monitoring calls and follow-up calls. The function and use of follow-up calls are described in several studies. In these studies, follow-up calls are described as calls made by a nurse in the hospital to patients who have been discharged from hospital and have gone home, i.e. in a non-acute phase. This may be, for example, to

follow up on health problems of patients with a colostomy or to first time mothers (Zhang, Wong, You & Zheng, 2011; Hannan, 2012). The Oxford Dictionary (2016) describes the follow-up call as a “continuation or repetition of something that has already been started or done”. The difference between these two types of calls is that a monitoring call is a type of follow-up call that involves monitoring at regular intervals with the aim of observing the patient's course of disease in the acute phase soon after the symptoms appear.

## **2.2 THE TELEPHONE ADVICE NURSING CONTEXT**

Due largely to societal influences, such as an increasing complexity in healthcare and the needs and expectations of healthcare consumers, nursing has undergone a significant transformation. The role of the nurse has moved towards supporting the ambulatory care patient in self-care management. This has led to new opportunities for patient coaching, teaching, support and coordination of care. Nurse-patient telehealth encounters are an integral part of ambulatory care nursing (Ruthenberg & Greenberg, 2012). Ambulatory care nursing can be defined as a complex, multi-faceted specialty that encompasses independent and collaborative practice. It is built on a broad knowledge base of nursing and health sciences and applies clinical expertise rooted in the nursing process. Nurses use evidence-based information across a variety of outpatient healthcare settings to achieve and ensure patient safety and quality of care while improving patient outcomes. Telehealth nursing is an integral component of professional ambulatory care nursing that utilizes a variety of telecommunications technologies during encounters to assess, triage, provide nursing consultation and perform follow up and surveillance of patient status and outcomes (AAACN, 2011).

Telephone advice nursing is one of the largest healthcare settings in Sweden today, where Swedes can reach their healthcare call centre by calling the number 1177. This is a national telephone number that people can call around the clock for healthcare advice. Every county/region in Sweden runs its own healthcare call centre but each call centre is also part of a national network and follows common guidelines. The telenurses who work in 1177 healthcare call centres have broad nursing experience and most have specialist nursing training (1177b, 2017). Telephone advice nursing in the US has developed rapidly in recent decades, just as it has in Sweden (Shapiro et al., 2004). In the UK there is a service called NHS 111 (previously called NHS Direct) which is in some ways similar to Sweden's 1177, and this receives about 8 million calls per year (NHS Direct, 2017).

A description of telenurses' competency published by the Swedish Society of Nursing describes and highlights the knowledge a telenurse needs to have in order to be able to conduct telenursing. The purpose of this description is to highlight the telenurse's unique and professional skills and competence. A telenurse is a nurse who works with telenursing during the majority of their working hours, regardless of practice setting. For example, telenurses work at 1177 healthcare call centres, 112 emergency dispatch centres, healthcare centres and specialist open clinics. The competency description describes the key skills and competencies telenurses need in various fields such as nursing care, communication and education; nursing and medicine; nursing and technology; nursing and the community; nursing and health

promotion/illness prevention; nursing and ethics; research, training and development; and leadership (Swenurse, 2011).

### **2.3 THE TELEPHONE ADVICE NURSING PROCESS**

The telephone advice nursing process differs from face-to-face contact between patients and nurses since it lacks visual communication. One study described how telenurses developed skills to manage interactions with care seekers in order to compensate for the lack of visual cues. These were, for example, listening for physical signs such as heavy breathing and getting the caller to do tests on themselves such as taking their temperature (Pettinari & Jessopp, 2001). There are models that explain and describe the telephone advice nursing process during the dialogue with the care seeker. The call is goal-oriented when both the care seeker and telenurse have clear intentions for the conversation, and the conversation can be seen as a person-centered care meeting (Runius, 2008; Greenberg, 2009). Greenberg has developed a comprehensive model of the process that gives a clear picture of what a telenurse does during the consultation with a care seeker. The model begins with interpreting and understanding what the care seeker says, after which the model illustrates three different phases during the call. Phase 1 is gathering information; this is a category of nursing activities where information about the care seeker is obtained. Phase 2 is cognitive processing and during this phase the care seeker's information is used for determining and decision-making. Phase 3, the last phase, is output, which consists of a number of nursing activities and leads to some kind of nursing action. One of these actions could be a monitoring call (Greenberg, 2009; Ruthenberg & Greenberg, 2012). A telephone self-assessment tool related to this telenursing process is under development and is intended to contribute to the development of communication and interpersonal competence in telephone advice nursing (Johnson, Wilhelmsson, Börjesson & Lindberg, 2014). In Sweden, Runius has developed and described the process of telephone advice nursing. This describes the conversation process through five different phases: *open* where the telenurse starts the call with an open question; *listen* where the nurse listens actively to the care seeker; *analyse* where the telenurse and care seeker create a common picture of the health problem together; *justify* where the telenurse summarizes the essence of the conversation and finally *exit*. In Sweden, this method is used in 1177 healthcare call centres and the telenurses who are active there may receive internal training in this technique, which involves the exploration of health problems by using both open and closed questions. It also involves getting a picture of the care seeker's expectations and concerns, and a picture of the sick person's medical history. In the concluding phase, a summary of the health problem is agreed with the care seeker to obtain a common picture. The pitfalls of conversations are also described, such as when the nurse makes a too hasty decision regarding what the conversation is concerning, or does not analyse the information the care seeker gives and moves too quickly to the decision phase (Runius, 2008).

### **2.4 THE CARE SEEKER PERSPECTIVE**

A care seeker is defined as the person who calls a telenurse for his/herself or on behalf of another person (Swenurse, 2011). One study showed that, in almost half of the calls, it was a

person other than the person with the health problem who called (Wahlberg & Wredling, 1999). In several studies, care seekers have described being satisfied with the telephone advice and to some extent described it as being patient-friendly (Bunn, Byrne & Kendall, 2005; Holmström, Nokkoudenmäki & Sundler, 2016; Kaminsky, Röing, Höglund & Holmström, 2017). A recent study described the differences in satisfaction between care seekers. This study revealed that the care seekers who were advised to seek medical care were significantly more satisfied with healthcare call centres than those who were recommended self-care, however the study also described that a young age and a long waiting time correlated negatively with satisfaction (Gustavsson, Martinsson, Wälivaara, Vikman & Sävenstedt, 2016). It appears that there are aspects that influence satisfaction, such as telenurses' knowledge, which seemed to affect the care seekers' satisfaction. Care seekers were not satisfied when they experienced that the advice given had been insufficient. Emotional aspects also influenced satisfaction, for example, if the care seeker felt secure and if the call had a calming effect (Wahlberg & Wredling, 2001; Gustavsson et al., 2016).

#### **2.4.1 Parents call about their children**

In this thesis, the focus is on monitoring calls to parents of children with gastroenteritis. This is because clinical experience shows that telenurses seem to perform monitoring calls to parents who call about gastroenteritis symptoms in their children. Parents seemed to call when they felt seriously concerned about their children or what they should do as parents; being able to describe what was worrying them reduced their concerns so that they could focus on the problem (Polaschek & Polaschek, 2007). It is common that mothers call about their sick children. Common reasons for conversations with parents cited by healthcare call centres are ear problems, rashes/sores, fever, sore throat and gastroenteritis. Paediatric problems account for about 30-40% of the calls to telenurses, and 5% of the calls to healthcare call centres concern children with gastroenteritis. About 45% of the calls result in self-care advice from the telenurses (Kaminsky, Carlsson, Höglund & Holmström, 2010; 1177a, 2016). Gastroenteritis in young children can be potentially serious due to dehydration, especially in small children (1177c, 2017).

### **2.5 THE TELENURSE PERSPECTIVE**

There are several studies that describe the telenurse perspective. One study described three different perspectives of telenurses' perceived problems when working with telephone advice. Firstly, the *patient perspective*, which describes different categories of problems, for example callers' trust or convincing callers that they do not need to visit the healthcare service. The *nursing perspective* describes the problems related to the telenurse, for example not being able to see the patient, consultation through a third person, and finally the *organizational perspective*, which describes problems in the organization, for example lack of healthcare resources and no feedback, i.e., not knowing what happened after the call (Wahlberg, Cedersund & Wredling, 2003). Holmström & Höglund (2007) also described aspects of telephone advice nursing from the nurse perspective, including ethical problems. Telenurses described the ethical problem of talking with and performing assessments through

a third person, that is talking to a parent or a relative instead of the person with the health problem. Another ethical problem could be discussing personal and sensitive problems over the phone. Balancing callers' needs for information with professional responsibility was an ethical dilemma telenurses described having to deal with, and insufficient resources and the organization of healthcare were also highlighted.

