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Pre- and postoperative infection preventive information for surgical patient

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The purpose of this thesis was to develop the preoperative information given for elective surgical patients in the hospital of Kätilöopisto. The aim of this study was to find out a possible lack of preoperative instructions and how to develop the preoperative patient education materials to prevent the surgical site infection (SSI). The theoretical framework of this study included patient education, infection prevention, nursing improvement and surgical site infection.

The study was done by conducting a survey on preoperatively given information to elective surgical patients and the professional staff members. This study used triangulation; quantitative and qualitative research methods to find out the patients and professionals perceptions on the already existing preoperative information. The triangulation was used to increase trustworthiness of the results. Data from the patients' questionnaires was collected with quantitative research method. Out of 60 questionnaires served, 31 patients responded to the survey. The data was analyzed with a statistical package for the social sciences (SPSS). 6 professional nurses participated in a collaborative workshop on a quality of instructions after the analysis of patients' data. The workshop data was qualitative and analyzed with data driven content analysis.

The data pointed out the need for development of preoperative patient education material. Parts of the essential guidelines were missing from the given instructions and some of the instructions were updated last in 2009. The patients were more pleased with the appearance and the content of the instructions than the professional nurses, but both informant groups stated there was no refer to infection prevention or control in the instructions. Therefore, this data indicates the need for instructions of better quality as well as for more detailed patient education.

This study provides information of the current state of the preoperative educational material for the surgical patient in the hospital of Kätilöopisto, and a starting point for further development of the preoperative instructions.

Keywords: Patient education, infection prevention, nursing improvement, surgical site infection

Table of Contents

1	Introduction	6
2	Background of thesis	7
3	Patient education	9
3.1	Ethical aspects of the patient education	11
3.2	Patient education methods in the hospital of Kätilöopisto	11
3.2.1	Oral individual education	12
3.2.2	Written education.....	12
3.2.3	Telephone guidance	12
3.2.4	Internet-based education.....	13
3.3	Infection prevention in perioperative care	13
3.3.1	Pre-and postoperative information given for surgical patient.....	15
3.3.2	Patients own participation in infection prevention	16
3.4	Nursing improvement in patient education.....	17
3.4.1	The role of leader nurse in developing process	18
4	Surgical site infection, SSI	19
5	The aim of the study and research questions.....	21
6	Research methods.....	21
6.1	Quantitative data collection	22
6.2	Data analysis of quantitative research.....	23
6.3	Collaborative workshop on quality of instructions	35
6.4	Workshop data analysis	38
7	Findings.....	38
7.1	Findings of the quantitative data analysis	38
7.2	Findings of the qualitative workshop data analysis	39
7.2.1	Shortcomings of the preoperative guidelines.....	40
7.2.2	Development of the preoperative patient education	41
7.2.3	Future development ideas	42
7.3	Interpretation of the findings	42
8	Discussion	43
8.1	Trustworthiness of the study.....	45
8.2	Ethical considerations	46
8.3	Moral relevancy of the phenomena.....	47
9	Further suggestions	48
	References.....	51
	Appendix 1; Research tables	61
	Appendix 2; questionnaire in Finnish.....	80
	Appendix 3; questionnaire in English	82
	Appendix 4; Research permit	84
	Appendix 5; Research permit	88

Appendix 6; Cover letter for the patient.....	91
Appendix 7; Informed Consent (Finnish).....	92
Appendix 9; Workshop Power Point Presentation.....	94
Appendix 10; Workshop Power Point Presentation.....	98
Appendix 11; Findings of the group-oriented work	102

1 Introduction

Surgical care has been an essential component of health care worldwide for over a hundred years. Surgical care is an integral part of health care around the world, with an estimated 234 million operations performed every year (WHO 2014). Surgery can be the only way to save the patient from death or alleviate disabilities from common conditions. While the main purpose of the surgery is to ease health problems and save lives, an insufficient preoperative preparation for the operation and an incorrect postoperative care could cause substantial harm in many ways. Infections related to surgical care process are a universal problem, and a surgical site infection (SSI) is one of the most common infections related to health care. (Allegranzi et al. 2011.)

This thesis is focusing on the pre- and postoperative infection preventive information given preoperatively for surgical patients. A good guidance of the patient is patient-centered intervention between the professional and the patient (Kääriäinen 2008). Patient education can be developed with nursing improvement. A successful education affects patient satisfaction, commitment to the care process and the quality of the care (Kääriäinen 2008). Comprehensive pre- and postoperative instructions have been proven to lower infections (Anttila et al. 2010). Inadequate resources and patients' shortened stay in the hospital are causing challenges to the pre- and postoperative guidance. The patient has pre- and postoperatively more responsibility in his own health care.

The patient can get a surgical site infection during or after the surgery on that part of the body where the surgery took place. The surgical site infection can turn out very harmful and the recovery is usually slow. Costs of re-hospitalization are high for the society, and the patient may become disabled for a long time period. (Douglas 2014.) Infections related to hospital care endanger the safety of the patient and they as well lower the quality of the care (Arifulla 2012).

Pre- and postoperative information given preoperatively for surgical patients is an important source of information and should contain an infection preventive content. The aim of this study was to find out a possible lack of the preoperative instructions and how to develop the preoperative patient education materials to prevent the SSI. The questionnaire included in this thesis was used as a source of information, to examine the already existing pre- and postoperative information given for gynecological patients coming for surgery at the hospital of Kätilöopisto. The research questions for this study were, 1) what are the perceptions of the patients and the professionals of the preoperative patient education material, and 2) how to

develop the preoperative patient instructions. The questions included clarity, challenge, infection prevention, satisfaction and development of the instructions.

Co-operative workshop together with professionals was held after analyzing the questionnaires returned by the patients. The results of this study can be used in planning and development of the preoperative patient education.

Essential concepts in this thesis are patient education, nursing improvement, infection prevention and surgical site infection.

2 Background of thesis

Patients receive information from the hospital related to their surgery and instructions for preparations at home before and after the surgery. Despite this information, patients coming to the operating theatre have little knowledge of infection prevention and of how they can participate in it. (Arifulla 2012.) The direct information of infection prevention and principles how to proceed, what to do, is missing from the information given by the hospital (Arifulla 2012). Patients are feeling they do not receive clear information of how they can participate in their own surgical prevention of complications (Kättö 2009). Safe and cost-effective patient care can be provided by planning it well beforehand.

The elective surgical care process includes preoperative care, intraoperative care and postoperative care. The elective care process means planned care process with an appointment, which starts from the patients' home and ends to patients' home or to another care unit. The patient centered care covers the planning of the surgical care, implementation and assessment. (Kneedler & Dodge 1994)

Preoperative period means the time before the surgery. Preoperative period starts from the decision made together with the patient to go through an operation. The patient will be set on the queue of the surgery. Preoperative period includes patient examination, patient education and preoperative preparations. The goal of the preoperative preparation is to ensure the good physical, psychical and social preparation of the patient before the surgery.

Intraoperative period is the time during the surgery. It starts when the responsibility of the patient is delivered to the personnel of the operating theatre. Intraoperative period includes patients' entering to the operating theatre, implementation of the anesthesia and the surgery and the care in the recovery room.

The time after the surgery is called postoperative period. Postoperative care starts when the responsibility of the care is delivered from the recovery room to the ward or to another care unit. Seldom patient is allowed to go home straight after the recovery. Postoperative period includes convalescence time, rehabilitation time and demobilization with care instructions.

Pre-, intra- and postoperative care is called perioperative care (Rauta et al. 2013). The good perioperative care in HUS (The Hospital District of Helsinki and Uusimaa) is based on HUS professional nursing model. In the center are the results of the care of the patient and care givers' engagement in a common way of working. Values and the basic starting point of work in HUS are presented in tables 1 and 2.

Values of HUS
Equality of people
Patient centered care
Creativity and innovativeness
High quality and effectiveness
Openness, trust and mutual respect

Table 1. Values of HUS

Basic starting point of work in HUS
Vision of nursing: top skill level with co-operation in a developing nursing culture for the best of the patient
Mission of nursing: The patient will be helped
Promise to the patient: We promise to give safe, high quality and effective care
Promise to the owners: We promise to act efficiently and productively

Table 2. Basic starting point of work in HUS

3 Patient education

The goal of the patient education is to help and support the patient with his illness, supporting him to participate to his own care (Arifulla 2012). According to the Finnish law which is stated in the Act of Patients Status and Rights (785/1992), patient has right to knowledge and information about his own health care.

A good guidance of the patient is patient-centered intervention between the professional and the patient (Kääriäinen 2008). The guidance should be individual and paying attention to the health status, needs and the background of the patient.

Patients' motivation can be strengthened with the patient education. A motivated patient is also committed to his own care. (Saarela 2013.) Patient education can support the patient empowerment and prevent infections related to surgical care (Arifulla 2012). "Infection control priorities in nursing have been to increase patients' participation by empowering with patient education" (Arifulla 2012). The stay in the hospital can be reduced with the successful guidance (Kynge et al. 2007).

Improving motivation towards infection prevention starts with trust between the patient and health care professional. Health care professionals are in charge to ensure the patient has understood all the given information (written and spoken) appropriately and he is capable of taking care of his own health and improving his own health conditions before an operation and after the surgery. The lack of evidence based information may cause failure or difficulties in enhancing patient motivation and its promotion. No influence can be expected of education poorly presented. An adequate and well planned prevention program from health care professionals increases the possibility to rise the patients' own motivation and commitment. (Cousens et al. 2001.)

It is often important that the information is given several times little by little particularly among senior patients or those whose capacity of understanding may vary. A patient who is queuing for an operation, needs to be provided with an appropriate information according to his particular health situation (Heikkinen et al. 2008).

The professional skills of the health care workers are one factor promoting the empowerment through the knowledge. The facts which depend on prevailing practices may also promote or prevent the empowerment. Such are the instructions during the care. In addition, the factor depending on prevailing practices that may prevent patient's empowerment through knowledge is the structures of the care. (Rauta 2006)

Patients have different ages, backgrounds and cultures. The education of the patient and its basis should be considered. The way how the information is given depends on age, understanding and educational level of the patient. Culture means learned and transmitted values, beliefs and practices. Culture is guiding people in their health care and in the need for care. Successful and respectful teaching that takes into account the cultural diversity gives better results in the patient's education.

The patients' own motivation is the key for the behavioral change. Health care professionals have a duty to ensure the patient has received all the information and knowledge that is needed and it is well understood. The patient has the final say on his or her own health, even according to the law Act of Patients Status and rights (785/1992, 6§ law of self-determination). Autonomy is one of the ethical key principles and describes patients own participation in his care. Meanings as self-governance, liberty rights, privacy, individual choice, freedom of will, causing one's own behavior, and being one's own person are expressing the term autonomy. The autonomous person acts freely after a self-chosen plan. (Beauchamp, Childress 2001.)

