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Using the Electronic Nursing Documentation System

-Home Care Nurses' Experiences

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Using the Electronic Nursing Documentation System-Home Care Nurses' Experiences

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The purpose of this thesis is to describe the experiences of home care nurses' using the electronic documentation system in the health care system in Finland. This research studies the documentation experiences because nurses are now dealing with computerized care plan on a daily basis and proper documentation is the basis of delivering good care.

The research question of the study is, "What are the nurses' experiences using the electronic nursing documentation system?"

This thesis was conducted using the qualitative research method. Ten Home Care nurses (n=10) participated in the semi-structured interview and the results were interpreted using inductive data analysis.

The main categories identified were usefulness, efficiency, accessibility and communicativeness from the data. The findings show positive responses from nurses as they were contented and satisfied with the system they are using. They expressed interest for further development although they could not specify as of the moment on which areas.

The experiences of nurses in using the electronic nursing documentation gathered in this study show positive responses to how the system supports their nursing task in the goal of providing quality care and increased patient safety. The system has significantly helped in the continuing of care because patient information is readily available and accessible in Home Care. The nurses' experiences were expressed accordingly on their day-to-day activity that individually understands and experienced in using the electronic nursing documentation.

Keywords: electronic nursing documentation, home care

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1 INTRODUCTION

As technology advances new developments are constantly working in our lives. It is transforming the society in a higher level of living and interaction. Take healthcare for example, technology has a great impact with the medical breakthroughs in researches, treatments and communication. These have given healthcare provider to practice medicine in a more comprehensive and effective ways. (Krueger 2010)

The health care system displayed a tremendous transition by adopting the electronic documentation. “Implementing Electronic Document Management Solutions is a challenge, a major project and a substantial change to the way care is delivered but it is achievable, and others have achieved it and gained many benefits”. (Nazir 2014)

Back in the days where nurses often fuss about charting because of the long hour spent that might be more practically used in actual patient care. The uses of Electronic nursing documentation (END) have distinct advantages over the old practice. It was designed to facilitate the flow of information between health care professionals, within the organization and between the different sectors that are involved in the patient’s care. The movement from a narrative system of charting to an END system requires major changes in mindset, knowledge, performance and skills. (Heinzer 2010)

This study describes the home care nurses’ experiences using the Electronic Nursing Documentation so as to enable reference and insights for future nurses who are novice in using the END.

2 PURPOSE AND RESEARCH QUESTION OF THE STUDY

The purpose of this thesis is to describe the experiences of home care nurses' using the electronic documentation system in the health care system in Finland. This research studies the documentation experiences because nurses are now dealing with computerized care plan on a daily basis and proper documentation is the basis of delivering good care.

The research question of this thesis is "What are the nurses' experiences using the electronic documentation system?"

3 ELECTRONIC NURSING DOCUMENTATION IN FINLAND

Documentation is creating a permanent record of information which can be written or electronically generated and helps us to follow the service provided. In the health care sector, it is a channel of communication between the health professionals. It records facts, findings and observations. As time passed, the nature of documentation changed. Documentation is a significant part of a patient's treatment. The nurse should document especially the implementation and the effects of the treatment, patient's condition and the follow-up and evaluation of the recovery. In the World Health Organization's (WHO) "The Role of General Practice in Primary Health Care" the authors claim: "the availability at the time of consultation of high-quality medical records is essential to continuity of care". (Kuusela, Rautava, Vainiomäki, Vainiomäki 2008)

In Finland, it has been introduced and practiced in recent years in many hospitals and home care. Nursing documents are produced, stored and represented with a nursing documentation system, which is part of an electronic health record. The nursing model applied is based on a nursing process, a nationally defined nursing care data set and the Finnish Care Classification (FinCC). The END believed to support the multi-professional patient care, which provides an active communication between the healthcare team. (Kaipio, Kuusisto, Nykänen 2014)

A review article entitled *Impacts of Structuring Nursing Records: a systematic review* mentioned that in Finland, “along with the development of a national nursing documentation model, the nursing minimum data set (NMDS) was harmonized with the use of a standardized nursing classification Finnish Care Classification (FinCC), the translated and validated version of the FinCC, to describe nursing diagnoses, interventions and outcomes. The discovery and sharing of new knowledge with NMDS as extracted from large databases are vital in managing the rising complexity of today's healthcare organizations. (Hyppönen, Kivekäs, Lappalainen, Liljamo, Rajalahti, Saranto 2014)

The patients have authority on their own records. In 1992, the Ministry of Social Affairs and Health in Finland issued laws regarding patient records. This highlights about security, content and retention of patient records. This law states rules to document the reason, history, problems, examinations, assessments, laboratory tests, treatment plans should be documented properly. In the act on the status and the right of the patient, (785/1992) section 13, says that all the information contained by patient documents shall be confidential. (Ministry of social affairs and health 1992).

In 2011, a study by A. Kuusisto, P. Nykänen and J. Viitanen which evaluated and defined the usability of electronic nursing documentation systems in Finland. They defined usability as “most often employed to indicate the attributes of a system that make it easy to use” (Kuusisto et al. 2011). They have used five usability attributes for evaluation, which are fluency and reliability of the documentation, learnability of the system, usefulness of the documented information and the collaborative use that can be made of the documented information. (Kuusisto et al. 2011)

The results of the study highlighted primarily negative findings about the usability of the electronic nursing documentation that has been analysed. However there were also some positive findings that were noted. According to the study, nurses seemed to actively prefer electronic documentation systems and were on the whole unwilling to revert to paper-based practices. The main reason cited for this preference was the accessibility of information (compared to paper-based filing systems, electronic documentation is much more easily accessible) and the reusability of documentation (e.g. once a detailed care plan is accurately and appropriately drawn up and stored electronically, it can be reused afterwards in other care processes). (Kuusisto et al. 2011)

There are various evaluation studies and reviews that have tried to measure the advantages and disadvantages of computer based nursing information systems on nursing care, mostly focused on defining issues such as the quality of nursing documentation, time consumed, user satisfaction and the efficiency.