The telenurses use an average of 13 to 18 different bases for their assessments. Three main perspectives of these bases are also described: the *care seekers*, for instance the telenurses may perceive that the care seeker does not spell everything out in words; the *telenurses*, the telenurse can feel unsure of the assessment and can call the care seeker back after a while to follow the course of the disease; the *organization*, for example the telenurses have to base their assessment on the accessibility to available healthcare services. As mentioned earlier, working as a telenurse can be complicated when you do not see the care seeker, but can only listen to and interpret the non-verbal communication. The non-verbal communication can be described as hearing the sounds around the person who is seeking care, for instance when dealing with children, this can be hearing if they are running around or playing, or how they sound when they are coughing (Wahlberg et al., 2005). Telenurses at the 1177 healthcare advice line are supported by a decision support tool called 1177 Decision Support (Rådgivningstöd) (1177d, 2017). The aim of this is to secure consistent and safe assessments (Kaminsky et al., 2017) and, in the case of gastroenteritis in young children, it gives information about symptoms and interventions (see Figure 2).

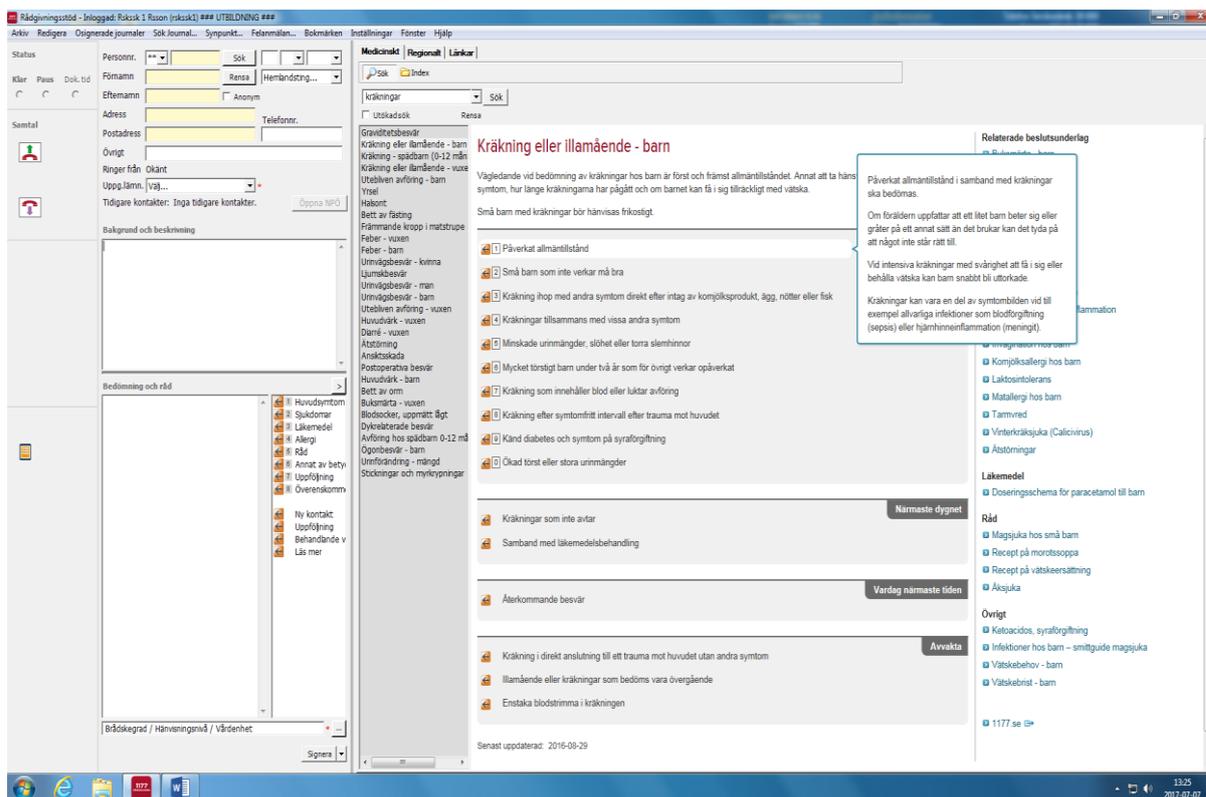


Figure 2. 1177 Decision Support (Rådgivningstödet), vomiting in young children. From Stockholm County Council (Stockholms läns landsting) 2017.

When exploring the communication between telenurses and callers, different types of calls were identified: a gatekeeping call, which can be described as when the focus is on referring the care seeker to another facility; a gendered call, which can be described as when the telenurse acted almost as a mother when a young girl called, but used more direct and technical communication when a man called; and a call marked by impersonal traits. These call types were divided into three different themes; gatekeeping calls, gendered calls and medicine-focused calls (Hakimnia, Holmström, Carlsson & Höglund, 2014). Telenurses felt that having good clinical knowledge was central to the telephone advice; they also believed that they had developed a new communication skill (Purc-Stephenson & Trasher, 2010).

### **3 RATIONALE FOR THE STUDIES IN THIS THESIS**

Telephone advice nursing is one of the most commonly used forms of healthcare in Sweden. Approximately 4.5 million people use the opportunity to call 1177 each year to receive advice from a telenurse and, of these, approximately 1 million calls result in self-care advice to parents/relatives of small children. Common reasons for parents to call 1177 about their child are infections such as gastroenteritis. Through personal contacts, the research team learned that monitoring calls were performed at some healthcare centres in relation to such calls.

Telephone advice nursing is related to self-care advice according to Orem's supportive and educational care system, which means teaching the care seeker to perform actions so that his/her own needs are met. This can be done by creating an enabling environment in the form of, for example, a monitoring call. Earlier studies have shown that care seekers were generally satisfied with telephone advice and that telenurses described assessing the care seekers' need for care as challenging. However, telephone advice nursing is a relatively new area of research where, although some aspects have been studied, there are still knowledge gaps. In some previous studies, making monitoring calls has been mentioned as a method used by telenurses to assess the need for care. There is therefore a need for an expanded body of knowledge concerning the phenomenon of monitoring calls.

## 4 AIMS

The overall aim for this thesis was to increase knowledge of monitoring calls in telephone advice nursing from the perspectives of care seekers and telenurses.

- I. The aim of the study was to describe the parents' experiences of monitoring calls in telephone advice nursing in children with gastroenteritis.
  
- II. The aim of the study was to describe the telephone nurses' experiences of monitoring calls in telephone advice nursing to parents of children with gastroenteritis.

The separate studies will be referred to by their Roman numerals throughout this thesis.

## 5 DESIGN AND METHOD

This research project consists of two studies that illustrate the experience of monitoring calls from different perspectives, the care seekers' and the telenurses', and it focuses on the context, which is typical for qualitative research. This project can be regarded as basic research intending to describe experiences of monitoring calls, and understand and explain phenomena that have not previously been described (Patton, 2002).

Since the area of monitoring calls in telephone advice nursing is relatively unexplored, a qualitative interview method was used with inductive content analysis according to Granheim & Lundman (2004) in study I and according to Elo & Kyngäs (2008) in study II. The qualitative research interview was used with the aim of obtaining a picture of the interviewee's experience (Kvale & Brinkmann, 2009). The qualitative content analyses in these studies aimed to describe variations related to the differences and similarities in the data and used a process of interpretation with focus on the subject and context (Krippendorff, 2013). The aims of these two studies and of the content analysis were to provide knowledge and understanding of the phenomenon being researched (Hsieh & Shannon, 2005) i.e. to create a broad description of the phenomenon of monitoring calls (Elo & Kyngäs, 2008). An overview of the two studies in this thesis is presented in Table 1 below.

Table 1 Overview of the two studies, participants and methods.