Nurses, and doctors have to be honest and tell about the risks of the operation what the patient faces and how his life habits and own health condition effect to the success of the surgery. They also have a duty of describing honestly what may happen in the future if the patient is not ready to change his unhealthy life habits. This includes particularly smoking, drinking and unhealthy eating habits. (Kivelä et al. 2014.) Clear and honest real-life examples are the best teachers when motivating a patient towards better habits.

3.1 Ethical aspects of the patient education

Ethical principles of healthcare are set by the ethical board of the national healthcare. Each person working in healthcare has to follow these principles that include both the definitions of healthcare mission and the ethical principles. According to the ethical board, the mission of healthcare is promoting health, preventing sicknesses and minimizing sufferings. There are six ethical principles: patient's right to good care, human dignity, self-determination, justice, professional practices and an atmosphere that promotes well-being, and co-operation and mutual respect. The ethical principles of healthcare also defines the basis of guidance and patient education, and they add to the understanding of acting in an ethically correct way to work. Based on this, patient's view and experience has to be noted from an ethical point of view, and on the other hand, the principles obligate the nurse to act for the best of the patient and in co-operation with other professionals. The aim of this guidance can be understood through the healthcare ethics: The aim is to promote well-being of the patient. (Terveydenhuollon eettiset ohjeet/ETENE.)

3.2 Patient education methods in the hospital of Kätilöopisto

The amount of information given during the care process can be overwhelming and it can be difficult to assimilate within the limited time. Different kinds of patient education methods are needed while patients are not always capable to ask the questions they want, remember or they feel hesitation during the contact with professional health care worker (Leino 2011). While the patient is capable of receiving only a limited amount of information, it is important to rehearse the core issues in the end of the guidance (Kynge et al. 2007).

The patient education methods used in the hospital of Kätilöopisto are oral individual education added with written education, only written education and via telephone happened education.

3.2.1 Oral individual education

Most commonly given guidance is oral individual guidance, face to face happening guidance between the patient and the nurse. This is the form of guidance that the patients are most pleased with, and that is how they see it most beneficial. Individual guidance has been seen efficient as it enables making immediate direct questions easy. (Kyngäs & Henttinen 2008.)

The use of both oral and written education together is more effective than using oral education alone. The combination of oral and written knowledge preoperatively is recommended by The Royal College of Anaesthetists (Ralphs 2006).

3.2.2 Written education

In patients' education it is common to use written patient education material, which is expected to be clear, easy to understand and follow. The written patient education material can be given as text on a paper, on information leaflets (Johansson 2006) or on internet pages (Heikkinen et al. 2008). The quality of the material should be good and the instructions well written. The material itself should empower patients to participate their own health care (Arifulla 2012).

The written patient education is not only transferring the information to the patient but delivers the message of the position of the patient in the health care system. It defines the view about health and sickness (Lipponen et al. 2006). The goal of the hospital is to guide patients to act correctly and the goal of the patient is to get essential information (Lipponen et al. 2006).

3.2.3 Telephone guidance

Telephone guidance can replace part of the preoperative polyclinic visits or complement the preoperative education. Telephone guidance requires interaction skills of the nurses, experience and professional knowledge (Orava 2010). While the visual view and observation is missing from the telephone guidance, it is important to plan how the guidance is given for elderly people or immigrants (Lipponen et al. 2006).

Telephone guidance has been stated to be effective and economically profitable way of service. Preoperative telephone call 3 days before the surgery cut down the last minute cancellations with 53% (Haufler & Harrington 2011).

3.2.4 Internet-based education

Nowadays the health care professionals have often pressure with lack of time in their work. Less workers should work more effectively within the same time. According to Heikkinen (2011), Internet-based education for surgical patients is increasing patients' possibilities to become cognitively empowered. There are more technical educational solutions for instance mobile phones and tablets which improve efficiency of the education. There is also an enormous need for the empowerment of the health care clients and health promotion. People are used to search information on the Internet. This gives emphasis on effective individually tailored possibilities in health care education (Heikkinen 2011).

At the present, the empowering Internet-based education can be recommended as an efficient alternative to traditional face to face happening education. It is a good choice when concerning the lack of nurses and other health care professionals and it is also an economical choice helping to cut the costs of health care. The education is also not place or time limited and it is time saving. It offers an option for patients to choose the time and place for learning and reading information on the Internet (Heikkinen 2011).

3.3 Infection prevention in perioperative care

Good infection prevention and control is essential in ensuring surgical patients' safe and effective care (WHO 2014). Infection prevention in health care is helping to confirm the protection of those who might be vulnerable to acquire an infection while receiving care for their health problems. The basic principle in infection prevention is hygiene and especially hand hygiene (WHO 2009, 2014).

Improved hand hygiene has the potential to reduce morbidity and mortality from infections spread by facial or oral routes and person to person contact. Infections preventable include surgical wound infections (SSI). Infection prevention requires a change in educational systems and in the level of individual behavior. Motivating for behavior change might need more than active communication and given information (Aunger et al. 2014).

Good hand hygiene is the most effective way to avoid the transmission of harmful germs and health associated infections among health care sectors (Harbath et al. 2000). The most common reason among the health care professionals for careless hand hygiene is the lack of time (Hupli & Routamaa 2007).

The attitude presented by the other health care professionals and particularly by the supervisor greatly influences the behavior towards the hand disinfection. According to Erasmus et al. (2009), health care students copy the behavior of their superior during their clinical and hospital practice. Senior health care professionals are of major importance for hand hygiene compliance (Erasmus et al, 2009). Creedon (2005) found out that the efforts of hand hygiene must be multifaceted. Alcohol hand rubs should be provided for each patient. Health care professionals' skin irritation needs to be taken care of urgently. According to Girou and Oppein (2001) there are three major obstacles among health care professionals before wide acceptance of hand rub: lack of terms in efficacy, distrusts of skin in tolerance and mistrust on hand cleansing instructions. Compliance to recommendations is a part of being health care professional.

A National prevalence study conducted in Finland during 2011 found that 7,4% of the patients had at least one treatment-related infection (WHO 2011, Kärki & Lyytikäinen 2011). In Germany, a National hand disinfection consuming survey increased the use of disinfection up to 40% (Behnke et al. 2012).

It is important to develop the education and knowledge among the public health care professionals on the patterns of surgical safety to prevent the lack of care in health care chain (WHO 2009).

A surgical safety checklist is used worldwide to prevent surgical site infections, morbidity and mortality. According to the WHO (2014), through the use of surgical safety checklist in operating rooms, postoperative complication rates fell by 36% on average, and death rates fell by a similar amount. According to WHO, the study in industrialized countries describes that a perioperative rate of death from impatient surgery went up from 0.4% to 0.8% and the rate of major complications of 3.0% to 17.0%. These numbers are much higher in developing countries (WHO 2014).

The aim of infection prevention in health care is to reduce infections related to care of the patients, to find and stop the epidemics, to prevent the development of the resistance of the microbes, to cure the infections correctly and to manage the preventive procedures effectively and economically (Kuntaliitto 2005). Approximately one third of health care acquired infections are preventable (Gastmeier et al 2003).

3.3.1 Pre-and postoperative information given for surgical patient

To prevent infections, patients receive information in their homes for preparations before the surgery. Preoperative preparations at home are showering and cleaning the skin, especially the navel for operations focusing on the abdomen, stopping smoking, having normal glucose levels if diabetic, losing weight if they are obese, treating all infections before the surgery if possible and controlling the teeth and mouth (Harle 2004, HUS infektio- ja turvallisuus 2013). Hair from the incision area should not be removed because of the risk of an infected wound. The hair will be removed only before the operation, if needed (Suomen Kuntaliitto 2005, Moncaster et al. 2006).

In the operating theatre, doctors and nurses will take several measures to ensure that the surgical site is as clean as possible. A patient coming to the surgery who has carried out preoperative preparations properly is saving time and costs in the operating room. By following the given instructions, the patient is reducing the risk of surgical site infection.

The role of the post-operative guidance is significant, and it concentrates on hand hygiene and the correct care of the wound. The wound is protected with sterile dressings during the first 24 to 48 hours. Hand hygiene is performed before and after dressing changes and before checking the wound. The patient is informed to contact the doctor immediately if symptoms of infection occur, such as redness, pain, drainage at surgery site or fever. (CDC 2016.)

These are the given pre- and postoperative instructions by the hospital, but the direct information of infection prevention and principles on how to proceed and what to do is missing. The most common infection control content in the material of the patient education is hand hygiene, although its implementation is not clearly conducted (Arifulla 2012). There is a need to improve patients' education materials and guidelines about the infection control content, as well as to increase the patients' own participation (Arifulla 2012).

3.3.2 Patients own participation in infection prevention

Good hand hygiene is the most important issue when preventing SSI because hands are the main sources of infections. For this reason proper hand hygiene should receive a great deal of interest. The aim of hand hygiene is to remove transient wound microorganisms before their transfer to the surgical wound (Gould & Brooker 2008). When talking about hand hygiene one should also remember nails which should be kept short and clean. The wound should only be touched when necessary and the patients should follow very carefully all the instructions given by the hospital.

If the patient is at home, the homecare nurses and public health care professionals should follow instructions closely. They should also teach the patient and remember proper hand hygiene with soap hand wash when the hands are dirty. Otherwise antiseptics and alcoholic hand rubbing (containing 60-70% alcohol- based formulation ethanol or isopropanol) is used. When soap is being used, the mechanical action of washing and drying removes microorganisms. Antiseptics destroy organisms, providing the contact time, which is sufficient and often neglected (Behnke et al. 2012). When taking care of the wound it is necessary to use appropriate hand gloves, too.

Factors such as nutrition should be taken into consideration when the wound is in healing process (Ganon et al 2002 & Hasegawa et al 2008). There are many kinds of protein products which have been developed specially for patients who have wounds in their body. All in all healthy nutrition which contains plenty of protein promotes the healing process of the wounds. (Horan et al.1999.)

Aseptic dressing technique is necessary when taking care of the surgical wound. Stitches and wound tapes should be taken care of, according to the instructions given by the operated hospital. The purpose of aseptic (non-touch) dressing technique is to avoid contact between open tissue, especially fingers and any other possible contaminated items that could lead to cross contamination. More absorbent dressings may be applied to deal with seeping exudate in order to avoid discomfort, environmental contamination and cross infection. Daily changes are usually unnecessary and may be painful. Transparent polyurethane dressings permit inspection without removal. The risk of contamination increases every time the wound is being touched. It cools the wound and slows down cell division and the action of phagocytic cells. (Gould & Brooker 2008.)