In 2004-2007, a study conducted in Satakunta Hospital district about the electronic nursing discharge summary. The results were positive among the 22 nurse respondents mentioned that, "When done carefully, the ENDS enables real time communication, fast enough and safely, though the new structure needs consideration and documentation takes time." (Asikainen, Kuusisto, Lukka, Tantt 2007)

4 TYPES OF RECORDS

The Nursing and Midwifery Council (NMC 2002) state that "good record keeping helps to protect the welfare of patients and clients" and it relies upon the hands of the nurses whose essential goal is to do as mentioned. As an important part of the nursing practice, the basis of an effective health record is when the nurses are able to document the patient's or client's health problems and how they can be addressed, what has been done on the course of treatment that may also include future plans to meet their needs. (Nursing Management 2013)

There are different charts, forms and documentation found under the nursing profession. Some may vary in every institution depending on the needs locally but all of them will have the basic ones. The first of the common documents is the nursing assessment tool that contains the patient's biographical information such as name, age, reason for admission, allergies, diagnosis, medication, and the patient's medical history. (Elsevierhealth 2003)

The Nursing Care Plan is also a common document found in the patient/client's records. It has space for the health problems and patient/client's needs. In certain areas, nursing diagnoses are used and nursing interventions are listed to achieve goals that are required to be specific, measurable, attainable, realistic and time-bounded. In accordance to the condition or status of the patient/client, an evaluation is done or necessary changes in the plan can be made (Elsevierhealth 2002). In certain institutions in Finland like the home care and elderly homes, Hoito- ja Palvelussunnitelma (Care &

Service Plan) or Hoito- ja Kuntoutussuunnitelma (Care & Rehabilitation Plan) is commonly used. (Valvira 2012)

Another important document is the vital signs chart that contains baseline data of blood pressure, pulse, respiration, temperature and the succeeding recordings depending on how often these are monitored. Food intake, bowel movement, and fluid balance are also checked depending on the patients/client's health problems or those with intravenous infusions, nasogastric or gastronomy feedings, drainage or stoma. In addition, the Medicine chart lists the patient/client's medications where details such as dosage, route, and time must be indicated. (Elsevierhealth 2003)

Moreover, an incident report is made by a nurse or the witness should any unusual incident or accident that involves the patient, significant others or the staff occurs at the workplace. Examples of these incidents are falls, medication errors, abuse or an attack (Elsevierhealth 2003). The purpose of incident reports is not to punish the staff members but recording of non-routine occurrences or accidents is used for quality improvement. These reports improve management and high-risk patterns are identified that preventive measures are initiated. (Paramathma 2013)

Keeping of records is very important because it provides the management and the staff documentation the services rendered and for care planning and evaluation. It is an essential tool of communication for healthcare professionals, the family, and other authorized bodies (Nursing Management 2013). High quality record keeping must be observed because records are valuable legal documents and it will be used as evidence when complaints about care are made (Elsevierhealth 2003). Documentation must be correct, consistent and based in facts since aside from its legal implications, records may be also used for research. (Paramathma 2013)

5 HOME CARE

Home care is a type of health service that allows people with special needs to receive care in the comfort of their own home. It is suitable for individuals, who are getting older, are chronically ill, recovering from surgery, or disabled. It intends to help the clients cope with their daily activities in their own homes together with the clients' relatives, friends and partners. Care is usually provided by licensed health care professionals, homemakers and assistants who help them in their basic needs like bathing,

preparing meals, eating and cleaning. In many municipalities, the service is available morning and evening and also during weekends. (STM 2015)

Home Nursing and services entail nursing and rehabilitation services referred by a doctor. The goal of home care is to help clients in daily living and promoting independence, improve their quality of life and cooperation with social services, thus reducing the need for institutionalization. A common client group of Home Care is the elderly. The quality service recommendation is that 13-14% of 75 year olds are given regular home care by 2012. A care and service plan will be made that will facilitate their independent capacity to help them live in their home as long as possible. (Valvira 2012)

The City of Espoo is providing holistic health care services to its population and home care is one of them. The goal of home care in Espoo is to provide support for the elderly, people with disabilities, chronically ill people and those who are recovering that they may live safely in their own home. The client, relative or a close person can apply for services such as home hospital, home service, and home support where they can then be put for initial assessment. For a patient coming from the hospital, someone who is in-charge from the Espoo Home Care will arrange home support and other services needed with the doctor's prescription. (Espoo 2014)

The assessment of being entitled to such services is done with the client and/or with their significant others. Home hospital clients are under the doctor's watch, being ensured that their medical needs are provided. On the other hand, home service helps meet clients' need in daily living. For those who only need help with household chores like cleaning and picking groceries, they are guided to avail them from private service providers. Moreover, examples of home care support services are food, safety, shopping, clothing, and cleaning services. (Espoo 2014)

6 METHODOLOGY

6.1 QUALITATIVE RESEARCH

Qualitative research is a type of scientific research consisting of an investigation that seeks to answer an inquiry, produces results that are not predetermined, emphasizes on understanding, describing, and interpreting feelings, behaviors, and the human experience as it is lived (Beck, Polit, Hungler, 2001). In this thesis, qualitative research was the method used since the materials collected and analyzed are narrative and subjective.

Qualitative method is often more appropriate to use if the aim is to understand individuals or a community within a particular issue. The main advantage of using this type of research is its ability to present how people experience a given research issue in textual descriptions. In other words, it provides a bigger picture of a situation or issue and offer information in an accessible way. It can convey a richness and intensity of a phenomenon in a way that a quantitative research method cannot (Nicholls, 2011).

In order to acquire understanding of the experiences or attitudes of nurses, qualitative method is used since it generally aim to answer questions of 'what', 'how', or 'why' of a phenomenon (Cochran & Patton 2002). In this study, the qualitative methodologies can address the nurses' experiences, attitudes, and perspectives in using the electronic documentation at their workplace.

To begin the qualitative research process, a topic is selected and a research question is formulated. The research question should be clear, focused, significant to the field of study of the writers, and aims to gain new information. A good research question aids in the refining of the thesis statement as it will then be answered at the conclusion of the study. The data can be used in various research methods and may come in variety of formats such as fieldwork notes and interview transcripts that need to be organized before they are subjected to a process of analysis (Cochran & Patton 2002).

The methods and conclusions need to be justifiable that issues of objectivity, reliability and validity are relevant. Participant observation, in-depth interviews, and focus groups are three most common qualitative methods. These methods are most favorable for collecting of data on naturally occurring behaviors, personal histories, experiences,

and draw out data on the cultural norms that also gives an overview of the general concerns of the groups represented. (Denscombe 2004)

6.2 SEMI-STRUCTURED INTERVIEW

Semi-structured interview methods were chosen in this study because it provides opportunity to generate rich, insightful data, and the contextual and relational aspects of the research area are significant to understand nurses' perception and attitudes towards using the Electronic Nursing Documentation System. The semi-structured interview provides a repertoire of possibilities. It is sufficiently structured to address specific topics related to the phenomenon of study, while leaving space for participants to offer new meaning to the study focus. (Cross & Galletta 2001)

A semi-structured interview is commonly used in qualitative research because it allows introduction of relevant peripheral information to gain in-depth insight into the topic. It aims to illustrate and understand the meanings of the core themes of the subjects' world. The interview's main goal is to understand the point of what the interviewees say. It is done to explore emotions, experiences and feelings since the face-to-face approach will produce better data (Kvale 1996).