<b>Study</b>	<b>Main content of the studies</b>	<b>Participants</b>	<b>Method of data collection</b>	<b>Method of data analysis</b>
<b>I</b>	Description of parents' experiences of monitoring calls in children with gastroenteritis	10 parents	10 interviews face-to-face 2009-2010	Qualitative content analysis Graneheim & Lundman, 2003
<b>II</b>	Description of telenurses' experiences of monitoring calls in children with gastroenteritis	19 telenurses	16 interviews face-to-face 3 interviews by telephone 2013-2017	Qualitative content analysis Elo & Kyngäs, 2008

## **5.1 SELECTION OF PARTICIPANTS**

Participants in the studies in this thesis are from the two parties that are involved in monitoring calls concerning children with gastroenteritis. In study I, the participants were parents who were care seekers calling about their children and in study II they were telenurses performing the monitoring calls. Clinical experience shows that performing monitoring calls in this type of situation is a common intervention at the 1177 healthcare advice line.

Study I was conducted in the west of Sweden where participants were selected by the telenurses working at a healthcare call centre. The participants were informed about the study by the first author who was also director/manager of the healthcare call centre. The telenurses recruiting the participants were given information about the study both orally and in writing at the selected call centre. The participating parents were given a verbal description of the study by the telenurse they had their initial contact with. When the parents had given their consent, the first author called them and gave information about the study again and also sent written information. If they then confirmed their consent, a time and place for the interview was agreed. The parents were also informed that they could cancel their participation at any time. Telenurses recruited participants based on the following criteria: Swedish-speaking parents who called 1177 concerning children younger than two years of age who had gastroenteritis symptoms and who were then given self-care advice and accepted monitoring calls.

Study II was conducted in two 1177 healthcare call centres in Sweden, one in a medium-sized town in the south and one in a medium-sized town in the north. The choice of the call centres was based on the researchers' knowledge that many monitoring calls were performed in these centres. A request for participation was also sent to a call centre in a large city but participation in the study was rejected due to a heavy workload. The managers in the two selected call centres then received information about the study both orally and in writing. When consent from the managers had been received, the first author informed the telenurses directly at a staff meeting and invited them to participate in the study. When the telenurses had given their verbal consent they were provided with written information about the study and then signed a written consent. They were also informed that they could cancel their participation at any time. The participants were recruited based on the following criteria: they should have worked in the call centre for at least one year and they should have performed monitoring calls regularly.

## **5.2 DATA COLLECTION**

### **5.2.1 Study I**

In study I, ten participants were recruited and they had been in contact with eight different telenurses. Data collection took place continuously over an eight month period from June 2009 to February 2010. Ten participants, nine women and one man, were interviewed by the

first author. The first interview was performed as a pilot interview; it was transcribed before carrying out the other interviews and then included in the study, however this was not mentioned in the article. After seven interviews were completed, the data was seen to repeat itself, although three more interviews were then conducted. The age of the participants was between 24 and 36 years (mean 31) and their children's ages were between 8 and 23 months. The interviews with the participants took place two weeks after their monitoring call with the healthcare call centre. The participants chose the location of the interviews, and these were held in the parent's home (n=5), in the parent's workplace (n=2), in a café (n=1), in a healthcare call centre (n=1) and in a healthcare centre (n=1).

The interview began with an open question: "Can you tell me about your experience of calling 1177 when you received a monitoring call?" Sometimes more questions were asked during the interview, for instance: "Can you describe the feeling you experienced when ...". The interviews lasted between 7 and 23 minutes and aimed to get a picture of the parents' experiences of receiving monitoring calls.

### **5.2.2 Study II**

In study II, the interviews were made by the first author. Before the interviews were conducted, a pilot interview was performed to test the interview techniques as well as the subject area. Testing the interview technique was a way to ensure that the arrangement worked in the interview situation. 16 of the interviews were conducted face-to-face at the two healthcare centres and three interviews were conducted by telephone. The number of participants was 19, they were all women and their average age was 56 years. The participants had worked at the call centres for an average of 12 years and 13 of them had specialist nursing training. The interview started with an open question: "Can you tell me about your experience of monitoring calls when parents call about their sick child with gastroenteritis?" The interviews lasted between 9 and 30 minutes.

## **5.3 DATA ANALYSIS**

### **5.3.1 Study I**

The data analysis in study I was performed using content analysis (Graneheim & Lundman, 2004). To obtain an understanding of the phenomenon, latent content analysis was selected to interpret the underlying meanings of texts and what is said between the words. The analysis was performed in several phases. In the first phase, all of the interviews were read through several times to gain an overall sense of the whole. In the second phase, data were divided into meaning units. In the third phase, the meaning units were abstracted and labelled with a code. An interpretation of the underlying meaning was performed in this phase. The whole text was taken into consideration when the meaning units were abstracted/labelled with a code. This analysis process was conducted on an individual basis by the three researchers. In the fourth phase, the codes were compared between researchers based on differences and similarities and, after discussion; codes with similar content were merged and named as a subcategory. In the final phase, the researchers placed subcategories with similar content together into main categories.

### **5.3.2 Study II**

The data analysis in study II was performed using content analysis according to Elo & Kyngäs (2008). This study had an inductive approach, which is recommended when there is not much prior knowledge of the phenomenon. An inductive approach means that the detail is first observed, and then it is combined into larger units. In the first phase, the interviews were read through several times with the aim in mind. In the next phase, the data were organized and this included open coding, categorisation and abstraction. All three researchers compared their subcategories based on differences and similarities and, after discussion; subcategories of codes with similar content were merged into generic categories. The codes were transferred by the first author to a code-sheet in order to group codes into sub-categories, generic categories and a main category.

## **5.4 ETHICAL CONSIDERATIONS**

The studies have received ethical approval, study I D-number 2009/32B22 University West in Trollhättan and study II D-number 2012/894-31/5 Regional Research Ethics Committee in Stockholm.

Ethical considerations were made in line with the Declaration of Helsinki (World Medical Association, 2008). Before the studies, the managers at the healthcare call centres were given verbal information about the studies and were then sent written information. After careful consideration of the information, the managers at the healthcare call centres gave their written consent for participation in the studies. The participants were then contacted and given information, first orally and then in writing. In both studies, the participants were informed that their participation in the studies could be retracted at any time. The participants were also assured that the results obtained from the interviews could not be traced to the informants personally and that the data would be kept locked away and not accessible to unauthorized persons.

In study I, there was a risk prior to the interviews that the parents who were interviewed might experience feelings regarding their ability to care for their child during illness and perhaps even a sense of being an inadequate parent. Another risk identified was that the interviewees could feel afraid to express negative views about the care given and about the healthcare call centre. These risks did not emerge during the studies, but if they had, the interviewees were to be offered support from the primary care team. In study II, there was an anticipated risk that the interview could arouse feelings among the telenurses, for instance their ability to handle different call-situations. If this had affected the telenurses they were to be offered the opportunity to talk with the research leader. The interviews seemed to run smoothly in both studies and, to our knowledge, no anticipated risks emerged.

## 5.5 RESULTS

### 5.5.1 Study I

In study I, four main categories emerged: *convenience*, *confirmation*, *support* and *guidance*.

#### *Convenience*

Parents who had children with gastroenteritis appreciated the opportunity of receiving a monitoring call and regarded it as convenient to be able to get advice about self-care in the home from the telenurse. All were surprised that this possibility existed and that they were able to receive such care, and said that it was a new experience. They also appreciated the opportunity to receive care in the home and not have to take their sick child out; it was suggested that going to the emergency unit was often associated with long waiting times, which was perceived as negative. Parents appreciated that the telenurse made the decision about when the monitoring call would be carried out, so they did not themselves have to make the decision about when it was time to call. The parents felt that they could instead focus on their sick child.

#### *Confirmation*

It was understood that the interaction between parents and telenurses became deeper when they were given the opportunity of receiving a monitoring call. A majority of the parents described how they perceived their contact with the telenurses, saying that they were treated with respect and that this was important in the conversation. It was also seen as an opportunity to share their concerns about their sick child; they thought that this made them feel calmer. They experienced a sense of being seen as a person with individual needs and that there was the feeling of being taken seriously. When the telenurse carried out the monitoring call, this was perceived by the parent as confirmation that they were being taken seriously.

#### *Support*

Parents of children who had gastroenteritis often felt that they were in a vulnerable situation. In such situations, receiving monitoring calls meant that they gained feedback on the care advice they had received and performed. Monitoring calls also provided an opportunity to ask more questions, since asking all the relevant questions in a single call was perceived as difficult. Monitoring calls gave the parents the feeling of not being alone and a sense of security knowing that the telenurse will call back at a specified time.