3.4 Nursing improvement in patient education

The hospitals and other health care sectors face increasing needs to participate in quality improvement activities and that includes the nursing improvement as well. Organizational strategies set the goals for developing. Nursing and its improvement will intensively grow. Among health care and nursing, the quality improvement demands are high while the nurses are the main caregivers in hospitals. The role of the nurse mainly impacts patient care, treatment and final outcome (Kääriäinen 2008).

Patient education can be developed with nursing improvement. Patients' own activity in infection prevention can be increased by nursing improvement as a part of patient education. Appropriate professional training is necessary to ensure the sufficient level of professional knowledge. The knowledge and expertise of the professionals should lead to well planned, systematic and developed patient education. It is important to make sure the patient has received an adequate amount of high-quality information, since the patient has the final decision on his health care himself. Successful guidance and education have significant effects towards the health of the patient. They are also profitable as it saves state finances. Therefore, further education among health care professionals is highly recommended. (Kääriäinen 2008.)

Contradictory perceptions of the patient education, inappropriate facilities, lack of time and knowledge, and lacking equipment hinder successful patient education among nurses. Interaction is an essential part of patient education and empowermental interaction has been found to be patient-centered. There is a need for more versatile patient education (Kääriäinen, 2008).

The knowledge and expertise of a nurse who is trained to be an expert in hygiene should be utilized adequately. Self-learning is inadequate among the health care professionals. It has a significant role in improvement of patient care (Leino-Kilpi et al. 2008).

According to the Basic starting point of work in HUS, it is promised to give safe, high quality and effective care to the patients. According to its vision, the nursing is highly skilled with co-operation in a developing nursing culture that is best for the patient. (Basic starting point of work in HUS 2015.)

3.4.1 The role of leader nurse in developing process

To create hospital developing culture, the leader has a significant role to engage the nurses and other health care professionals. Due to the increasing complexity of health care, the role of leadership has become progressively more important. The working culture which starts from the point of view that quality improvement of the organization is everyone's responsibility, is reported to achieve significantly better results. According to Thompson, Wieck and Warner (2003), nurses expected substantial and strong leadership support on every day basis. To implement quality improvement strategies there was a need for involvement, visibility of the leader both physically and written by e-mails. Also there was consistent commitment to developing work (Thompson et al. 2003).

The leaders' leading style affects co-operation, work satisfaction and commitment to work and therefore it promotes patient safety. The different styles of leadership, such as visionary, coaching, affiliate, democratic and participative, have an empowerment impact on professional development. They also affect the workers' retention (Acree 2006 & Andrews 2005), well-being at work and quality of care given for the patients (Elo et al, 2010). Altogether the participative leadership was associated to be the best leading style mentioned above (Dunham-Taylor 2000, Leveck & Jones 1996, Vesterinen 2013). It encourages the employees to participate in organizational decision-making. The emotional intelligence and personal quality called "strong charisma" of the leader have a positive impact on the staff. According to Akerjordet & Severinsson (2008), Codier et al. (2011), the impact of an emotionally intelligent leader is unquestionable and the units with an emotionally talented leader are often best in care enhancement.

The leader nurse has a constant need for self-learning and professional development (Vesterinen 2013). With such development there is possibility to have an active role among the staff by supporting and having a positive effect in nursing improvement. Therefore, a leader nurse has a big responsibility in development process according to leading style and its use in an adequate way (Vesterinen 2013).

4 Surgical site infection, SSI

There is a criterion for the surgical site infection defined by the Centers for Disease Control and Prevention (CDC 2016). *Superficial incisional SSI* involves only the skin and subcutaneous tissue. It occurs within 30 days after the surgery. *Deep incisional SSI* involves deep soft tissues, fascial and muscle layers. *Deep incisional SSI* occurs within 30 or 90 days after the surgery. *Organ/Space SSI* involves any part of the body deeper than the fascial or muscle layers. *Organ/Space SSI* occurs within 30 or 90 days after the surgery. (CDC 2016, Török et al. 2010.) Typically the surgical site infection occurs during the first two weeks after the surgical procedure (Török 2010).

The skin is the body's best barrier against invading pathogens. An infection will become a risk, when the skin is no longer intact. In a case of a surgery there is always a certain risk of an infection (Gould & Brooker 2008). The patient can get the SSI during or after the surgery on that part of the body where the surgery took place. It can involve the skin only but can also be more serious and reach the tissue under the skin, the organs and the implanted material. (CDC 2016.) The surgical site infection is among the most common problems for patients who undergo operative procedures (Allegranzi et al. 2011, Borgey et al. 2007). It remains a common and widespread problem contributing to morbidity and mortality; partly attributed to increase in infections due to antimicrobial resistant bacterial pathogens.

The factors that influence the incidence of surgical wound infection preoperatively are the patient's underlying illness, risk factors as smoking and malnutrition and condition of the skin. Glucose levels should be stable and under 200mg/dL if diabetic, all the infections should be treated before the surgery and the teeth and mouth controlled. (Brenner & Nercelles 2011.) Body Mass Index (BMI) larger than 25 (Body Mass Index $BMI \geq 25 \text{ kg/m}^2$, calculated as weight in kilograms divided by height in meters squared) is a great risk factor (Aholaakko et al. 2012, Hasegawa et al. 2008). According to Chen et al. (2007) obese patients are more likely to have a surgical site infection than patients with normal weight. Obesity alone is an independent risk in the development of SSI (Chen et al. 2007). Preoperative skin preparation belongs to the main preventive measures to decrease the likelihood of SSI (Borgey et al. 2007). Preoperative showering with hair washing and navel cleaning are preventive measures before the surgery. The majority of SSI cases is caused by patients' skins own bacterial flora (Turtiainen & al. 2014). The endogenous microbial flora can be reduced with preoperative skin preparation and it is strongly recommended patients to take a shower with an antiseptic soap solution before the surgery (Borgey et al. 2007). Hair removal from the area of incision is not preoperatively recommended (Borgey et al. 2007, Török 2010).

Intraoperatively the influencing factors to the incidence of SSI are the site and the complexity of the surgery, duration of the surgery, if the glucose level is more than 11mmol/L (WHO 2014), patient's temperature during the surgery; active warming measures should be used for surgical procedures lasting more than 30 minutes to maintain a temperature above 36 degrees, to avoid Hypothermia (WHO 2014), the presence or absence of hypovolemia, the oxygen tension in the tissue and the use or nonuse of prophylactic antibiotics. (Török et al. 2010.) The prophylactic antibiotic should be given less than 30 minutes before the incision (Brenner & Nercelles 2011), but it can be administered within 60 minutes prior to the initial incision (WHO 2014). If required the hair removal is done intraoperatively and by using clippers or chemical depilatory creams (Borgey et al. 2007). According to study of Lefebvre et al. (2015) hair removal with clipping, chemical depilation, or no depilation showed significantly fewer SSIs than shaving.

Postoperative factors decreasing the incidence of the surgical site infection are the correct handhygiene (Pittet et al. 2005), removal of possible drainages as soon as possible and the correct care of the wound (Brenner & Nercelles 2011).

Operations and wounds are classified clean, clean contaminated, contaminated and dirty (Gould & Brooker 2008). The surgical team is using the wound classification system intra- and postoperatively for grading the extent of microbial contamination. It assists the surgeon to decide whether or not to use preoperative antimicrobial prophylaxis or to continue it postoperatively. Patients with operations classified contaminated and dirty have higher risk to develop an SSI (Demisew et al. 2011).

The first few hours after the tissue is contaminated by bacteria, constitutes of a critical period during which wound infections are established. An infection after the surgery and a local infection with symptoms of redness, swelling, warmth, pain and secretion are the symptoms of SSI (Török et al. 2010). The normal inflammation of the wound is continuing for approximately three days. Contamination with bacteria is prolonging the inflammation and disturbing the healing process. In a case of an infection, a surgical procedure may be needed to prevent the complications. (Gould & Brooker 2008.)

Surgical site infections prolong hospitalization by 5 to 20 days and they substantially increase the cost of care. Recovery from the surgery will be slower and more difficult. (Manyahi 2012.) Surgical site infection causes many problems for the patient and for society (WHO 2011.) It increases the pain and the suffering of the patient while the patient is disabled for a long period of time. Patients with infections require more antibiotics and analgesia, more treatments and nursing (Gould & Brooker 2008). Costs of the re-hospitalization are high and the patient is sick for a long term. In severe cases an SSI infection can cause mortality (Gould & Brooker 2008).

5 The aim of the study and research questions

The aim of this study was to find out a possible lack of preoperative instructions at the hospital of Kätilöopisto, and to find the means to develop the preoperative patient education materials to prevent the SSI. The research questions for this study were, 1) what are the perceptions of the patients and the professionals of the preoperative patient education material, and 2) how to develop the preoperative patient instructions. The questions included clarity, challenge, infection prevention, satisfaction and development of the instructions. In order to investigate the perceptions of the patients and the professionals, a survey of the preoperative education material was conducted and also a group-oriented workshop for professionals was organized.

6 Research methods

We were using triangulation; quantitative and qualitative research methods in our thesis to find out the patients and professionals point of view on the already existing information. We analyzed pre- and postoperative instructions given preoperatively for the patient. The mixed method is used for cross-checking the data from several resources (O'Donoghue & Punch 2003). The purpose of the mixed method is to increase the reliability and the validity of the results (Bogdan & Biklen 2006). Triangulation used in this thesis is one of the main mixed method designs (Creswell et al. 2007). Triangulation involves separate collection and analysis of two types of data, quantitative and qualitative data, which is then merged and interpreted in the stage of the results (Creswell et al. 2007). By combining the quantitative and the qualitative research methods we were able to check the results of the same phenomena from different sources and increasing the trustworthiness of our study (Altrichter et al. 2008). Threats of trustworthiness are reactivity, researcher biases and respondent biases (Padgett 2008).

Quantitative method is often used when there is a need to find out about the state of something and to explain the phenomena. Quantitative study is essentially about collecting numerical data to explain certain questions (Cohen & Morison 2000). Quantitative method allows questions to be systematically answered, opening a way for development of the phenomena. The quantitative data from the patients was collected with a structured technique as a questionnaire form and analyzed with by using Excel and SPSS (IBM SPSS Statistics 23), Statistical Package for the Social Sciences. Clarity of the instructions was analyzed by using cross tabulation. Cross tabulation is meant to organize the categorical data from the patients questionnaires in such a way as to reveal whatever relationship exist between two variables (Argyrous 2011). In this research Cross tabulation is identifying a relationship between two variables 1) hysterectomy and 2) hysterectomy and other related operation. By cross tabulation we analyzed the structured questions of the patients questionnaire form and the percent's of all patients answers.