The researcher has a list of topics that must be covered in the semi-structured or focused interviews. A topic guide is used to ensure that all question areas are covered and the key point is to encourage the participants to talk freely about the topics on the guide (Beck et al. 2001, 265). The topic guide usually has prompts that come useful for the interviewer to facilitate spontaneity in the interview as the interviewee is encouraged to discuss about specific issues. (Cochran & Patton, 2002)

Interviews differ to everyday conversations in the sense that they are focused on the researcher's need for data and are conducted in the most careful way possible ensuring the trustworthiness of the information. Cochran & Patton (2002) pointed out that both the interviewer and participants are at most confident that the findings reflect the answer to the research and not the researcher's or an uncommon group's bias.

The techniques should aim that the interviewees or data are not just chosen to support the researcher's pre-existing ideas about the answers. The interviewer has a clear list

of issues to be addressed by asking guide questions but is also flexible in terms of order of topics considered in which the interviewee develop ideas and express more widely on the issues raised. (Denscombe, 2004)

In our thesis, interviewing is the best method because it gives personal opinions rather than questionnaires. Moreover, a general interview guide approach is used because a general area of information must be obtained from the interviewee.

6.3 INTERVIEW AND SAMPLE CRITERIA

The informants are deemed eligible for the thesis if they meet the following criteria: 1) Should be a registered nurse, 2) Working in Home Care, and 3) Continuously using the electronic nursing system.

A registered nurse working in home care setting is well-versed with the system and is able to share their individual experiences. Nurses use the electronic documentation on a regular basis and will be exposed to varied components of the documentation system.

The thesis plan, contract and consent letter was presented to the ward manager. The manager planned the day and time of the interview. The nurses who participated in the interview were selected according to the criteria described in our thesis. The day was informed to us by email by the manager. The manager planned the schedule of interview. Ten nurses (n=10) were interviewed individually for 15-20 minutes. The mode of communication in the interview was according to the convenience of the informants where both English and Finnish were used but only the English and the translated statements are presented in the thesis.

The interviews were conducted at one of the meeting rooms of the Espoo Home Care office. The interviews were recorded and later transcribed. Also, field notes was written during the interview.

6. 4 INDUCTIVE DATA ANALYSIS

The purpose of qualitative data analysis is to organize received data so that it can be synthesized, interpreted and presented in a written form. (Beck et al. 2001). An inductive analysis is applied here because conclusions will be drawn from the interview data, that is the condense data is summaries and briefed. From the collected data, we will look for patterns. Moreover, inductive data analysis goes well with the qualitative method. Analysis finally makes clear what would have been most important to study, if any we had know beforehand. (Cochran &Patton, 2002)

The process of analyzing a data involves certain stages like making a written note regarding the interviews, arranging the collected data and repeated listening and reading the materials. This means that the collected data is studied deeply. Then the data is summarized in which the data is searched for words or sentences and sorted relevant to the research question. Borkan (1999) describes the horizontal and vertical passes of data for the analysis.

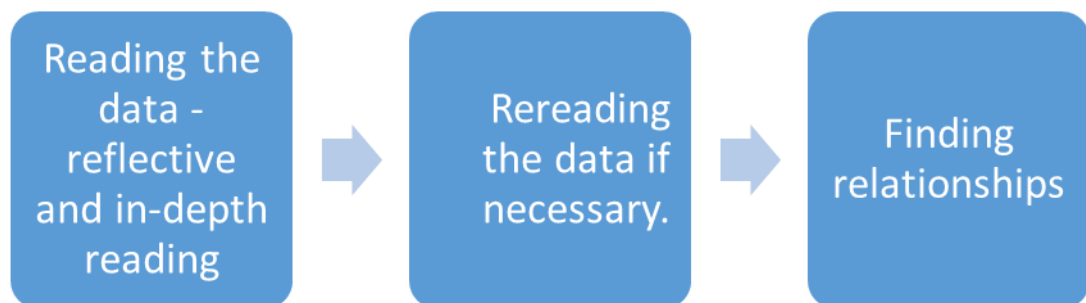


Figure 1: Borkan's horizontal pass (Borkan, 1999)

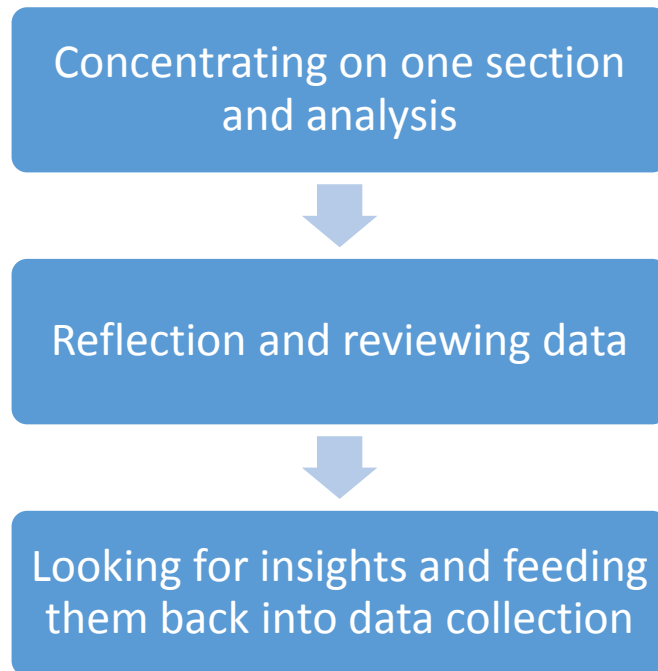


Figure 2: Borkan's vertical pass (Borkans, 1999)

Throughout the analyzing process the research question and the aim of the thesis is thought of to keep going on the right track. A coding is most often a word or short phrase that symbolically assigns a summative, salient, essence capturing, and or evocating attribute for a portion of language based or visual data (Saldana 2013). In vivo coding is the phase in which the researches mark the phrases used by the participants. Line-by-line coding is where the participant and researcher consider a piece of information as important. Then the codes with similarities are placed in one group or categorizing.

For our thesis, the first step was to transcribe the data obtained from the interviews from Finnish to English. Secondly, the authors of the thesis sat together and read the material. Thirdly, coding was done in which the authors circled the words or the phrases which is related to our research question. The data was again read and discussed. Fourthly, the data was then grouped into subcategories. Fifthly, the codes with similarity and in relation to the research question, four main categories were formed namely: usefulness, efficiency, accessibility and communicativeness.