#### *Guidance*

Telenurses were regarded as experts in providing self-care and being guided by the telenurse through the acute phase was described as useful. The advice to the parents was considered valuable and practical, as well as personal.

### 5.5.2 Study II

Telenurses' experiences of monitoring calls resulted in one main category: *Aiming at patient-safe self-care* and four generic categories: *Focusing on the parent by aiming at increasing their feeling of security*, *focusing on the child for patient safety*, *learning for parents and telenurses* and *relieving care*.

#### *Aiming at patient-safe self-care*

The main category describes the telenurses wanting to provide safe self-care at home; they followed the child's course of disease and made new assessments with each call. They also supported and educated the parents on how to perform safe self-care at home.

#### *Focusing on the parent by aiming at increasing their feeling of security*

A reason for performing monitoring calls was to relieve anxiety and insecurity among the parents. The main concern was to relieve the stress the parents suffered regarding their child's illness. The telenurses sometimes assessed that the parent did not have sufficient knowledge about how to manage the sick child's condition. They described that parents sometimes did not know why the child needs fluid when suffering from gastroenteritis.

#### *Focusing on the child for patient safety*

When deciding whether to make a monitoring call, the telenurses took the child's condition into account, since there could be a risk in performing self-care at home. The child's condition was therefore one reason for making a monitoring call and following the child's course of disease; the child's condition could determine how often the monitoring calls were performed. Another reason for deciding to make monitoring calls was when the telenurses felt insecure about whether their assessment in the first call was correct. They could also make a monitoring call when they felt uncertain about whether the parents had followed the advice given and when they had a feeling that something was not as it should be in the home.

#### *Learning for parents and telenurses*

Making monitoring calls was also about learning for both the parents and the telenurses. Teaching and supporting parents was one of the aims of making the calls. The telenurses wanted to create good and clear communication with the parents and to avoid misunderstandings, and they also wanted to teach the parents about how to perform self-care at home. The telenurses described that they themselves also learned from performing monitoring calls, and that they received feed-back about whether they had made an adequate assessment in earlier calls and if the self-care advice given had been understood by the parent.

#### *Relieving care*

Relieving the demand on healthcare was one of the aims of performing calls; the telenurses believed that parents should first try to perform self-care at home before going to a healthcare service. It was beneficial to give them the possibility to try self-care at home and monitor them at home at first instead of referring to a service in the first call. The telenurse also

decided to carry out a monitoring call when there was a long queue to the 1177 advice line, thus avoiding parents taking the child to a healthcare service if this was not necessary. The limited healthcare resources available was another reason for telenurses performing monitoring calls, the telenurses expressed that working in this way could be a benefit for society.

## **5.6 SHORT SYNTHESIS OF THE RESULTS**

Monitoring calls can create a sense of security by giving anxious parents (study I) an opportunity to share their worries with a telenurse who performs a monitoring call in order to create a safe environment for parents and children (study II).

Monitoring calls can create patient-safe self-care; parents regarded telenurses as experts in giving self-care advice who provided advice that was both valuable and personal (study I). One of the aims of monitoring calls was for the telenurses to follow the course of the disease to be sure about their assessments (study II).

Monitoring calls can create a learning opportunity for the parents who described that they had received positive feedback regarding the self-care they had performed and an opportunity to ask more questions (study I). The telenurses described that monitoring calls could create learning opportunities for both parents and the telenurses (study II). Monitoring calls can facilitate self-care at home and provide care without having to travel (study II). This is perceived as convenient for parents (study I) and facilitates care by preventing unnecessary care visits (study II).

## 6 DISCUSSION

The overall aim of this thesis was to increase knowledge concerning monitoring calls in telephone advice nursing from both a care seeker and a telenurse perspective. In this thesis, the care seekers were parents who called concerning their children with gastroenteritis. The monitoring call focuses on supporting parents in safely performing self-care at home. Central to the concept of self-care is that it has to be initiated deliberately and voluntarily by an individual. The activities necessary for maintaining health and development have to be learned (Cavanaugh, 2002). Self-care is also important for the care seekers so that they can function in life and experience health and wellbeing (Orem, 1991).

The telenurses' competence and caring constitute the basic structures for patient contact in professional care. A telenurse has, as part of their competence, developed the ability to make contact with people/care seekers over the telephone. A monitoring call can be understood as a caring meeting where professional care is carried out by telephone, as described by Halldorsdottir (1996). The professional care can be interpreted as the telenurse strengthening the care seekers empowerment, giving advice and carrying out monitoring calls, and alleviating the anxiety of parents and teaching them to manage their child's illness. The telenurse has a high level of expertise in making clinical decisions by telephone (Swenurse, 2011).

### 6.1 CARE SEEKERS' SENSE OF SECURITY

Striving to create a sense of security among parents was seen as fundamental in both studies. Parents who visited the emergency department with their child perceived the illness to be more serious and reported greater levels of worry, stress, helplessness and upset, and were less confident (Ogilvie, Hopgood, Higginson, Ives & Smith, 2016). For parents, safety is a core sense of being able to care for their sick child at home; security is often feeling safe in the specific situation (study I). In order to build security for the care seekers, the telenurses must create good communication with them (study II) and initiate a professional connection, since this is the fundamental difference between caring and uncaring encounters (Halldorsdottir, 1996). Telenurses seemed to create a sense of security among parents with the help of monitoring calls (study II) and the parents seemed to feel safer in the situation when they described a feeling of shared responsibility (study I). Supportive activity is a valid way of giving assistance when parents are faced with something unpleasant and painful (Orem, 1991), and supporting in telephone advice nursing is an implicit output of a call and includes actions such as reassuring, encouraging and validating (Rutenberg & Greenberg, 2012). Telenurses described monitoring calls as a way to allay concerns (study II). Just the knowledge of being able to call a healthcare call centre gives care seekers a sense of security (Ström, Marklund & Hildingh, 2009).

The monitoring calls were also about alleviating the anxiety of parents of children with gastroenteritis (study II). The parents experienced that they were given an opportunity to share their concerns about their child (study I), which is also confirmed by another study

(Polaschek & Polaschek, 2007). Many callers also expressed anxiety about calling, feeling unsure about how appropriate their call was (Richards, Pound, Dickens, Greco & Campell, 2007).

## **6.2 PATIENT SAFETY**

Telenurses described that working with a focus on patient safety was fundamental. The parents described that the monitoring calls contributed to their feeling of being taken seriously and that they felt a sense of trust and security when they received monitoring calls (study I). Orem described several methods for supporting patients in self-care and providing physical or psychological support is one of them. By giving physical and emotional support, the helper is able to encourage another person to initiate or persevere in the performance of a task, to think about a situation, or make a decision. Supporting another is also used extensively in childcare and in other situations where individuals are in the process of developmental change (Orem, 1991). The telenurse helps to create an environment that enables parents to care for their child. It also seemed to be important for the telenurses to know whether the parents had understood the self-care advice, that the communication in the call was good and that it ended with an agreement between the parent and the telenurse (study II). The National Board of Health and Welfare (2017b) states that part of the health assessment in self-care also includes an analysis of whether or not a patient may be exposed to a risk of injury if it is demonstrated that the specific measure/measures taken cannot be considered self-care. This means that the assessment by the telenurse also includes an analysis of whether the child would be at risk or not by giving advice to the parents on self-care. Not checking that the caller has understood the given advice seems to be a patient safety risk (Ernesäter, Winblad, Engström & Holmström, 2012). It appears that the telenurses use monitoring calls for their own safety, to follow up on their advice and to re-evaluate their assessment (study II). The nurses' competence and their caring approach are prerequisites for the nurse-patient connection and together they form the essential structure of professional caring (Halldorsdottir, 1996). A study of malpractice claims regarding calls to healthcare call centres found that a risk to patient safety occurred when the telenurses did not re-evaluate their assessments in every new call (Ernesäter, Winblad, Engström & Holmström, 2012). Telenurses perceived the possibility of being able to call care seekers back as a prerequisite in their work environment and it seemed to increase their feelings of control and reduced their anxiety about making incorrect assessments (Björkman, Olsson, Engström, Wahlberg, 2017). Monitoring calls could also be seen as a form of safety net, contingency plan and implementation procedure to ensure that the strategy is effective and the patient is safe (Jones, Neill, Lakhapaul, Roland, Singelhurst-Mooney, 2013). The telenurses safety net advice included information about serious symptoms to look for; in monitoring calls the telenurse called back to feel reassured that the assessment was correct and the self-care advice had worked (study II).