The purpose of the qualitative research is to gain understanding of a phenomenon as it occurs and to describe the meaning constructed by the participants (Patton 2002). The qualitative method investigates the why and how, not only what, where, when or who (Padgett 2008). We were using the qualitative data driven content analysis for analyzing the answers of the professional nurses, who participated to the co-operative workshop. The data was collected primarily from the open-ended questions of the questionnaire form and from the open-ended questions of the group-oriented work. We organized also collaborative discussions during the workshop. The data emerged from the workshop was unstructured. The data collected with methods such as interviews, observations, diaries, other written documents or a combination of different methods in most studies is unstructured (Elo & Kyngäs 2008).

6.1 Quantitative data collection

The data was collected from the patients' structured questionnaire forms. There were seven questions altogether in our question form with a set of questions and answer alternatives, to choose from 1 to 5. In addition, there were also two qualitative open questions (3rd & 7th). The answers were measured according to strength of feeling "strongly agree" to "strongly disagree". The form were given to 60 gynecological patients coming for elective surgical operation.

The questionnaires were given to 60 gynecological patients coming for surgical operation from December 2015 to April 2016. We got back 31 forms. Four participants did not mention the operation they were coming. All 31 participants answered the structured questions: 1, 2, 4, 5 and 6. There were a set of questions and answer alternatives to choose from 1 to 5. 11 participants answered to the open question number 3 and 12 participants to the open question number 7.

6.2 Data analysis of quantitative research

Final data analysis was conducted by using Excel and SPSS (IBM SPSS Statistics 23), Statistical Package for the Social Sciences which is common among the health researchers (Argyrous 2011). Quantitative research refers to the use of numbers for data analysis. The numbers can be collected automatically. The ultimate goal in data analysis is to get results that can be analyzed statistically (Green & Harvey, 1993). If there are no numerical values, it would be difficult to compare the results of our study to existing ones.

The following questions (1, 2, 4, 5 and 6) in the questionnaire form (Appendix 3) involved two variables, hysterectomy and hysterectomy and other related operation. The variables were chosen due to lack of information in other procedures. 11 patients out of 18 underwent hysterectomy and 7 patients underwent hysterectomy and other related operation. First the answering options were placed in Excel, from which they were moved into SPSS. By SPSS cross tabulation we got formal and objective information about the questionnaire and our findings were presented easily in numerical form (Argyrous 2011). The elective hysterectomies (18 patients altogether) were the largest group from whom the most answers were received from. We analyzed all the structured questions (1, 2, 4, 5 and 6) by cross tabulations and received answering percentages listed in tables 8-12. Questions 4, 5 and 6 were described by bar charts as well as by percentages in tables 13-15.

The Excel was used to describe and analyze all the structured questions by bar charts in the form of different heights with each box to representing questions 1, 2, 4, 5 and 6 (Appendix 3). All the 31 patients answered these following structured questions (tables 3-7) measured by Excel. The numeral data showed the amount of the opinions to each question.

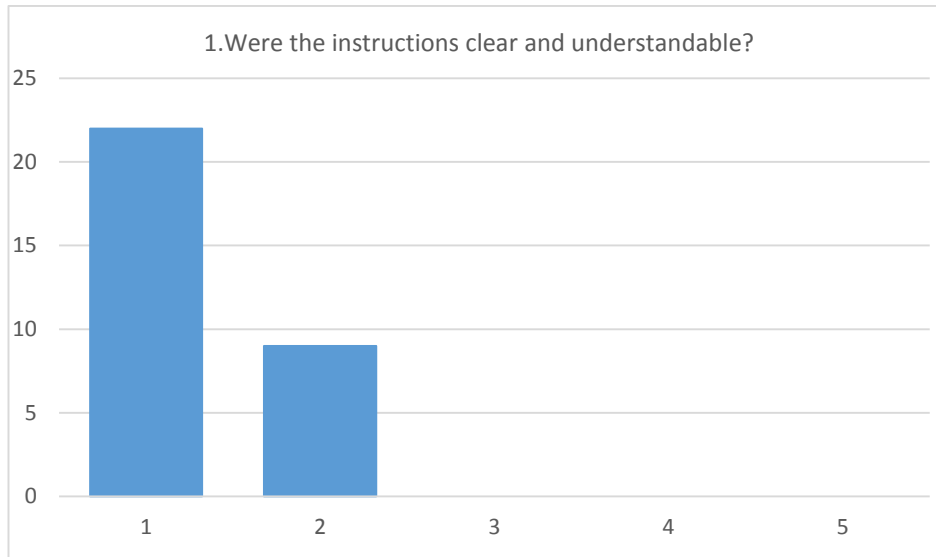


Table 3. The 1st question of the questionnaire

1= Very clear
 2=Quite clear
 3=I cannot tell
 4=Not very clear
 5=Not at all clear

- 22 answers very clear and 9 answers quite clear.

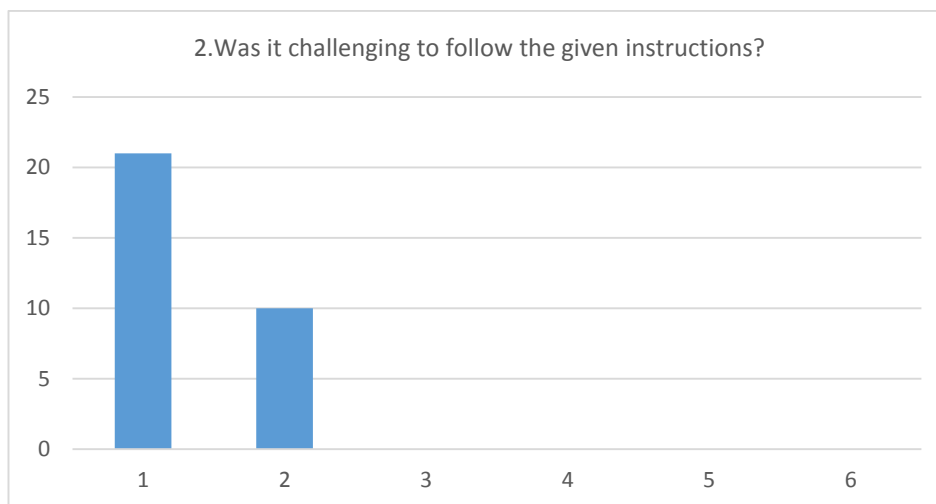


Table 4. 2nd question of questionnaire

1=Very easy
 2=Quite easy
 3=I cannot tell
 4=Quite challenging
 5=Very challenging

- 21 answers very easy and 10 answers quite easy.

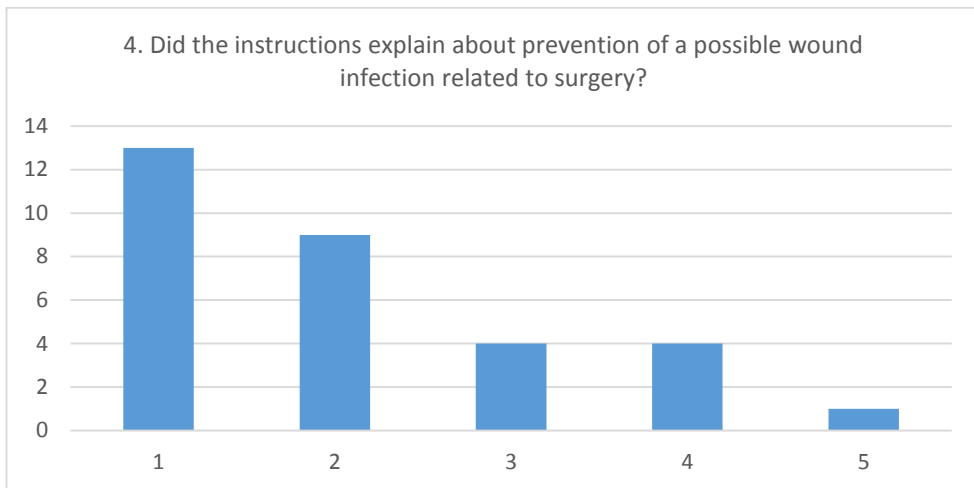


Table 5. 4th question of questionnaire

1=Very well
 2=Quite well
 3=I cannot tell
 4=Not so well
 5=Not at all

- 13 answers very well, 9 answers quite well, 4 answers I cannot tell, 4 answers not so well and 1 answer not at all.

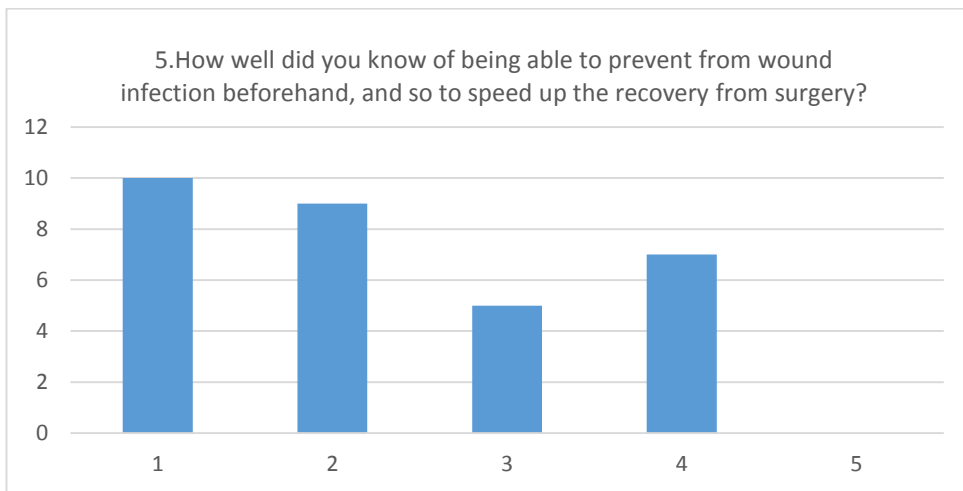


Table 6. 5th question of questionnaire

1=Very well
 2=Quite well
 3=I cannot tell
 4=Not so well
 5=Not at all

- 10 answers very well, 9 answers quite well, 5 answers I cannot tell and 7 answers not so well.