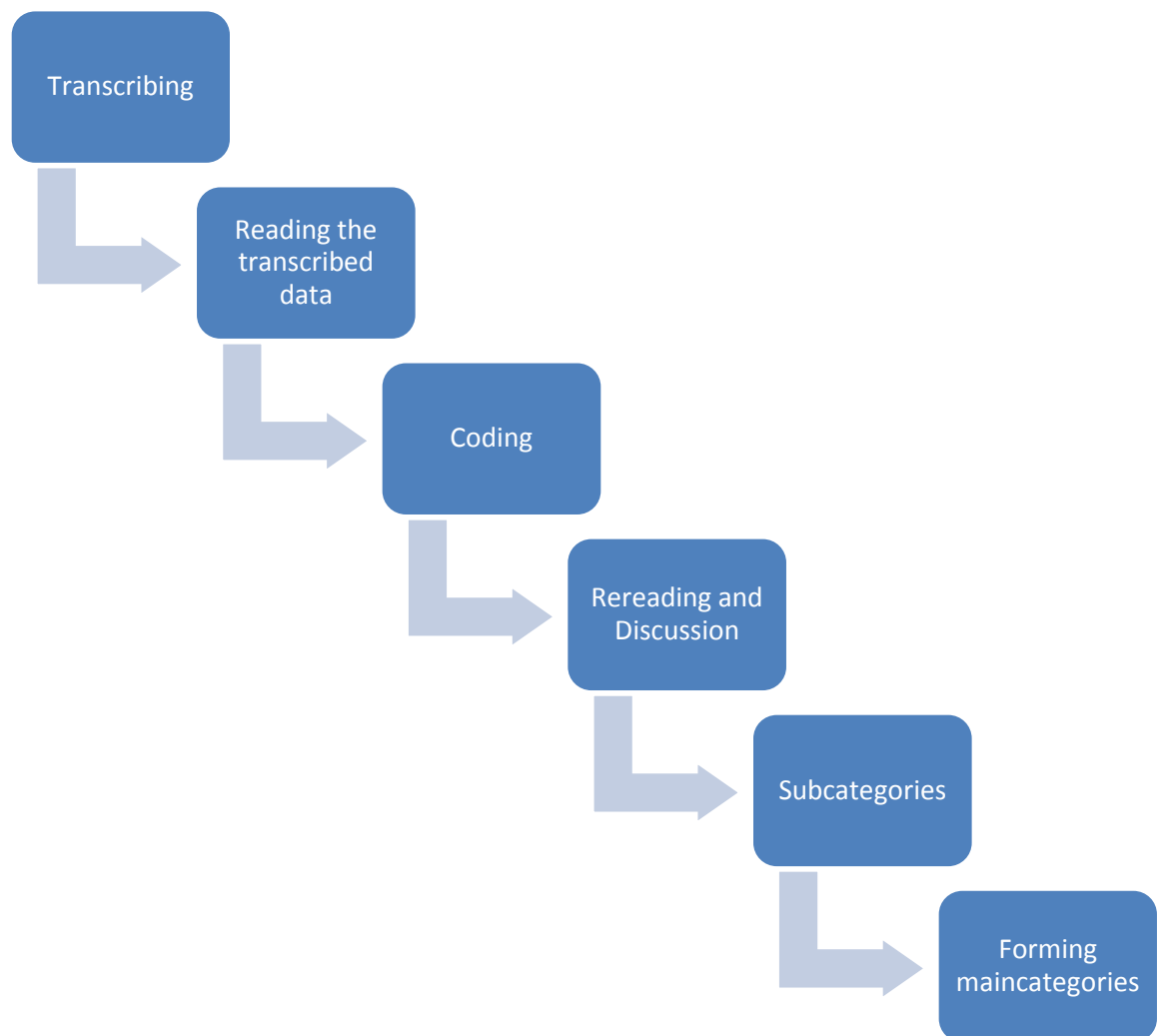


Figure 3: Illustration of the analysis

7 FINDINGS

In this study about the experiences of nurses' using the electronic nursing documentation the findings were formed into four main categories mainly usefulness, efficiency, accessibility and communicativeness.