### **6.3 LEARNING IN MONITORING CALLS**

Parents talked about the need to get support linked to their own decisions and to give feedback regarding the advice given (study I). Effective feedback must answer three major questions; What are the goals? How am I going? And what activities need to be undertaken to make a better progress? (Hattie & Timperley, 2007). Telenurses described that supporting and teaching parents how to perform self-care at home was one of the aims of carrying out monitoring calls and that they wanted the parents to take responsibility for their sick child (study II). The care seeker can learn how to handle the emerging situation with the help of nursing assistance, and teaching is a valid method of helping a person who needs instruction to develop knowledge or particular skills (Orem, 1991). The telenurse's role is to help make decisions and communicate knowledge and skills (Cavanagh, 2002). At the same time, parents described how being guided through the emergency phase of the illness was useful for them (study I). Guiding another person is considered a method of assisting that is valid in situations in which persons must make choices (Orem, 1991). A study by Gustafsson et al. (2015) found that having a good understanding about how to obtain symptom relief in minor illness was related to feeling confident in performing self-care. The National Board of Health and Welfare's (2017a) guidance on health monitoring in child healthcare emphasizes information and education to parents. Monitoring calls can contribute to these goals by facilitating self-care at home in acute phases of illness.

Learning is a lifelong activity in nursing and the telenurses used the monitoring calls to develop their learning. They described, for example, that feedback gave them information about whether they had made adequate assessments and if the parents had understood the self-care advice given. They also described it as updating their own skills (study II). Validation is important, nurses need feedback to self-evaluate their practice, to address knowledge deficits, and to supplement their existing knowledge base (Rutenberg & Greenberg, 2012). One study described lifelong learning in nursing as a dynamic process and that this process is also formal and informal. Lifelong learning involves seeking and appreciating new worlds or ideas in order to gain new perspectives as well as questioning one's environment, knowledge, skills and interactions. Lifelong learners find learning in everything they are doing (Davis, Taylor & Reyes, 2014). The telenurses described that they self-learned from performing monitoring calls, which could be described as an informal way of learning (study II). A monitoring call is a meeting that involves an interaction between the telenurse and the parent, and it can be regarded as a pedagogical encounter. During the meeting, the telenurses use their skills in order to understand and assess what the parent have understood during the first call. This is in line with how Silén (2013) describes the pedagogical encounter.

### **6.4 RELIEVING CARE AND SAVING RESOURCES**

The parents described experiencing the monitoring call as a pleasant surprise because of the ease of getting care without the need to travel to a healthcare facility (study I). In their experiences of monitoring calls, the telenurses described that they reduced the number of healthcare visits and thereby saved on the use of healthcare resources, which benefits society (study II). Self-care advice can lead to a reduction in healthcare utilization (Gustafsson et al.,

2016) and telephone advice nursing on the whole seems to save healthcare resources (Marklund et al., 2007). Monitoring calls appear to be a cost-effective approach according to the findings in these studies. The parents seemed to use it as a way to save time and seemed to find it more convenient to care for their sick child at home (study I). Patients in another study described that the possibility to access adequate advice by making a telephone call from home was perceived as positive compared to going to the nearest healthcare centre or hospital (Ström et al., 2009). In this way monitoring calls could contribute to more sustainable healthcare by providing instant help from telenurses by telephone (Schroeder, Thompson, Frith & Pencheon, 2013).

## **6.5 THE PHENOMENON OF MONITORING CALLS**

The phenomenon of monitoring calls in this thesis could be described as telenurses helping parents, care seekers, to manage their sick children at home in the first stages of illness or for a longer period of time and in a patient-safe way, thereby excluding or postponing healthcare service visits. This is in line with a recent study that suggests that individualized and respectful treatment and involvement of callers can increase satisfaction and seems safe (Kaminsky et al., 2017).

Monitoring calls, according to the results in this thesis, can be defined as a series of calls made by telenurses with the aim of supporting a care seeker in self-care at home in the acute phase by following the course of the disease and the status of the sick person in a patient-safe way. This is significantly different to how the concept of follow-up calls is described in the literature, which is following up on a patient's status in a non-acute phase i.e. after a hospital stay or during a chronic illness (Zhang, Wong, You & Zheng, 2011; Hannan, 2012). The concept of monitoring is, in this thesis, in accordance with how Florence Nightingale described it, as "watchful care" i.e. assessing signs of deterioration or improvement in health and protecting the patient's safety and well-being" (Nightingale, 1970). Nightingale, of course, is describing here watchful care in hospitals and not by telephone, but there seems to be no difference in the ultimate goal, which is giving professional nursing care to the patient.

## **7 METHODOLOGICAL CONSIDERATIONS**

To discuss the trustworthiness of the studies, the strengths and weaknesses according to the consolidated criteria for reporting qualitative research, COREQ, have been used (Tong, Sainsbury & Craig, 2007).

### **7.1 THE RESEARCH TEAM**

The author of this thesis has some pre-understanding concerning knowledge and experience in the area of telenursing (Long & Johnson, 2000; Elo et al., 2014). This has facilitated the contact with participants in study II; however, they were carefully informed on that I have not worked with telephone advice during the last decade and that the interviews were performed by a researcher. In study I, the researcher who carried out the interviews was also the manager of the healthcare call centre, which could have influenced the selection of the participants and could therefore have impacted on the credibility (Patton, 2002). However, the interviewers and the research teams were presented in the information given to the participants in both studies.

### **7.2 STUDY DESIGN**

Limited research literature was available in the area of monitoring calls in telephone advice nursing when designing the studies. Consequently, the design of the study had, by necessity, to be explorative and the generalizability of the findings is therefore limited (Elo & Kyngäs, 2008; Kim, Sefcik & Bradway, 2016).

In study I, it was more difficult than expected to find participants, but an explanation for this could be the low incidence of gastroenteritis during the data collection period. In addition, only one healthcare call centre was included in the study, which could have decreased variance. In study II, one healthcare call centre in a large city was originally chosen. However, the manager of that call centre declined participation due to a heavy workload. This could be a limitation regarding variance and transferability since both the call centres used were located in similar towns (Marshall & Rossman, 2011). However, the call centres were located in different parts of Sweden, one in the north and one in the south.

In study I, ten parents were interviewed. The aim was to interview approximately 15 parents but since the data was repeating itself after seven interviews it seemed unethical to interview more than ten parents. In addition, the time frame for the inclusion of the ten interviews was eight months and the incidence of gastroenteritis decreased during the recruitment period. In study II, 19 telenurses were interviewed and the length of the interviews was between 9 and 30 minutes. In study I, the interview length was between 7 and 23 minutes. Concerning credibility, the interviews could appear to be rather short, however, the participants were only asked to elaborate on their experiences of monitoring calls, not on their experience of telephone advice in general. Even the shortest interviews had a rich content. The interviews were mixed face-to-face (n=16) and by telephone (n=3). The advantages of telephone interviews have been, for example, that it was possible to obtain richer material with more interviews despite the distance (Kvale & Brinkmann, 2009).

### 7.3 ANALYSIS AND FINDINGS

In study I, all the interviews were coded and categorized individually by each researcher and then discussed to reach consensus. In study II, two of the authors coded and categorized the interviews and the categorization was discussed among all three authors to strengthen the dependability and credibility, and thereby the trustworthiness, of the study (Marshall & Rossman, 2011). The findings are also supported by quotations and the quotations are from different participants in both study I and study II to add transparency and trustworthiness (Tong et al., 2007).

The analyses aimed to structure the text into subcategories and categories (Hsieh & Shannon, 2005). Thus, the analysis had the ambition to remain close to the participants' own words and phrases (Sandelowski, 2000). At the same time the analyses were conducted with the ambition to formulate internal homogenous and external heterogeneous categories in order to achieve trustworthiness (Elo et al., 2014). Subjective interpretations in qualitative content analysis are unavoidable (Graneheim & Lundman, 2004) and critical discussions during supervision and in different research seminars were used to try to manage this.