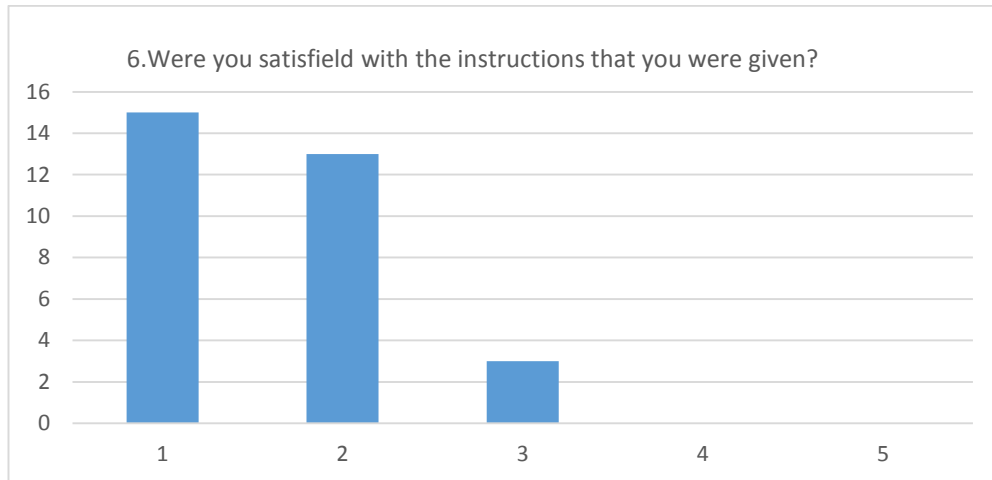


Table 7. 6th question of questionnaire

1=Very satisfied
2= Quite satisfied
3=I cannot tell
4=Not so satisfied
5=Not at all

- 15 answers very satisfied, 13 answers quite satisfied and 3 answers I cannot tell

Clarity of the instructions

By cross tabulation we analyzed the structured questions of the questionnaire forms from the 18 patients who underwent a hysterectomy or hysterectomy and other related operation. In the following tables 8-12, two variables are described: 1) hysterectomy and 2) hysterectomy and other related operation, and the percentages to each question. The structured questions of the form were:

- 1st question; were the instructions clear and understandable?
- 2nd question; was it challenging to follow given instructions?
- 4th question; did the instruction explain about prevention of a possible wound infection related to a surgery?
- 5th question; How well did you know to be able to prevent from wound infection and so to speed up the recovery related to surgery?
- 6th question; were you satisfied with instruction that you were given?

		operation		Total
		hysterectomy	hysterectomy and other related operation	
Were the instructions clear and understandable?	very clear	4 57,1%	8 72,7%	12 66,7%
	quite clear	3 42,9%	3 27,3%	6 33,3%
Total		7 100,0%	11 100,0%	18 100,0%

Table 8. The first question: Were the instructions clear and understandable?

		operation		Total
		hysterectomy	hysterectomy and other related operation	
Was it challenging to follow given instructions?	very easy	3 42,9%	7 63,6%	10 55,6%
	quite easy	4 57,1%	4 36,4%	8 44,4%
Total		7 100,0%	11 100,0%	18 100,0%

Table 9. The Second question: Was it challenging to follow given instructions?

		operation		Total
		hysterectomy	hysterectomy and other related operation	
How well did you know of being able to prevent from wound infection beforehand, and so to speed up the recovery from surgery?	very well	0 0,0%	3 27,3%	3 16,7%
	quite well	3 42,9%	4 36,4%	7 38,9%
	I cannot tell	1 14,3%	2 18,2%	3 16,7%
	not so well	3 42,9%	2 18,2%	5 27,8%
Total		7 100,0%	11 100,0%	18 100,0%

Table 10. The Fifth question: How well did you know of being able to prevent from wound infection beforehand, and so to speed up the recovery from surgery?

		operation		Total
		hysterectomy	hysterectomy and other related operation	
Did the instructions explain about prevention of a possible wound infection related to surgery?	very well	1 14,3%	3 27,3%	4 22,2%
	quite well	3 42,9%	3 27,3%	6 33,3%
	I cannot tell	1 14,3%	2 18,2%	3 16,7%
	not so well	1 14,3%	3 27,3%	4 22,2%
	not at all	1 14,3%	0 0,0%	1 5,6%
Total		7 100,0%	11 100,0%	18 100,0%

Table 11. The Fourth question: Did the instruction explain about prevention of a possible wound infection related to surgery?

		operation		Total
		hysterectomy	hysterectomy and other related operation	
Were you satisfied with instructions that you were given?	very satisfied	1 14,3%	5 45,5%	6 33,3%
	quite satisfied	4 57,1%	6 54,5%	10 55,6%
	I cannot tell	2 28,6%	0 0,0%	2 11,1%
Total		7 100,0%	11 100,0%	18 100,0%

Table 12. The Sixth question: Were you satisfied with instructions that you were given?

The Fourth question:

→Did the instruction explain about prevention of a possible wound infection related to a surgery?

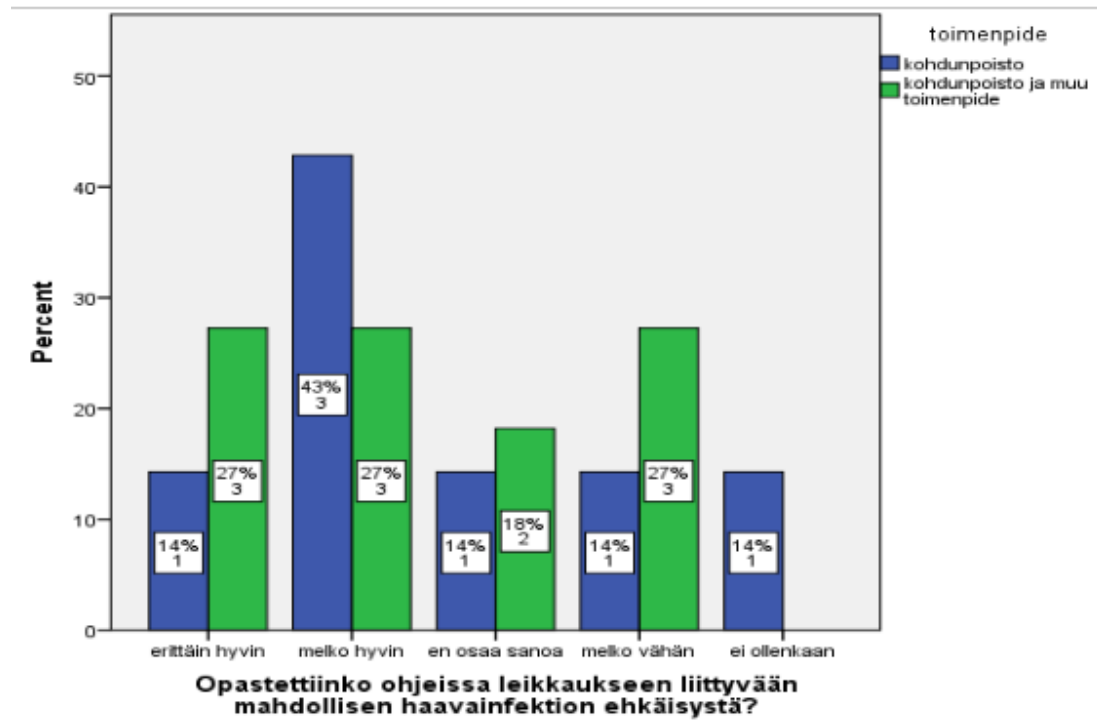


Table 13.

- Blue= hysterectomy
 - Green=hysterectomy and other related operation
- Erittäin hyvin=very well
 - Melko hyvin=quite well
 - En osaa sanoa=I cannot tell
 - Melko vähän=not so well
 - Ei ollenkaan=not at all

The Fifth question

→How well did you know of being able to prevent from wound infection beforehand, and so to speed up the recovery related to surgery?

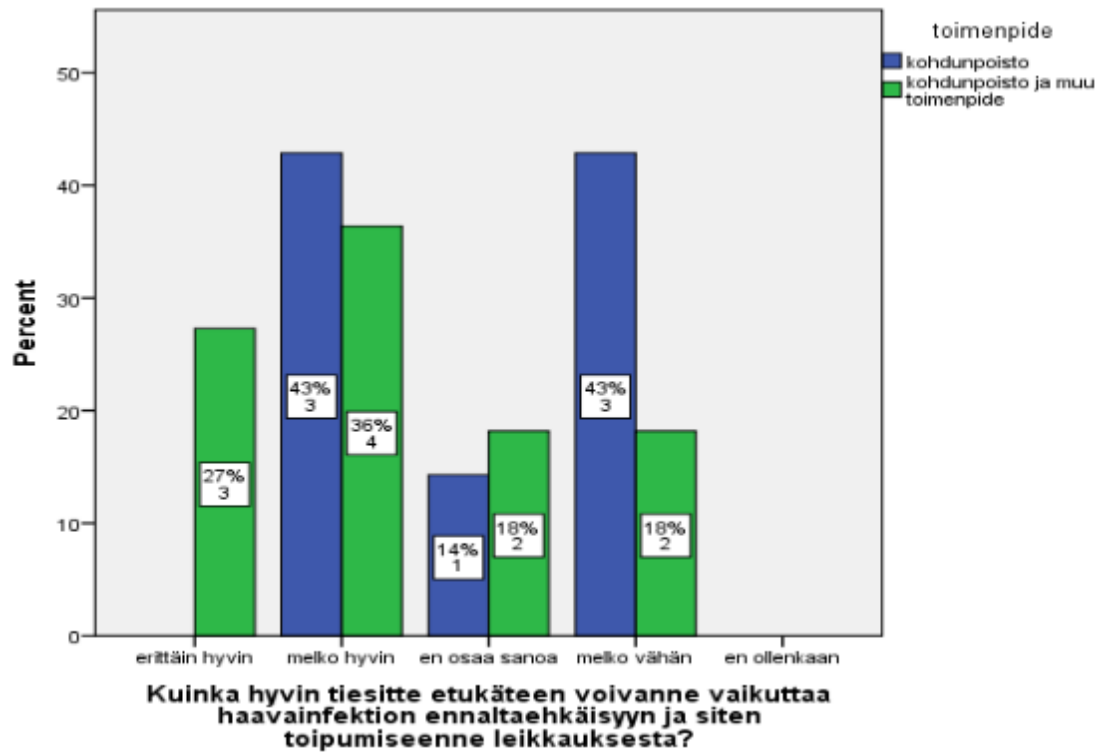


Table 14.