7.1 USEFULNESS

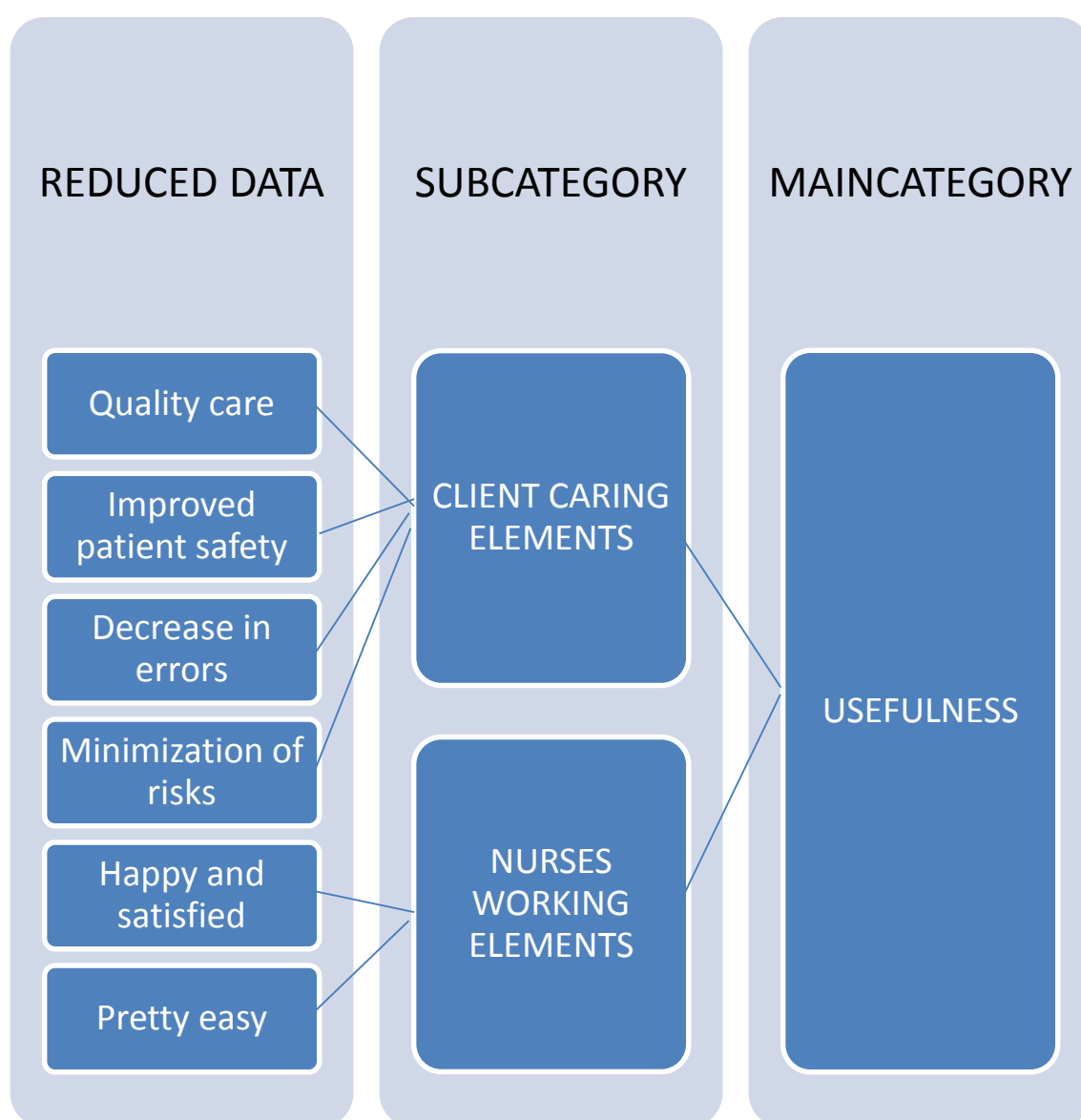


Figure 4: Usefulness

Documentation is an integral part of the nursing profession. Coordination among the members of the health team depends highly on it since it is a primary source of information regarding the patients' care and their latest status.

The home care nurses described their experience of using the electronic documentation system as being very useful in carrying out nursing tasks. They seemed to be aware of its importance in the provision of quality care and improved patient safety.

“Care of clients is easy with the program. It helps in providing quality care.”

“The system has helped us improve patient safety”

With the usage of electronic nursing documentation, the home care nurses expressed that there is a significant decrease in committing errors and minimization of risk.

“Electronic documentation has led to decrease in the errors.”

“There has been minimization of risks as the electronic documentation supports the management of risks and incidents related to the clients.”

Electronic nursing documentation is a transition from using paper to using the computer and the home care nurses seemed to be pleased with this modern development.

“I am happy and satisfied with the current system.”

“It is made user-friendly so it is pretty easy.”

7.2 EFFICIENCY

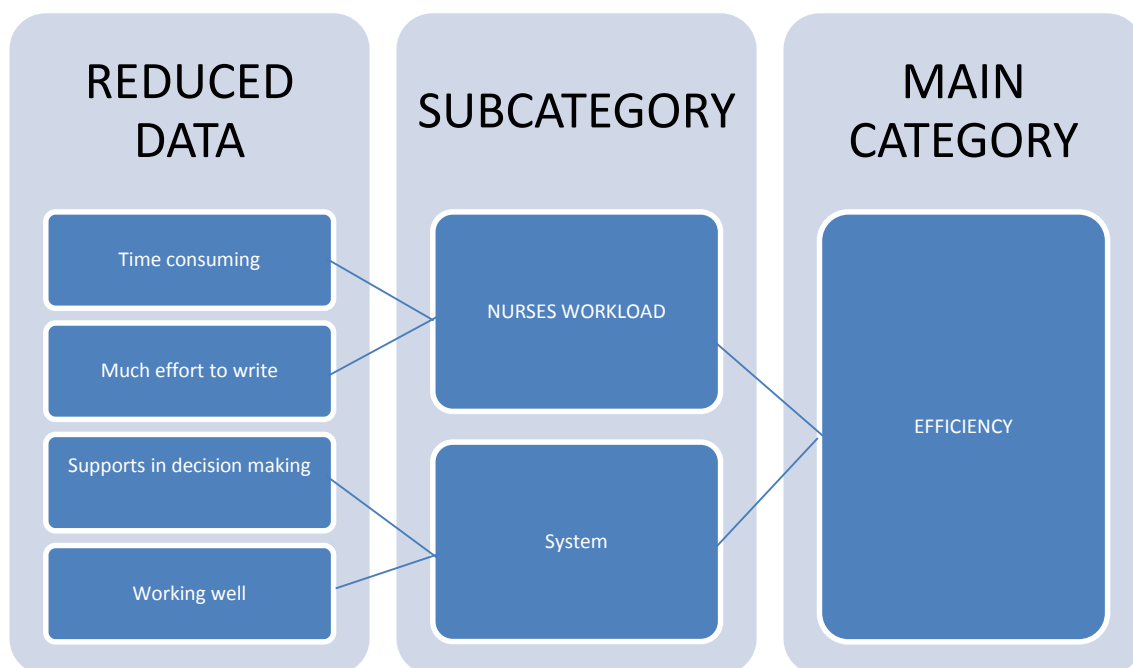


Figure 5: Efficiency

The nurses described efficiency at work as carrying their tasks on time and the ability to put effort and the competency in proper documentation of patient's record. The home care nurses often experienced documenting the patient's data time consuming for they have to record all the nursing care, patient's condition and other patient's information.

“After the field work coming back to office and entering the details are time consuming.”

“It does take much effort to write in the system because you need to put them in specific headings. But sometimes we have long hours and then entering each incident can be burdensome.”

The nurses' experienced that the electronic nursing documentation system seems like it supports in effective decision-making for it was properly arranged.

“...the system supports in decision making as the data in the system is properly arranged.”

“So far the system is working well.”