In study I, latent content analysis according to Graneheim och Lundman (2004) was used and in study II content analysis according to Elo och Kyngäs (2008). The methods of analysis are similar but Graneheim and Lundman (2004) describe two different types of qualitative analysis, manifest and latent. The latent content analysis is supposed to interpret the underlying meaning of the text. This is performed to a certain extent in study I, however, the level of latency could be discussed. It is used in the abstraction process in creating the main categories but at the same time remaining close to the participants' own words. The methods of analyses used in this thesis are similar, but Graneheim and Lundman (2004) could be interpreted as describing the latent content analysis as being on a higher level of abstraction than the process of content analysis described by Elo and Kyngäs (2008). However, in this thesis the difference of level of abstraction between the studies can be discussed. Since the participants in study II were telenurses and from the experience from study I of short interviews because of the limited subject matter, Elo and Kyngäs (2008) seemed to be a better choice of method of analysis.

## 8 CONCLUSIONS AND IMPLICATIONS

This thesis describes experiences of receiving and conducting monitoring calls. Monitoring calls, described as a phenomenon in telephone advice nursing, have not previously been researched. This thesis has contributed new knowledge in telephone advice nursing.

Monitoring calls could contribute to an increased feeling of security; in both studies this seemed to be central in monitoring calls to parents who were caring for their child with gastroenteritis at home. Monitoring calls appear to be a patient-safe way of working, as they provide the possibility of making new/further assessments of the sick child so the self-care advice can be followed up and developed depending on the child's condition. Such calls also create a feeling of safety for parents who can ask additional questions regarding their child and receive feedback on the self-care they have performed, which could create a learning situation for the parents. In addition, monitoring calls also provide a learning situation for the telenurses. Telenurses used monitoring calls to decrease the use of healthcare resources since the treatment of a child with gastroenteritis at home through monitoring calls is similar to the treatment provided by hospital emergency services.

Monitoring calls in telephone advice nursing could contribute to an increased feeling of security among care seekers and to increased patient safety, could facilitate learning for parents and telenurses, and could decrease the use of healthcare resources. The results show how people can receive self-care advice, support and guidance for care in an acute phase of illness. By using monitoring calls more frequently there is a possibility for healthcare services to be relieved from caring for patients who can instead perform self-care at home. This also seems to be a patient-safe form of telephone advice nursing and contributes to sustainable healthcare.

The clinical implications of this thesis could be:

- When dealing with parents calling about their sick children, monitoring calls could increase the feeling of security for these parents.
- Patient safety could be increased through the use of monitoring calls and therefore be developed for other reasons for calling (other than gastroenteritis) and for calls to both 1177, 112 and other lines where nurses assess patients on the telephone.
- Learning could be increased for the telenurses and could be used as feedback regarding the quality of their work.
- The results of this thesis could be used in practice when developing the policy and organization of 1177.
- Monitoring calls could be integrated into the work of call centres receiving calls on both the 112 and 1177 numbers (Figure 3).

## The right resource at the right time at the right level of care

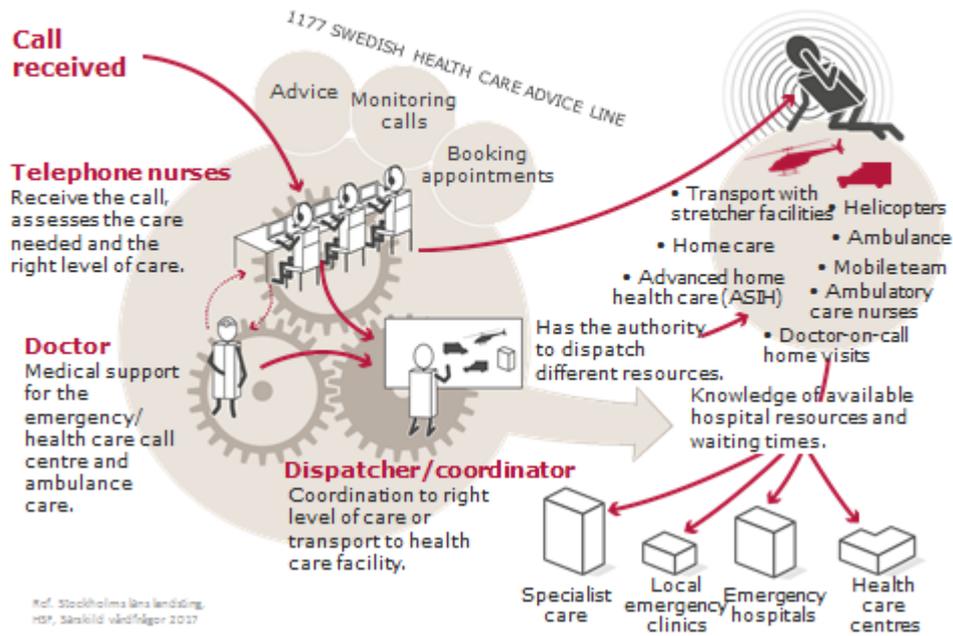


Figure 3 A vision of future call handling at 112 and 1177. From Stockholm County Council (Stockholms läns landsting), HSF, Särskilda vårdfrågor 2017.

## 9 FUTURE RESEARCH

The use of monitoring calls in telephone advice nursing has been studied in this thesis from the perspective of only one group of care seekers, that of parents of children with gastroenteritis. The use of monitoring calls as a phenomenon is still relatively unexplored and further studies could increase the body of knowledge.

Areas for future research could be:

- A comparative study between two groups of care seekers, those who received and those who did not receive monitoring calls.
- Studies involving other groups of care seekers.
- Studies in other contexts, for example healthcare centers or 112.

## 10 SUMMARY IN SWEDISH – SAMMANFATTNING

Sjukvårdsrådgivning per telefon har utvecklats under de senaste decennierna och är idag en av de största vårdformerna i Sverige. Alla svenskar har tillgång till kortnumret 1177, vårdguiden på telefon, till vilket man kan ringa till dygnet runt. 1177 tar emot ca 4,5 miljoner samtal per år, och när vårdsökande ringar 1177 kommer de i kontakt med en telefonsjuksköterska. Telefonsjuksköterskans arbete innebär att bedöma vårdbehov, ge egenvårdsråd, samt stöd och undervisning till de vårdsökande. Telefonsjuksköterskan hänvisar även till lämplig vårdnivå och bistår med hälso- och sjukvårdsinformation, samt samordnar vård- och omsorgsresurser.

Av de 4.5 miljoner samtal per år ges egenvårdsråd i cirka 2 miljoner av dessa och 275 000 samtal var under 2016 övervakningssamtal. Hälsoproblem hos barn är kontaktorsak i cirka 30-40% av alla samtal och av dessa så berör ungefär 5 % av samtalen barn med magsjuka. Övervakningssamtal som genomförs per telefon inom sjukvårdsrådgivning har nämnts i tidigare forskning som en del av egenvårdsrådgivningen men har inte tidigare studerats i ett vidare perspektiv. Övervakningssamtal definieras i denna avhandling som att telefonsjuksköterskan övervakar och följer ett sjukdomsförlopp per telefon. Detta genom att telefonsjuksköterskan återuppringer den vårdsökande med regelbundna intervaller för att följa sjukdomsförloppet, göra nya bedömningar av hälsotillståndet samt anpassa egenvårdsråden efter den aktuella situationen.

Det övergripande syftet med denna avhandling har därför varit att beskriva övervakningssamtal utifrån erfarenheter från vårdsökande föräldrar med magsjuka barn samt telefonsjuksköterskor.

I studie I genomfördes 10 intervjuer med föräldrar som hade kontaktat sjukvårdsrådgivningen på grund av sitt magsjuka barn och fått övervakningssamtal. I den kvalitativa innehållsanalysen framträdde fyra huvudkategorier som berörde bekvämlighet, bekräftelse, stöd och vägledning. Föräldrarna beskrev att möjligheten att vårda sitt sjuka barn hemma utan att behöva åka in till akutmottagningen som var förenat med långa väntetider som uppskattat. Föräldrarna värdesatte även att beslutet av tidpunkt för övervakningssamtalet fattades av telefonsjuksköterskan så föräldrarna kunde bibehålla koncentrationen på sitt sjuka barn. Det framkom även att interaktionen mellan förälder och telefonsjuksköterska blev djupare när de fick möjligheten till övervakningssamtal. Föräldrarna beskrev även det som att de fick ett respektfullt bemötande och att det var viktigt i samtalet. Viktigt var även att få en möjlighet att dela sin oro med telefonsjuksköterskan som uppfattades som lugnande. De upplevde att de uppfattades som en person med individuella behov och det gav en känsla av att bli tagen på allvar övervakningssamtalen gav en form av bekräftelse.