- Blue= hysterectomy
- Green=hysterectomy and other related operation
- Erittäin hyvin=very well
- Melko hyvin=quite well
- En osaa sanoa=I cannot tell
- Melko vähän=not so well

The Sixth question

Were you satisfied with instructions that you were given?

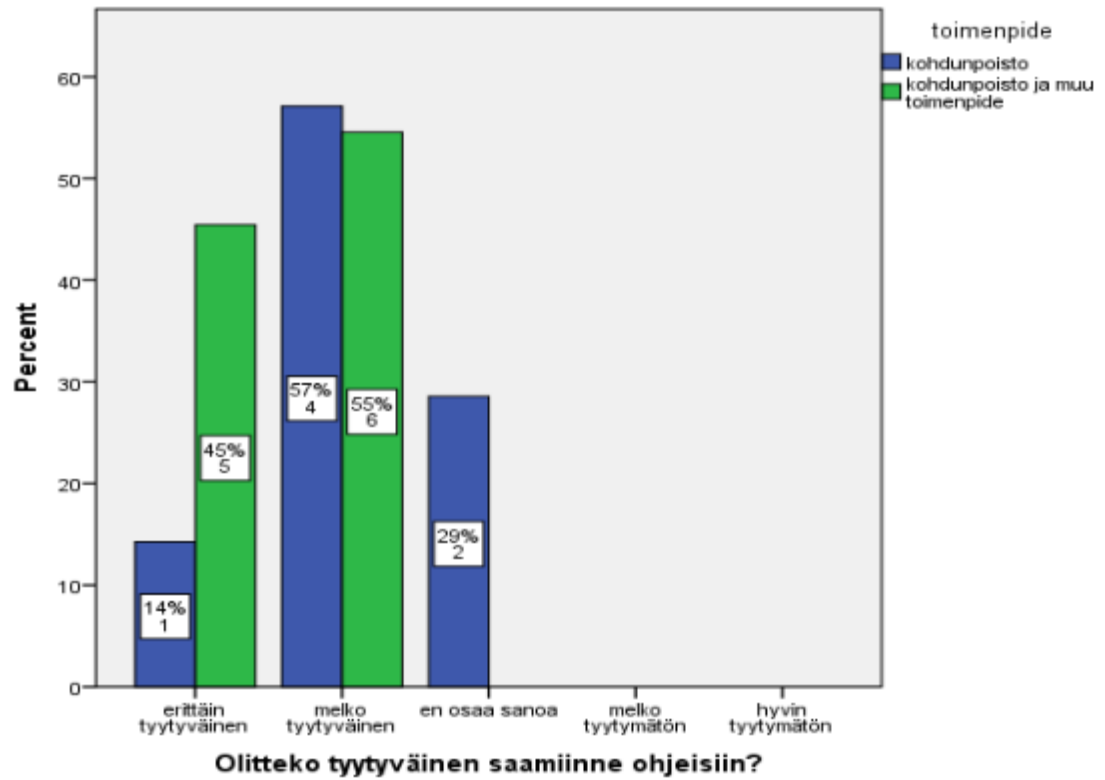


Table 15.

- Blue= hysterectomy
- Green=hysterectomy and other related operation
- Erittäin tyytyväinen=very satisfied
- Melko tyytyväinen=quite satisfied
- En osaa sanoa=I cannot tell

Questions number 3 (11 answers) and 7 (12 answers) were open questions which are described below:

3rd question “Was is it challenging to follow the given instructions? If yes, why?”

“Things were explained really understandable way.”(Quote1)

“It was disturbing that the instructions send by mail were very old.”(Quote2)

“No, I am a nurse by profession.”(Quote3)

“The guide how to use support hoses was missing.”(Quote4)

“Easy to follow, nothing to add.”(Quote5)

“It was not challenging.”(Quote6)

“It was not clear how long the pain would last after the surgery and how long it would take the stiches to melt away.”(Quote7)

“Nothing to mention.”(Quote8)

“The instruction received before were only about showering, drinking and eating. Also I expected to have instruction in Swedish.”(Quote9)

“I wanted to know more about my surgery.”(Quote10)

“If you read really carefully they were perfectly understandable.”(Quote11)

7th question “What would you add to the given instructions?”

“Nothing, In my opinion all the instructions were clear.”(Quote1)

“Nothing, they were exact and well detailed.”(Quote2)

“Nothing to add. I got good care.”(Quote3)

“The information about using the support hoses to prevent the thromboses.”(Quote4)

“Nothing.”(Quote5)

“Nothing.”(Quote6)

“Not necessarily a thing. It was good the nurse called before the operation and mentioned the main details.”(Quote7)

“The staff was really friendly”. (Quote8)

“I wanted to have the instruction in my own mother tongue, in Swedish.”(Quote9)

“Nothing to add”. (Quote10)

*“There could be a detailed list about the things to do at home before the surgery”.
(Quote11)*

“In my opinion there is almost nothing about the surgical site infection in the given instruction”. (Quote12)

6.3 Collaborative workshop on quality of instructions

After analyzing the answers of the questionnaires we organized a workshop to view the perspective of the professionals in the hospital of Kätilöopisto. The workshop was collaborative and good ideas and discussions emerged.

The workshop is a seminar, which gathers a group of people together to develop some predefined issue, or to make decisions. A group is defined when two or more persons belong to the same cohort. (Heikkilä 2002.) Workshops can be also planning workshops. The workshop is a group-oriented work, where the participants learn from each other by sharing their own experiences and ideas (Jaakkola et al. 2011). Issues can also be made questionable in a constructive spirit. This kind of activity is called facilitating. The meaning of facilitating is to make group-oriented work easier by leading the group towards a common goal. Participants will learn to take a stand and to take initiatives. (Kumpulainen et al. 2010.) In a group-oriented work individual's understanding of his self and his relationship to other people is growing (Jaakkola et al. 2011). Innovative solutions are also easier to develop in a shared co-operation with others (Mattelmäki 2006). With creative thinking the old can be connected and elaborated with new in a new way. The workshop gives an opportunity to implement creative sessions in a group and to give up the old, stagnated ways of thinking. (Mattelmäki 2006.)

Workshops open up new opportunities for traditional meetings. There is no single form for a functional workshop, but clear goals will help participants to focus on the right topic. Understanding the group behavior is important, so that participants could be more open to dialogue and would work intuitively. (Heikkilä 2002.)

The participants of the workshop were all native Finnish citizens. Therefore the language used in the invitation and in the workshop was Finnish. We invited nurses from the gynecological policlinic, wards 7 and 8 and from the operating theatre. We invited a maximum of four participants from the each department. The date for the workshop was the 6th of May, Friday after Ascension Day. It was a normal working day, but with a limited employee capacity. Six participants registered for the workshop. There were two participants from the gynecological policlinic, from ward 7 was one, from ward 8 there was one as well and participants from the operating theatre were two.

The workshop was held in the hospital of Kätilöopisto. We had reserved a space called *Into* for our workshop for two and half hours. This environment was an ideal for groups of maximum 20 persons and all the technical facilities were there for our presentation. It was also important for the participants to participate during their working hours. Nobody needed to use their free time for coming to the workshop.

Our workshop started in the morning at 08.30 and lasted until 11.00 o'clock. We had ordered breakfast for our participants to create a welcoming situation. Our workshop started after introducing ourselves with a Power Point presentation (see Appendix 9). We explained the purpose of our study, phenomena, facts and benefits. During the presentation we asked constructive questions about the issue and discussed together with the participants. The atmosphere was collaborative and the participants were interested in the theme.

After the Power Point presentation and discussion we gave participants to read preoperative instructions for the patient from three different hysterectomies. Patients with elective hysterectomies were the largest group from whom we got the most answers to our questionnaires. Preoperative instructions were abdominal hysterectomy, laparoscopically assisted hysterectomy and vaginal hysterectomy. After reading the instructions participants answered individually to the same questionnaire form as the patients already had. They answered especially to the open questions. The results of the patients answering was showed next. Discussion emerged related to preoperative instructions and patient answers.

The last task of the workshop was a group-oriented work. We used learning cafe method for this part of the workshop. Learning cafe is a method used for learning in small table groups in a cafeteria style. The goal is to find answers even to a difficult questions in a constructive spirit. (Hyppönen, Lindén 2009.) We had three two person groups and original pairs were mixed. Every group answered one question in three different tables. There was a ten minutes time to answer to each question. Good conversations arose and paper sheets were filled with post-it notes. When the total time of the group-oriented work was finished, everyone returned to their original table. Every table group presented the results of their table.

The workshop was an innovative and developing learning and working situation. We shared and gathered valuable information from the point of view of the professionals. The participant feedback from the workshop was overall positive.



Figure 1. Workshop environment

The open-ended questions from the questionnaire form were:

“Was it challenging to follow the given instructions? If yes, why?”

“What would you add to the given instructions?”

The open-ended questions for the group-oriented work were:

“What does a good patient education consists of?”

“Which factors prevent or disturb the good patient education?”

“How would you develop the preoperative patient education?”

6.4 Workshop data analysis

The qualitative data-driven content analysis was used for analyzing the answers of the professionals. Both structured and unstructured documents can be analyzed with content analysis (Tuomi & Sarajärvi 2011). Content analysis can be used by the qualitative researchers when examining documents and other textual materials. Data-driven content analysis was chosen as the most suitable analysis for the data gathered from the workshop, due to the low number of informants. We wanted to analyze the data from the perspective of the participants. Limits between thematic coding and content analysis are not clear while content analysis deals with the manifest rather than the latent (Padgett 2008).

According to Tuomi & Sarajärvi (2011) there are three stages in the data-driven content analysis process: selective reduction, clustering and creation of the theoretical concepts. The original data from the questionnaires and from the group-oriented work was examined several times. The data was reduced with the research questions in mind. (Tuomi & Sarajärvi 2011) After examining the data, a list of sub-categories emerged. The list of sub-categories was further examined and compared with each other. This was the stage of clustering. The clustering leads to the creation of the theoretical concepts (Tuomi & Sarajärvi 2011). Similarities and links between the sub-categories were discovered. The themes emerged from the similarities and the links of the reduced data. The themes formed an order for the gathered data. Tuomi & Sarajärvi (2011) describes this as the final stage where the conclusions are made and the theoretical concepts are created.

7 Findings

7.1 Findings of the quantitative data analysis

According to data collected from the 31 patients and analyzed by Excel the given instructions were very clear or quite clear (The 1st question). Also it was very easy or quite easy to follow the surgery related instruction (The 2nd question).

Cross tabulation by SPSS based on data hysterectomy and hysterectomy and other related operation (18 patients altogether) imparted the similar results according to analyze done by Excel in questions 1 and 2.