7.3 ACCESSIBILITY

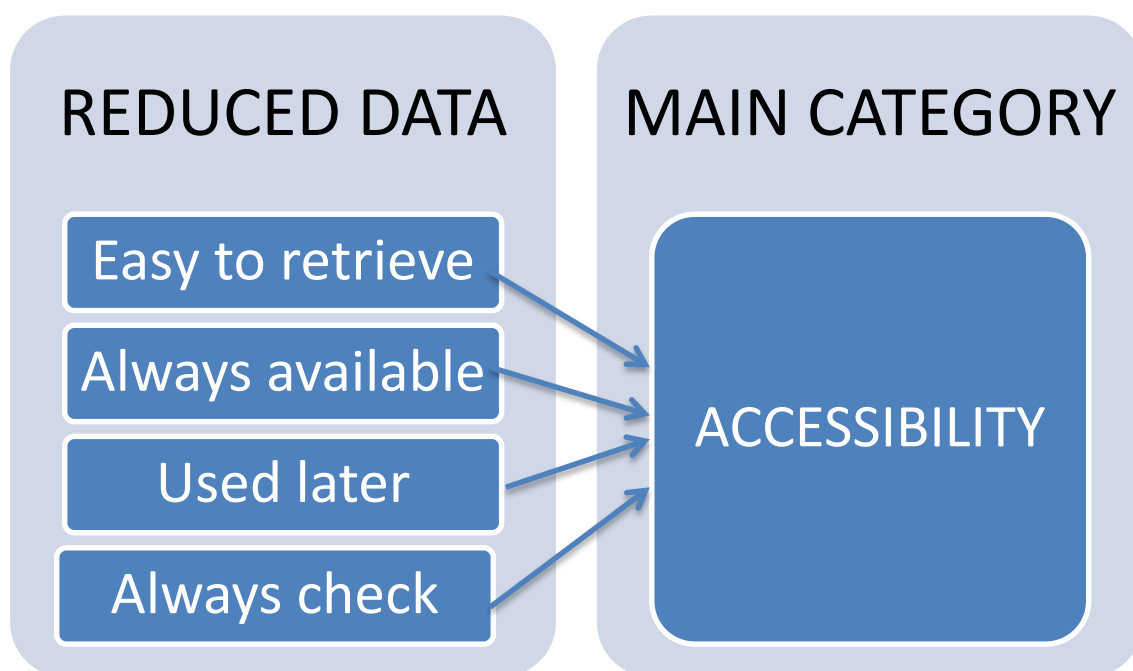


Figure 5: Accessibility

As the electronic nursing documentation systems is used by all the members of the health team such as the doctors, physiotherapists, lab technicians, nurses and others, accessibility of the documented patient information are very important for nurses and it is deemed as a basic requirement for good collaboration and high quality patient care.

The nurses used the electronic nursing documentation most of the time in checking the patient's current health status and information.

“It is very important for our patients’ information to be easy to retrieve when at work. As long as you have your password, you can log into the documentation program that is being used in your workplace.”

Before going to the patient’s house, the nurses scan through the written reports done on the earlier shifts. The home care nurses are busy and they often do not meet each other when the shift changes. The patient’s record were readily available to everyone who have an account.

“We don’t have to wait for nurses to give the report .All information are always available in the electronic recordings.”

The documented records are permanently stored. The documentation system give accesses to the reports of different health care professionals like the doctors, physiotherapists, etc. and the nurse use this information while handling with the care plans. For instance, the changes in medication done by the doctor or the recent activity plan made by the physiotherapists are often used while doing the nursing care plans.

“Once information is stored electronically, it can be used later in other care processes.”

“I think using the electronic nursing documentation is better because we can always check.”

7. 4 COMMUNICATIVENESS

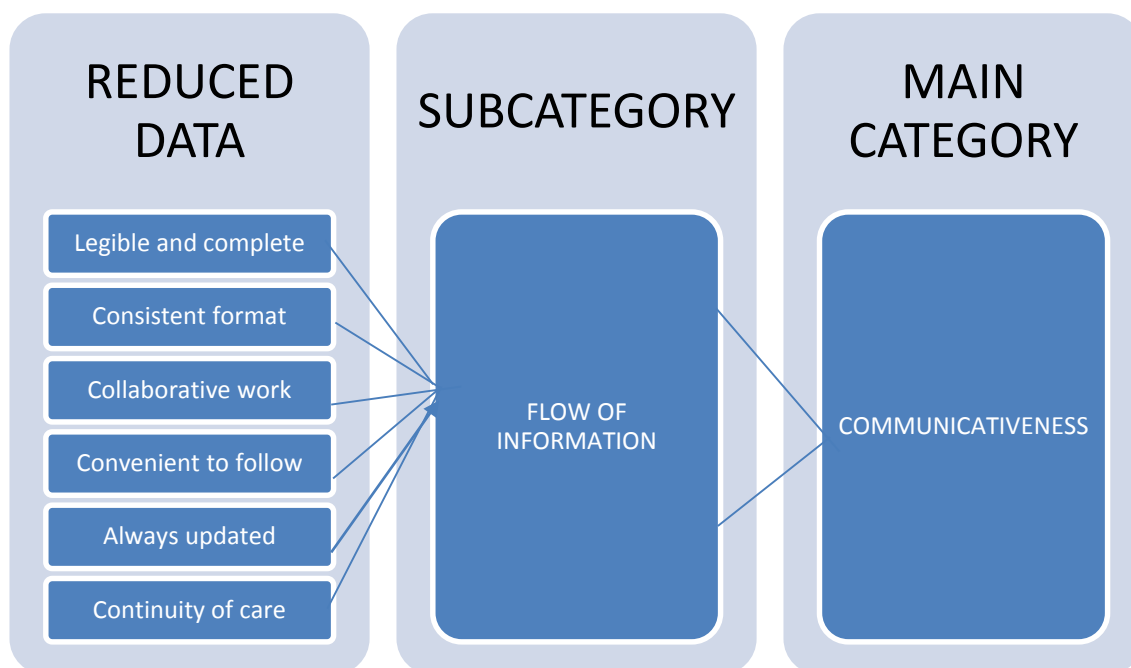


Figure 6: Communicativeness

One of the standards of nursing care is the ability of the members of the health team to relay information smoothly and as clearly as possible. One concern of paper documentation is the legibility of another person's penmanship. In using the Electronic Nursing Documentation, the home care nurses collectively felt that,

“documenting electronically is so much better than writing on paper because you can't always read everyone's handwriting. I like it because it is legible and complete”.

The nurses' comments about the layout of the system,

“...the way the information is displayed is good because it has a consistent format.”

Successful collaboration with colleagues, as perceived by the nurses, can be reflected in using the electronic nursing documentation. The written information will

also serve as evidence for what happened during the patient care that includes findings in the timely assessment and the procedures done.

“Aside from reporting or endorsement, the nurses on the next shift can read later on what happened on the shift before because there should be collaborative work. It is very important to write everything down because unrecorded procedures will always be considered not done.”

“It’s very convenient to follow that happens with the patients like when they are sent to the hospital to have a surgery or any procedure done and it will be reflected in the documentation program. In that way, all professionals involved in the patient care are always updated.”

“It is always up-to-date that it helps in the continuity of care.”