Studie II beskriver telefonsjuksköterskors erfarenheter av övervakningssamtal och 19 telefonsjuksköterskor intervjuades. I analysen av dessa intervjuer framkom en övergripande kategori som handlade om att skapa en patientsäker egenvård. De fyra underkategorierna beskrev att det handlade om att skapa en känsla av trygghet, att skapa patientsäkerhet, att skapa en lärandesituation samt att övervakningssamtalen även minskade sjukvårdskostnader. Telefonsjuksköterskornas erfarenhet av att utföra övervakningssamtal var att samtalen genomfördes syfte att skapa en trygghet för den vårdsökande då de erfarit att det finns så mycket oro hos de föräldrarna. Telefonsjuksköterskorna beskrev också att arbeta med övervakningssamtal uppfattades som ett patientsäkert arbetssätt där de samtidigt kunde lära de vårdsökande hur de skulle kunna hantera situationen med barnets hälsoproblem. Telefonsjuksköterskorna beskrev även att övervakningssamtalet skapade lärandemöjligheter för både föräldrar och telefonsjuksköterskorna. De beskrev också att övervakningssamtalen minskade kostnaderna för sjukvården då de föräldrarna kunde vårda sitt sjuka barn i hemmet med hjälp av telefonsjuksköterskan.

Resultatet av avhandlingen visar att telefonsjuksköterskorna jobbade aktivt med att försöka att skapa en så trygg känsla hos föräldrarna som möjligt. Telefonsjuksköterskorna menade att genom att skapa en god kontakt med föräldrarna så bidrog man även en trygg miljö för föräldrarna att vårda sitt barn i hemmet. Föräldrarna beskrev en känsla av delat ansvar då de gavs möjlighet till övervakningssamtal, vilket kan beskrivas som skapande av en trygghet för föräldrarna. Telefonsjuksköterskorna ansåg det som en möjlighet att stilla den oro som många av föräldrarna hade över sina sjuka barn genom att erbjuda övervakningssamtalen. Telefonsjuksköterskorna beskrev det även som ett sätt att arbeta patientsäkert, föräldrarna menade att de kände sig tagna på allvar och de kände en känsla av tillit när övervakningssamtal erhöles. Att erbjuda övervakningssamtal innebar även för telefonsjuksköterskorna ett sätt att stämna av om föräldrarna förstått de givna egenvårdsråden. Övervakningssamtalen utfördes också för telefonsjuksköterskornas egen säkerhets skull, det vill säga de följde upp sina egna givna råd och gjorde nya bedömningar. Övervakningssamtalet beskrevs som en möjlighet att skapa en lärandesituation för föräldrarna då de fick positiv feedback på den egenvård de utfört, samtidigt så skapades det lärandemöjligheter för telefonsjuksköterskorna. Att få övervakningssamtal gav föräldrarna en möjlighet att få vård utan att behöva bege sig till sjukhus, vilket var uppskattat av föräldrarna. Telefonsjuksköterskan beskrev det som att genom att ge övervakningssamtal besparar man sjukvården fysiska besök och på så vis sparar sjukvårdsresurser.

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## 12 REFERENCES

- AAACN (American Academy of Ambulatory Care Nursing). (2011). Definition of professional ambulatory care nursing. Retrieved 170628  
<https://www.aaacn.org/sites/default/files/AmbulatoryCareNursingDefinition.pdf>
- Björkman, A., Olsson AK., Engström, M., Wahlberg AC. (2017). Identified obstacles and prerequisites in telenurses' work environment – a modified Delphi study. *BMC Health Services Research* 17:377 Doi 10.1186/s12913-017-2296-y.
- Bunn, F., Byrne, G., Kendall, S. (2005). The effect of telephone consultation and triage on healthcare use and patient satisfaction: a systematic review. *British Journal of General Practice*. 55, 521, 956-961
- Cavanagh S.J. (2002). *Orem's Model in Action*. Palegrave. New York
- Davis, L. Taylor, H. Reyes, H. (2014). Lifelong learning in nursing: A Delfi study. *Nursing Education Today* 34: 441-445
- Denyes, M.J., Orem D.E., Bekel, G. (2001). Self-care: A Foundational Sciences. *Nursing Science Quarterly*. 14:48 - 54 Doi: 10.1177/089431840101400113
- Elo, S., Kyngäs, H.(2008). The qualitative content analysis process. *Journal of Advanced Nursing* 62: 107-115 Doi:10.1111/j.1365-2648.2007.04569.x.
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open*, 4(1), 1–10. Doi:10.1177/2158244014522633
- 1177a. (2016). Statistics, Sjukvårdsrådgivningen. Unpublished. Stockholm, Inera AB
- 1177b. (2017). Om 1177 Vårdguiden på telefon. Retrieved 170704. <http://www.1177.se/Om-1177/1177-sjukvardsradgivning/>
- 1177c. (2017). Gastroenteritis in young children. Retrieved 170621  
<https://www.1177.se/Stockholm/Other-languages/Engelska/Barn/Magsjuka-hos-smabarn--vad-kan-man-gora-sjalv/>
- 1177d. (2017). Rådgivningsstödet webb – ett stöd i din verksamhet. Retrieved 170621 from <https://www.1177.se/Stockholm/Om-1177/rgs-webb/>.
- Ernesäter, A., Winblad, U., Engström, M., Holmström, I. (2012). Malpractice claims regarding calls to Swedish telephone advice nursing: what went wrong and why? *Journal of Telemedicine and Telecare* 18:379-383 Doi:10.1258/jtt.2012.120416

- Graneheim, U.H., Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, 24, 105-112. Doi:10.1016/j.nedt.2003.10.001
- Greenberg, M. E. (2009). A comprehensive model of the process of telephone nursing. *Journal of Advanced Nursing* 65 (12), 2621-2629. Doi: 10.1111/j.1365-2648.2009.05132.x
- Gustafsson, S, Vikman, I, Axelsson, K, Sävenstedt, S. (2015). Self-care for minor illness. *Primary Health Care Research & Development* 16: 71-78
- Gustafsson, S., Martinsson, J., Wälivaara, B-M., Vikman, I., Sävenstedt, S. (2016). Influence of self-care advice on patient satisfaction and healthcare utilization. *Journal of Advanced Nursing* 72 (8), 1789-1799 Doi: 10.1111/jan.12950
- Hakimnia, R., Holmström, I. K., Carlsson, M., Höglund, A. T. (2014). Exploring the communication between telenurses and caller - A critical discourse analysis. *International Journal of Qualitative Studies on Health and Well-being* 9:24255- Doi: 10.3402/qhw.v9.24255
- Halldorsdottir, S. (1996). *Caring and uncaring encounters in nursing and health care: developing a theory*. Linköping University.
- Hannan, J. (2012). APN telephone follow up to low-income first time mothers. *Journal of Clinical Nursing* 22; 262-270. Doi: 10.1111/j.1365-2702.2011.04065.x
- Hattie, J., Timperley, H. (2007). The power of feedback. *Review of Educational Research* 77, 81-112 Doi: 10.3102/003465430298487
- Hsieh, H-F., Shannon, S. (2005). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research* 15: 1277-1288
- Holmström, I., Höglund, A. (2007). The faceless encounter; ethical dilemmas in telephone nursing. *Journal of Clinical Nursing* 16: 1865-1871. Doi: 10.1111/j.1365-2702.2007.01839.x.
- Holmström, I.K., Nokkoudenmäki, M-B.,Zukancic, S., Sundler, A. (2016). It is important that they care - older persons' experiences of telephone advice nursing. *Journal of Clinical Nursing* 25(11-12), 1644-1653 Doi: 10.1111/jocn.13173
- Johnson , C., Wilhelmsson, S., Börjesson, S., Lindberg, M. (2014). Improvement of communication and interpersonal competence in telenursing - development of a self-assessment tool. *Journal of Clinical Nursing* Doi:10.1111/jocn.12705.
- Jones, C, HD, Neill, S, Lakhapaul, M, Roland, D, Singelhurst-Mooney, H. (2013). The safety netting behavior of fist contact clinicians: a qualitative study. *BMC Family Practice* 14:140