However, there was significant difference in the 4th question which measured existing instructions about wound infection related to surgery and its prevention. 43 % of hysterectomy patients answered “quite well” and to the same question patients with the procedure hysterectomy and other related operation answered 27 %. To the option “I cannot tell” the percent’s were 14 % in hysterectomy and 18 % in hysterectomy and other related operation. To the option “not at all” answered 14 % of hysterectomy patients.

The 5th question was about being able to prevent wound infection beforehand and more difference imparted in the answers. 27 % of hysterectomy and other related operation patients found “very well”. 43 % of the hysterectomy patients found “quite well” and 36 % in hysterectomy and other related operation. 18 % of patients in hysterectomy and other related operation found “I cannot tell” and in hysterectomy 14 % also answered to the option “I cannot tell”. In the second lowest answering option there was a remarkable difference: 18 % of hysterectomy and other related operation imparted “not so well” and 43 % of the hysterectomy patients found “not so well”.

The 6th question according to being satisfied with instructions given before the surgery 14 % of the hysterectomy patients were “very satisfied” and 45 % of hysterectomy patients answered the same way. 57 % of hysterectomy patients found “quite well” and 55 % of the hysterectomy and other related operation answered also “quite well”. To the option “I cannot tell” answered 29 % of the hysterectomy patients.

From answers of the open questions (3rd & 7th) it was easy to see that proper information about the surgery was missing. The given guidance was insufficient and it was not done in an appropriate way. The instructions were old-fashioned and there was confusion between the guidance given on the telephone and the written one. Patients wanted to get the information and guidance in their own mother tongue. According to the Act of Patients Status and rights (423/2003) 10, 18 and 20\$, patients have right to receive treatment in their own mother tongue.

7.2 Findings of the qualitative workshop data analysis

The number of themes emerged from the gathered workshop data was three. The first theme was “Shortcomings of the preoperative guidelines”, the second theme was “Development of the preoperative patient education”, and the third theme was practical information and ideas gathered from the workshop, and it was called “Future development ideas”.

7.2.1 Shortcomings of the preoperative guidelines

Shortcomings of the preoperative guidelines was one of the central topics. Parts of the guidelines were clearly missing from the given instructions for the surgical patient. Some of the instructions were last updated in 2009. Preoperative instructions for abdominal hysterectomy, laparoscopically assisted hysterectomy and vaginal hysterectomy were all different, although laparoscopically assisted hysterectomy and vaginal hysterectomy can both convert to abdominal hysterectomy.

The informants noted following shortcomings of the preoperative guidelines. The preoperative instructions of laparoscopically assisted hysterectomy and vaginal hysterectomy were missing:

- showering and washing hair in the evening before the operation
- cleaning of the navel
- removal of all the jewelry and the makeup
- drinking a maximum of 2 dl before 06.00 o'clock in the morning of the operation
- non-smoking in the morning of the operation
- information of the postoperative wound care and hand hygiene
- information of the use of prescription-free painkillers

The preoperative instructions of abdominal hysterectomy were missing:

- cleaning the navel and
- hand hygiene in the postoperative wound care

“The instructions before the operation were not detailed enough.” (Quote 1)

“Parts of the guidelines are missing.” (Quote 2)

“Cleanliness of the patient is important in the surgical care. Even the vaginal hysterectomy can change to the abdominal one.” (Quote 3)

“If the information is not clear, patients have diverse ways interpreting them.” (Quote 4)

“Guidance for eating and drinking, showering, jewelry and makeup free skin are part of the preoperative preparation.” (Quote 5)

“The meaning of the showering, navel cleaning and the postoperative wound care should have a great interest in preoperative guidelines.” (Quote 6)

7.2.2 Development of the preoperative patient education

The findings clearly demonstrated the need of development of the preoperative patient education material. The participants of the workshop had a professional perspective for the issue. The theme Development of the preoperative patient education emerged from the gathered data.

The participants of the workshop would add to the preoperative guidelines all the missing instructions and justification for the guidelines. The participants wished for clearer and simpler guidelines with core issues, demonstrated with pictures. The instructions should be more individual, paying attention to basic diseases, cultural background, language and timing. Peaceful area and a situation without a stress was mentioned as well as one of the development points in the patient education.

“Justification, why it is important to take a shower preoperatively or to proceed the correct hand hygiene in the postoperative wound care. The meaning of the infection prevention.” (Quote 7)

“The guidelines are old-fashioned. Most of the patients are not visiting the polyclinic preoperatively. The nurse is making part of the anesthesia consultations by herself.” (Quote 8)

“Cleaning the navel should be mentioned separately.” (Quote 9)

“Right timing for the guidance. Preoperative and postoperative guidance separately.” (Quote 10)

“Only the core issues, not too much information at one time. Clearer and more individual instructions with pictures.” (Quote 11)

“Peaceful place and situation for the patient education. “ (Quote 12)

7.2.3 Future development ideas

Future development ideas was the third theme. The valuable and practical ideas gathered from the workshop were selected under the theme future development ideas. Development and improvement ideas concentrated around the preoperative information given for the surgical patient and the situation when the information is given.

“Preoperative call and checkup that the instructions are understood. There is not enough time and resources to make the guidance by telephone” (Quote 13)

“Information package for different cultural groups.” (Quote 14)

“Enough staff to avoid the rush in the ward. At the moment there is no time for controlling the area where the incision is taking place.” (Quote 15)

“Certain peaceful area for the patient education.” (Quote 16)

“Better collaboration and continuation of care with different care units or relatives of the patients with diseases like alzheimer. “ (Quote 17)

More time and resources were wished for the patient education. The well understood and implemented instructions in the surgical care process is an essential point of infection prevention.

7.3 Interpretation of the findings

The data analysis pointed out the need for development of preoperative patient education material. Parts of the essential guidelines were missing from the given instructions. The patients were more pleased with the appearance and the content of the instructions than the professional nurses, but both informant groups stated there was no refer to infection prevention or control in the instructions.

The findings revealed similarities between answers of the patients and professionals. According to data collected from the 31 patients, given instructions were very clear or quite clear. Also it was very easy or quite easy to follow the surgery related instruction. Cross tabulation by SPSS based on data hysterectomy and hysterectomy and other related operation (18 patients altogether) imparted similar results than the Excel analyzes in questions 1 and 2.

However, there was a clear difference in the 4th question which measured existing instructions about wound infection related to surgery and its prevention. 43% of hysterectomy patients, and only 27% of hysterectomy and other related operation patients answered “quite well”.

The 5th question was about being able to prevent wound infection beforehand. 43% of the hysterectomy patients answered “quite well” and 43% “not so well”. 36% of hysterectomy and other related operation imparted “quite well”, 18% “I cannot tell” and 18% “not so well”. Therefore, this data indicates the need for instructions of better quality as well as for more detailed patient education. Nevertheless, it turned out that the patients were more satisfied with their preoperative education material than the professionals.

Preoperative instructions for abdominal hysterectomy, laparoscopically assisted hysterectomy and vaginal hysterectomy were examined and compared with each other in the workshop. Participants had a professional perspective for the issue. It was pointed out that parts of the guidelines were clearly missing from the given instructions for the surgical patient. Some of the instructions were last updated in 2009. The findings of the workshop demonstrated the need for development of the preoperative patient education material.

The participants of the workshop would add to the preoperative instructions all the missing preoperative guidelines, and justifications for them. The participants wished for clearer and simpler instructions with core issues, demonstrated with pictures. The instructions should be more individual, paying attention to basic diseases, cultural background, language and timing. Peaceful area and a stress-free environment was mentioned as well as one of the development points in the patient education.

8 Discussion

Different laws, recommendations and the norms of the society affect on patient education. In Finland, patient has a right to good health care and treatment. Treatment guarantee law became valid in 1.3.2005. Primary Health Care Act emphasizes the citizens’ right to counseling, care and medical rehabilitation and requires individuals’ health promotion. (66/1972)

Pre- and postoperative information given preoperatively to the patient is an important source of information. It helps the patient to understand the importance of the instructions and how he can participate in his own care and in his own recovery positively (Arifulla 2012).

Preoperative meetings are old-fashioned and hospitals do not provide enough professionals to organize the preoperative meetings with every patient. However, how does the hospital make sure that the patient got and understood the instructions sent by mail? It was stated in our workshop that *“there is not enough time and resources to make the guidance by telephone”* (Quote 13). According to Kääriäinen (2008), there is often lack of resources in the hospitals and therefore not enough time for the patient education, even though empowering patient education has been proven to lower infections (Arifulla 2012).

The participation of the patient in his own care depends on clear guidance, motivation of the patient, his health status, language, culture and religion. If the guidance is clear and simple to understand it is also easy to follow. Motivation can be raised with good guidance. Motivation is affecting things we notice and do. Motivation answers to the question, what makes people take actions. (Tynjälä 1999) Even if the patient would be motivated to take part in his own health care, his health status can prevent him to take correct actions. Language skills of the professionals and the patients have an effect on the guidance as well. The operating hospital should provide information in different languages, although the official languages in Finland are Finnish, Swedish and Sami. Patients must be given sufficient information, in a way that they can understand, to enable them to exercise their right to make informed decisions about their care.

The current globalization and internationalization are bringing different cultures and religions into our societies. The religion can be seen as a part of the surrounding culture. Respect for other cultures is fundamental (ICN 2012). Effective cultural communication represents respect, dignity and value for human rights (Miller & al. 2008). Failure in communication can be interpreted as stereotyping, prejudice or bad quality of the care (Leininger & al. 2006). Developing the understanding of different cultural values and beliefs is one of the most urgent tasks in our generation (Walsh R. 1993).

Societal aspect emphasizes the importance of the patient education, because the time of the care in the hospitals is shorter than before (Kääriäinen 2008). The patient has more responsibility for his own recovery and care. Earlier the patient education has highlighted the professionalism of the educator. Today the patient's own activity and responsibility for his own care has an important role. (Lipponen & al. 2008.)

8.1 Trustworthiness of the study

A trustworthy study is carried out fairly and ethically and the findings are representing the experiences of the informants as closely as possible (Steinmetz 1991). There are three types of threats of trustworthiness. Threats of trustworthiness are reactivity, researcher biases and respondent biases (Padgett 2008). These threats affect all studies, both quantitative and qualitative. Reactivity and researcher biases affect more to qualitative research than to quantitative one (Padgett 2008). Quantitative research is using distance and controlled conditions to protect against reactivity (Padgett 2008). Validity and reliability are most common terms in research when documenting the trustworthiness. In quantitative research validity and reliability are classically used. The validity is used to ensure the research is objective, impartial, generic, controlled, measured, and replicable (Cohen et al. 2011). By combining the quantitative and the qualitative research we were able to check the results of the same phenomena from different sources. It increased the reliability and the validity of our study (Altrichter et al. 2008).