8 DISCUSSION OF THE FINDINGS

8.1 ANALYSIS OF THE CATEGORIES

Most of the informants have reported about the increase in patient safety and decrease in medical error. For instance, often the clients get hospitalized and doctors make changes in the medications. The home care team can see the doctor’s comments and reports from the office and make necessary changes in the medication lists. It does not change automatically and the nurse has to make the necessary changes in the medication lists. It aids to decrease errors. This is also evident in a previous study done by Berg B, Moody L E, and Slocumbe E (2004) on nurses’ perception, attitude and preferences on electronic health record documentation in nursing which shows that about 76% of nurses believed that electronic charting lead to improved safety and patient care. The frequent course about the program makes it still easier as reflected by the nurses. The nurses further commented that courses have a positive impact on the nurses because these courses give guidelines about how to use the system and clarify doubts, enabling the nurse to use the system in an easy way. So, it is evident from the nurses’ reflection that the program is modified continuously and that new features are experimented. One nurse commented on the automatic technique available on the system that is working well. When the weight and height is entered, it automatically

calculates the BMI. Another example is the total dose for Marevan tablet. The dose for a week is automatically calculated when the dose for each day is entered. Thus, the program is user-friendly and all the nurses seemed to be satisfied with the program.

The nurses are in favor of the option that the ENDS has contributed towards improving the quality care provided. In 2009, Gill J M commented on his studies that the electronic medical record is a promising tool for improving quality of care in primary care and other health care settings. The patient's current condition and the previous health records can be checked. Some nurses' scan through the records before visiting the client that help them to understand what had happened during the previous days or the previous shifts and help in decision making. The nurses reported that in the system there are different kinds of headings like the blood circulation, medication, etc. In fact all the implemented intervention is not written in a single paragraph instead each comes under specific heading that it takes time and much effort to place the information under each. For instance, actions related to medications are entered in one heading while wound care on another. Although some nurses find some difficulty with the headings but it helps in the retrievability aspect of the system.

The completeness of the information was highlighted point by the nurses. The previous research on the impact of documentation done by Munyisia E N (2012) states that the benefits of the electronic documentation system were perceived by the caregivers as proving more legible, accurate and complete information. The importance of having the Electronic Nursing Documentation as being accessible is prominent in the answers of the informants. The interviewees have expressed that it is essential for the health team to have access to information because they are always available and easy to retrieve so that it can be used later. There they can always check patient's basic information and history. As long as they are authorized employees with their own password, they can retrieve them easily by clicking or typing them into the documentation program. There is no fear that information is missing and no repetition in entry of information. Having all the information written electronically, it is easier and quicker to find the particular information the nurses need. The convenience of quick search through the documentation program being used provides comfort to the health team members.

The Electronic Nursing Documentation is developed to store information that it facilitates communication among the health team with its consistent format so that it will

be convenient to follow. Timely access to clinical data like recently recorded vital signs and laboratory results can be attained easily. Overall, the END has provided nurses access to easily readable charting by individual nurses and other important information that is used in the patient's line of treatment. For example, having better access to important details such as the laboratory results, the respond of the health team to abnormalities will be in a timely fashion, therefore improving quality of care. It can be interpreted that using the END is a better preference because it provides ease to the nurses in the information aspect. According to a previous study Keenan, G.M., Tschannen, D., Yakel, E. (2008) done by about Documentation and the Nursing Care Planning Process, tools are needed to create a sound collaboration of information among the health team which is supported by continuous and efficient shared understanding of the patient's care history.

To ensure that the continuity of care endures across the multiple handovers done by the health team or anyone involved in the patient's care, such tools are essential. It appears that for the informants, the END is an effective tool for recordkeeping, which the primary purpose is to facilitate flow of information that supports the continuity and quality of patient care. One interviewee reported that it is important to document everything that nurses do because otherwise if such procedures or observations are not recorded, it is considered undone. Keenan, G. et al mentioned that Information work is a critical part of the medical endeavor. Nursing documentation serves multiple purposes such as legal requirements, accreditation, and accountability. (Keenan et al. 2008)

Aside from reporting verbally, the written information will serve as the evidence. It further proves that good teamwork is brought by good communication supported by recorded data. One informant also stated the convenience and how quick the information is shared among the involved health professionals. Citing the laboratory findings and history of hospital visits as examples, nurses are quite satisfied on how quickly they can check it compared to scanning for papers in a folder. It contributes to the better coordination among the health team. In addition, one interviewee expressed liking on the way information is displayed in the Electronic Nursing Documentation program.

8.2 TRUSTWORTHINESS

This study used qualitative method thus the dependability, credibility, transferability and confirmability are considered as the trustworthiness criteria. To make the raw information reliable and trustworthy, the inductive approach for qualitative data analysis is used. This approach is to condense extensive and different information into a brief, and summary form. Also, to make a clear links between the research objectives and the findings collected from the raw information and to establish model or theory about the underlying structure of experiences or processes which are evident in the raw information. (Guba & Lincoln 1994)

In order to achieve these criteria, the study followed a series of techniques to ensure trustworthiness of the research.

Credibility can be defined as the confidence in the truth of the findings (Guba & Lincoln 1994). It enabled the researchers to form a valid finding and conclusion. Credibility was established in this study through developing rapport that facilitated trust and understanding among nurses and the researchers. This enabled the researchers be oriented to its research objective to gather nurses' experiences in using the Electronic Nursing Documentation and let the participants share their own personal views and experiences as well to identify situation that are most relevant to the study (Guba & Lincoln 1994). The researchers also looked for related literature, read books and journals for additional knowledge and information to enhance the credibility of the study. This thesis has undergone consultations with the thesis supervisors and Laurea's guidelines were followed.

After the gathering of information, it was analysed and examined through inductive data analysis approach. It was also discussed the elements of the information that do not support or appear contradicting to the research objectives. This involves during the preliminary findings where the information were identified to portion of data to be analyse.

The transferability of the study was also established as this can also achieve a type of external validity. Through the findings, the nurses' experiences using the electronic

nursing documentation were gathered and analysed in a sufficient manner one can evaluate the extent to which the conclusions drawn are transferable to other situations, times, people and experiences.

The dependability and confirmability was also established by having other researchers or students that are not involved in the research process examine and give feedback to the other research study. The study followed Laurea's guidelines and applied cognitive flow thesis writing. The confirmability assured that the data findings, discussion, conclusions and recommendation is conforming to the researchers' interpretation and the actual raw data.

8.3 ETHICAL CONSIDERATIONS IN THE STUDY

One may also define ethics as a method, procedure, or perspective for deciding how to act and for analysing complex problems and issues (Resnik 2011). Ethical decision-making methods are used in this study to avoid errors, fabricating and misinterpretation of findings. The Electronic Nursing Documentation System that the nurses use in this study is kept confidential to avoid biases. There is no consent taken from the system provider thus the system's name is kept confidential in the study.