- Kamei, T. Yamamoto, Y. Kajii, F. Nakayama, Y. Kawamaki, Y. Kawakami, C. (2013). Systematic review and meta-analysis of studies involving telehome monitoring-based telenursing for patients with chronic obstructive pulmonary disease. *Japan Journal of Nursing Sciences* 10,180-192 Doi:10.1111/j.1742-7924.2012.00228.x
- Kaminsky, E., Carlsson, M., Höglund, A.T., Holmström, I. (2010). Paediatric health calls to Swedish telenurses: a descriptive study content and outcome. *Journal of Telemedicine and Telecare* 16(8), 454-457 Doi: 10.1258/jtt.2010.100110
- Kaminsky, E., Röing, M., Björkman, A., Holmström I.K. (2017). Telephone nursing in Sweden: A narrative literature review. *Nursing and Health Science* Doi:10.1111/nhs.12349
- Kim, H., Sefcik, J.S., Bradway, C. (2016). Characteristics of Qualitative Descriptive Studies: A Systematic Review. *Research in Nursing & Health* Doi: 10.1002/nur.21768
- Krippendorff, K. (2013). *Content Analysis: An Introduction to Its Methodology*, 2nd edn. Thousand Oaks CA: Sage, 2013
- Kvale, S., Brinkmann, S. (2009). *Den kvalitativa forskningsintervjun. 2:a upplagan*. Studentlitteratur AB. Lund.
- Long, T., Johnson, M. (2000). Rigour, reliability and validity in qualitative research. *Clinical Effectiveness in Nursing* 4, 30-37
- Marklund, B., Ström, M., Månsson, J., Borgqvist, L., Baigi, A., Fridlund, B. (2007). Computer-supported telephone nurse triage: an evolution of medical quality and costs. *Journal of Nursing Management* 15(2), 180-7 Doi: 10.1111/j.1365-2834.2007.00659.x
- Marshall, C., Rossman, G. B. (2011). *Designing Qualitative Research*. (5th edition) London Sage Publications.
- Martin, E.A., McFerran, T.A. (2014). *A dictionary of Nursing* (6 ed.) Oxford University Press . Retrieved 170807.  
<http://www.oxfordreference.com/view/10.1093/acref/9780199666379.001.0001/acref-9780199666379-e-5679?rskey=i1wE7W&result=5829>
- National Board of Health and Welfare. (2017a). Vägledning för barnhälsovården. Stockholm. Socialstyrelsen Retrieved 170515  
<http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19403/2014-4-5.pdf>
- National Board of Health and Welfare. (2017b). Hur arbetar hälso- och sjukvården med egenvårdsinsatser? Stockholm. Socialstyrelsen. Retrieved 170515  
<http://www.socialstyrelsen.se/publikationer2017/2017-1-27>
- NHS Direct. (2016). What is NHS Direct? Retrieved 161004 from  
<http://www.politics.co.uk/reference/nhs-direct>

- Nightingale, F. (1970). *Note on nursing: what it is, and what it is not*. Duckworth. London
- Ogolvie, A. Hopgood, K. Higginson, I. Ives, A. Smith, J. E. (2016). Why do parents use the emergency department for minor injury and illness? A cross-sectional questionnaire. *Journal of the Royal Society of Medicine Open*: 0 (0) 1-10 Doi:10.1177/2054270415623695
- Orem, D.E. (1991). *Nursing. Concepts of practice* 4th edn. St Louis MO: Mosby Year Book.
- Oxford Dictionary (2016) retrieved 161003 from <https://en.oxforddictionaries.com/definition/follow-up>
- Patton M.Q. (2002). *Qualitative Research & Evaluation Methods*. (3rd ed.), London: Sage Publications
- Pettinari, C.J. Jessopp, L. (2001). 'Your ears become your eyes': managing the absence of visibility in NHS Direct. *Journal of Advanced Nursing* 36: 668-675
- Polaschek, L., Polaschek, N. (2007). Solution-focused conversations: a new therapeutic in well child health nursing telephone consultations. *Journal of Advanced Nursing* 59: 111-119 Doi: 10.1111/j.1365-2648.2007.04314.x
- Purc-Stephenson, R.J., Thrasher, C. (2010). Nurses' experiences with telephone triage and advice: a meta-ethnography. *Journal of Advanced Nursing* 66 (3), 482-494. Doi: 10.1111/j.1365-2648.2010.05275.x
- Richards, S.H., Pound, P., Dickens, A., Greco, M., Campell, J.L. (2007). Exploring users' experiences of accessing out-of-hours primary medical care services. *Quality & Safety in Health Care*, 16, 469-477 Doi: 10.1136/qshc.2006.021501
- Runius, L. (2008). *Sjukvårdsrådgivning - det goda samtalet*. In Holmström, I., Telefonrådgivning inom hälso- och sjukvård. Stockholm. Studentlitteratur
- Rutheberg, C. & Greenberg, M.E. (2012). *The art of science of telephone triage: how to practice nursing over the phone*. American Academy of Ambulatory Care Nursing
- Sandelowski, M. (1998). Looking to care or caring to look? Technology and the rise of spectacular nursing. *Holistic Nursing Practice* 12: 1-11
- Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, 23(4), 334-340. doi:10.1002/1098-240x(200008)23:4<334::aid-nur9>3.0.co;2-g
- Schroeder, K., Thompson, T., Frith, K., Pencheon D. (2013). *Sustainable Healthcare*. John Wiley & Sons.
- Shapiro, S.E., Izumi, S., Tanner, C. A., Moscato, S.R., Valanis, B.G., David, M.R., Gullion, C.M. (2004). Telephone advice nursing services in a US health maintenance organization. *Journal of Telemedicine and Telecare* 10; 50-54 doi: 10.1258/135763304322764202

- Silèn, C., Bolander, K. (2013). *Att skapa pedagogiska möten i medicin och vård*. Lund. Studentlitteratur
- Ström, M., Marklund, B., Hildingh, C. (2009). Callers perceptions of receiving advice via a medical care help line. *Scandinavian Journal of Caring Sciences* 23:682-90 Doi: 10.1111/j.1471-6712.2008.00661.x
- Swenurse. (2011). *Kompetensbeskrivning för telefonsjuksköterskor*. Retrieved 160924 from <http://www.swenurse.se/Sektioner-och-Natverk/Foreningen-for-Telefonradgivning-inom-Halso--och-Sjukvard---TRIHS/Aktuellt/Kompetensbeskrivning/>
- Tong, A. Sainsbury, P. Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 19: 349-35 Doi: <http://dx.doi.org/10.1093/intqhc/mzm042>
- Wahlberg, A.C., Wredling, R. (1999). Telephone nursing: calls and caller satisfaction. *International Journal of Nursing Practice* 5: 164-70 Doi: 10.1046/j.1440-172x.1999.00179.x
- Wahlberg, A.C. Wredling, R. (2001). Telephone advice nursing – callers' experiences. *Journal of Telemedicine and Telecare* 7: 272-6 Doi: 10.1258/1357633011936525
- Wahlberg, A.C., Cedersund, B. A., Wredling, R. (2003). Telephone nurses' experience of problems with telephone advice in Sweden. *Journal of Clinical Nursing* 12: 37-45. Doi: 10.1046/j.1365-2702.2003.00702.x
- Wahlberg, AC. (2004). *Telephone Advice Nursing. Callers' perceptions, nurses' experiences and basis for assessment*. Thesis. Department of Nursing, Stockholm: Karolinska Institutet
- Wahlberg, A.C., Cedersund, E., Wredling, R. (2005). Bases for assessments made by telephone advice nurses. *Journal of Telemedicine and Telecare*; 11: 403- 407
- Wahlberg, A.C. (2007). *Sjuksköterskans telefonrådgivning*. Stockholm. Liber.
- World Medical Association. (2008). Declaration of Helsinki – ethical principles for medical research involving human subjects. Retrieved 160910. <http://wma.net/en/30publications/10policies/b3/17c.pdf>
- Zhang, J-E., Wong, F. K.Y., You, L. M., Zheng, M. C. (2011). A qualitative study exploring the nurse follow-up of patients returning home with a colostomy. *Journal of Clinical Nursing* 21, 1407- 1415. Doi: 10.1111/j.1365-2702.2011.03824.x