The Belmont Report, 1974 summarizes three basic ethical principles relevant to research involving human subjects, respect for persons, beneficence and justice. These three ethical principles were rigorously applied in this study. (Belmont Report 1974)

Respect for others was practiced as the participants were treated as autonomous agents (Belmont Report, 1974). The researchers ensured that the participants received a full disclosure of the nature of the study. A thesis plan, permission letter to conduct the study and a letter of informed consent to participate to an interview were presented to the nurse manager. The nurse manager informed the nurses about the study and the permission to conduct the study was sought by the nurse manager and the nurses. In the informed consent letter, it was mentioned that the participants will be kept anonymous and they can stop the participation whenever they willed.

Beneficence was also practiced as the possible benefits were maximized and minimized the harms. The participants were treated in an ethical manner not only by respecting

their decisions but also protected them from physical, emotional, mental or any kind of harm (Belmont Report 1974). The researchers are prepared in any case the interview needs to be discontinued for any reasons. The time and place of the interview was determined by the nurse manager and ensured that there was no conflict between the researchers and the participants. The place was the Home Care office located in Espoo that guarantees safety for the researchers and participants. The time chosen was between the management monthly meetings so that the nurses were all present for that day.

Justice was practiced, as there was fifteen minutes of interview per participants as determined by the nurse manager and was agreed by the researchers and participants. Fairness in distribution of time was applied but the participants are also given the opportunity to take their own time to express themselves and all agreed to adjust if needed. As part of the key ethical issues in any project, everyone who participates in this study must sign a consent form for participation free from pressure or coercion. The participants are given necessary information about what their participation involves and reassured that declining will not affect any services they receive. Confidentiality is observed as the identity and other personal details of the participant must always be protected (Cochran & Patton 2002).

8.4 LIMITATIONS OF THE STUDY

The study focused on the experiences of Home care nurses' using electronic nursing documentation system. The qualitative method and semi-structured interview was used that allowed the participants to describe their experiences and expressed themselves in accordance to the research question (Beck et al. 2001). There are some questions coming from the researchers due to curiosity and additional knowledge and actively answered by the participants but not included in the finding because it does not focuses on the research question and purpose of the study. Also the number of informants interviewed was only ten (n=10). This number is very small compared to the vast majority of nurses working in the home care sector in Finland.

Following the data collection, the researchers looked for trends in the data. The participants' statements were analyzed and trends were identified that are identical with the other participants' answer. The rule of thumb is that hearing a statement from

just one participant is an anecdote; from two, a coincidence; and hearing it from three makes it a trend (Madrigal & McClain 2012). These trends are used in the findings and discussions. Some statements from the participants were not used in the findings but were discussed in the discussion chapter.

The findings of the study were from the home care nurses' experiences using electronic nursing documentation system. The researchers extracted the data by trends which are mostly positive responses thus negative implications are not being focus.

9 CONCLUSION AND RECOMMENDATION FOR FURTHER STUDIES

The purpose of the thesis was to describe the experiences of nurses' using the electronic nursing documentation and it was found out from the study. In this study, there is positive responses to how the system supports their nursing task in the goal of providing quality care and increased patient safety. The system has significantly helped in the continuing of care because patient information is readily available and accessible in Home Care. The nurses' experiences were expressed accordingly on their day-to-day activity that individually understands and experienced in using the electronic nursing documentation.

This thesis compliments the result of a previous study made by Asikainen P et al (2007) that using of the Electronic Nursing Documentation facilitates communication, fast enough and safe, although nurses have also expressed that documentation takes time. (Asiakinen P, 2007)

The nurses also expressed interest for further development of the system to ensure better service and quality of care although they could not specify as of the moment on which areas, for they seemed to be contended on how the system currently works. The study also reflects the nurses' openness to embrace the modern technology in a way that they are open to innovations toward a modern health care system.

It seems that there is limited studies on nurses' experience of using the Electronic Nursing Documentation System. There is an indication that further studies should be conducted to assess opinions among the health care professionals and what areas in the system need improvement.

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11 APPENDICES

Appendix 1 PERMISSION LETTER

The manager,
Tuomarilantie 19
PL 2546, 02070 Espoon kaupunki
Tel. no. (09) 816 31666, 043-825-1916

PERMISSION LETTER

Dear

We are nursing students from Laurea University of Applied Sciences (Otaniemi) and currently working on our Bachelor's Thesis. Our study is entitled The Experiences of Nurses in Using the Electronic Nursing Documentation where we aim to understand the nurses' experiences in dealing with the electronic documentation system as part of daily nursing tasks and patient care in home care setting.

Upon securing consent, individual interviews will be conducted with nurse in the Neurology Ward. Field notes will be taken and the interviews will be recorded. Qualitative method and inductive data analysis will be used in interpreting the gathered information. Words or phrases from the original interview will be used in the data analysis. All information collected will be kept strictly confidential and anonymity is upheld. We assure you that the information collected will be used for research purpose only. The result of the study can be used by other nurses or health care professionals for future references about the experiences of nurses using the electronic nursing documentation.

We kindly ask permission from you to conduct our interviews which will take approximately 30 minutes. Field notes will be taken and the interviews will be recorded. All information collected will be kept strictly confidential and anonymity is upheld. Should you wish to quit at any point of the study, you may freely do so without any consequence.

Sincerely,

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Appendix 2 INFORMED CONSENT

Espoon Keskuksen Kotihoito
Tuomarilantie 19
PL 2546, 02070 Espoon kaupunki
Tel. no. (09) 816 31666, 043-825-1916

INFORMED CONSENT

Dear Nurses,

We are nursing students from Laurea University of Applied Sciences (Otaniemi) and currently working on our Bachelor's Thesis. Our study is entitled The Experiences of Nurses in Using the Electronic Documentation System where we aim to understand the nurses' experiences in dealing with the electronic documentation system as part of daily nursing tasks and patient care in a home care setting. The result of the study can be used by other nurses or health care professionals for future references about the experiences of nurses using the electronic nursing documentation.

Field notes will be taken and the interviews will be recorded. Qualitative method and inductive data analysis will be used in interpreting the gathered information. Words or phrases from the original interview will be used in the data analysis. All information collected will be kept strictly confidential and anonymity is upheld. We would appreciate the opportunity to meet with you as we conduct approximately 30-minute interview and any further insights you may have would be greatly appreciated. Should you wish to quit at any point of the study, you may freely do so without any consequence. If you agree to join this study, please sign your name on the following page.

I give my permission to record the interview, as well as using of the material as basis for this thesis.

Place, Date, Signature

Sincerely,

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Appendix 3 Survey Question

Main Question:

1. What are your experience using the electronic documentation system in your workplace?

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