In quantitative research, when using the structured questionnaire form, the interpretation of the questions will be clear and you are getting exact answers to the preset question (Green & Harvey 1993). In a question form, the questions do not change and they are same for every participant in the study. The data analysis was made with SPSS. The conclusions were reliable, because our method measured particular issues and the questions were exactly the same for every patient included in the study.

From December 2015 to April 2016 the questionnaires were given to 60 elective gynecological patients coming for surgery. The gynecological policlinic gave the informed consent and the questionnaires to patients during the preoperative visit. Due the slowly progression and collaboration with the policlinic, the secretary from the operating theatre delivered the forms directly to the patient documentation from March until April 2016. The ward nurses gave the forms to patients from the patient documentation before the operation. We received 31 answers. The 31 informants answered to all structured questions, 12 patients answered to the open question number 3 and 11 patients answered to the open question number 7.

The data of the workshop was analyzed with the qualitative data driven content analysis. Data-driven content analysis was the most suitable analysis for the data gathered from the workshop, due to the low number of informants. We had six informants in our workshop. We analyzed the data from the perspective of the participants. The participants were all professional nurses.

The threats of trustworthiness are affecting more to qualitative study than to quantitative one. Reactivity, researcher's biases and respondent biases were the threats of trustworthiness (Padgett 2008).

1. Reactivity means a potential effect of the researcher's presence on the participants' behavior and beliefs. We as workshop organizers participated to the workshop. We presented the study, phenomena, facts and benefits to participants. We gave time and peaceful situation to participants to answer individually to the questions. We stayed at the side during the answering time and did not get involved to avoid the threat of reactivity.
2. Researcher biases are emerging when the personal opinions and preconceptions of the researcher are dominating the research situation (Padgett 2008). Researchers may also ask leading questions in order to get the answers they want, or ignore the data which doesn't support their findings (Padgett 2008). We used the qualitative method in our workshop with written open questions for data collecting. Few pre-planned questions were prepared for the time of the discussions. Beneficial was to have a plan of the workshop prepared. The workshop situation was open and allowed new ideas and thoughts to be brought up during the session. Due to the professionalism of the participating group an academic literature was used but in an understandable way.
3. Respondent biases are withhold information and an offered information by informants which they believe researchers wish to hear (Padgett 2008). The answers of the professionals were credible and trustworthy while the nurses are following the values and the model of working in HUS and the ethical guidelines of the nurses. The place of the workshop was convenient for the participants while it was already familiar to part of the participants and held at their working environment. The space *Into* is private and peaceful teaching room in the hospital of Kätilöopisto. The workshop was held in Finnish because all the participants were Finnish citizens.

8.2 Ethical considerations

The appropriate hospital authorities and the ethical board of HUS (The Hospital District of Helsinki and Uusimaa) gave the permission to conduct this study in November 2015. When the study is focusing on the patients, the ethical estimation of the study is always done. The informants' self-determination, privacy, avoiding of possible harm and data protection are estimated. In our study the respect of human dignity, privacy and ethical aspects were carefully taken care of and the confidentiality was obeyed, the legislation of Finland and the norms of the society were followed.

Informants who took part in this study were treated equally: Respect of human life, - human dignity, -autonomy, -privacy, -caring, -ones rights of self designation and all the moral aspects of human being. In our study, the respect of human dignity was highlighted because this ethical consideration concretes particularly in medical studies and questionnaires. The patients filled a form *informed consent*, where they received information from our study and from their participation of the research. They had right to refuse to participate to our study, the participation was voluntary. All the informants answered anonymously. In our questionnaire forms, for identification, we asked the age of the patient and what kind of surgery the patient was coming for. The questionnaire forms were properly disposed after the study.

“While the primary purpose of medical research with human subjects is to generate new knowledge, the goal can never take precedence over the rights and interests of individual research subjects (WMA Declaration of Helsinki 1964).”

The researcher is responsible during the whole research process of the lasting of the informants’ ethicality and morality. (Eriksson et al. 2012)

8.3 Moral relevancy of the phenomena

The common problem in the hospitals is an insufficient pre- and postoperative information given for surgical patients, which should contain infection preventive content (Arifulla 2012). By developing the infection preventive information given for surgical patients infections related to surgery could be reduced. The goal in EU is to add patients’ own activity in the infection prevention (EU 2009).The surgical site infection can turn out very harmful and the recovery is usually slow. Costs of the re-hospitalization are high for the society, and the patient may become disabled for a long period of time (Borgey et al. 2012). Infections related to hospital care endanger the safety of the patients and they lower the quality of the care (Arifulla 2012).

Distributive justice can provide guidelines for forming specific policies or can provide guidelines how to take concrete actions to solve the practical problems.

Principles of justice are concerning the fairness of issues. It provides guidelines and helps to take morally relevant action.

Material principles of distributive justice are:

1. to each person an equal share
2. to each person according to need
3. to each person according to effort
4. to each person according to contribution
5. to each person according to merit
6. according to free-market exchanges

(Beauchamp, Childress 2001).

Principles of justice are formal or material. Formal principle is, for example, equality, and material principle is need. Equality means that everyone gets an equal share, same amount. Need means everyone gets according his need, is entitled to. (Beauchamp, Childress 2001.)

A set of principles after biomedical ethics can function as well as directives for professional ethics. Four moral principles serve this function. Basic principles after biomedical ethics are respect of autonomy, nonmaleficence, beneficence and justice (Beauchamp, Childress 2001). They can be seen as a framework in the common morality.

9 Further suggestions

Previous studies, and the results of this particular study state that preoperative patient education material often lacks information, in order for the patient to participate well enough in his own care process. Patients' own activity has a significant role preventing the surgical site infection, but it depends on access to information and patient education.

Since having a surgery is a risk, and infections related to surgery are still unfortunately common, there is a need to improve patients' preoperative educational materials and to increase the patients' participation in their own care. It is also seen as one of the most important goals in infection prevention in health politics (EU 2009). While the most SSI incidencies are caused by the patients' skins own bacterial flora, the preventive measures preoperatively are important. Instructions to prevent surgical infections need to be developed and well-focused. Awareness of patients' responsibilities should be raised so that they could participate in their own perioperative care process. Patient education material is expected to be evidence-based, clear, easy to understand and follow.

The patient education can be developed with nursing improvement. Appropriate professional training is necessary to ensure sufficient level of professional knowledge. Knowledge and expertise of the professionals should lead to well planned, systematic and developed patient education.

Technical solutions available on the Internet are the core elements of the future and they could help to solve the problems of lack of nurses and time. Internet-based education has been proven to increase patients' possibilities to choose the time and place for the preoperative preparations and the amount of information they need (Heikkinen et al. 2008). Internet-based patient education is cognitively empowering education. (Heikkinen et al. 2008)

The development to reduce the amount of dangerous, disabling and expensive surgical infections is important. Well planned patient care in surgical care process is providing higher safety of the patient. Patients are also part of the process and participate with the correct pre-and postoperative information, guidance and support in their own health care.

This study provided information of the current state of the preoperative educational material for the surgical patient in the hospital of Kätilöopisto, and a starting point for further development of the preoperative instructions. The results of this study can be used in planning and development of the preoperative patient education. Further research is needed to find out what is the suitable infection prevention content in perioperative patient education. To develop these issues for the future, there is a need to improve patients' educational materials, methods and guidelines, as well as to increase the patients' participation in their own care.

Based on the aforementioned studies and our study, we would recommend the following guidelines in order to improve the preoperative patient education.

Evidence-based recommendations for the preoperative patient education

1. *Instructions should be visually clear and easy to understand and follow.*
2. *Education is an intervention between the nurse and the patient.*
3. *Patient education is patient centered, individual and empowering.*
4. *Information given for the surgical patient is evidence-based and trustworthy.*
5. *Patient education should be both oral and written, with core issues repeated in the end of the education session.*
6. *Preoperative telephone call 1-3 days before the surgery.*
7. *Environment for the education should be peaceful when arranged in the hospital premises.*
8. *It is recommended to have an advanced practice nurse specifically trained for the surgical patient education.*

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Appendix 1; Research tables

Table1 Pre- and postoperative patients' education, surgical site infection, infection prevention and nursing improvement research.

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Arifulla, D. 2012	Finland	To analyze the surgical patient education materials infection control-related content in Finnish university hospitals. The study provides a starting point to develop patient education materials with infection control related content and to increase the patient's involvement.	An explorative and descriptive research.	The study material consisted of surgical patient education materials for adults in five university hospitals (N=237). By organization every fifth patient education material (N=50) were also analyzed for the quality of the content. Deductive content analysis was done with the empowerment assessment scale developed for this study. Infection control-related content was analyzed with an inductive content analysis.	Patient education materials were visually clear and consistent providing the best capabilities to support the functional and the bio-physiological dimensions of the empowerment. But there were no refer to infection control, rather it was referred to another health related point of view e.g. obesity, and the condition of the skin. The most common infection control content was hand hygiene, although its implementation was not guided.	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Heikkinen K., Leino-Kilpi H., Nummela T., Kaljonen A., Salanterä S. 2008	Finland	The aim of this study was to compare the cognitive empowerment of ambulatory orthopaedic surgery patients when using Internet-based education (experiment) in contrast to face to face education conducted by a nurse (control)	A randomized pre-test post-test design was used. Patients wererandomized to either Internet-based education (experiment) orface-to-face education with a nurse (control).	Elective ambulatory orthopaedic surgery patients were randomized to either an experiment group ($n=72$) receiving Internet-based education, or to a control group ($n=75$) receiving face-to-face education with a nurse. The data were collected at three different time points: before the preoperative education session, after preoperative education and 2 weeks after the operation. Three structured instruments were used: the Knowledge Test, the Sufficiency of Knowledge and the Orthopaedic Patient Knowledge Instrument.	Patients who received Internet-based education improved their knowledge level significantly more in the ethical ($p=0.005$) and functional ($p=0.023$) dimensions and also in total ($p=0.033$) than those patients who underwent face-to-face education with a nurse. In addition, patients in the experiment group had higher scores in sufficiency of knowledge in the experiential ($p=0.050$) and financial ($p=0.048$) dimensions and, moreover, their scores in sufficiency of knowledge in the ethical dimension improved significantly more ($p=0.008$) during the study period than patients in the control group.	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
<u>Sharon L. Oetker-Black, Susan Jones, Patricia Estok, Marian Ryan, Nancy Gale, Carla Parker</u> 2003	USA	The aim of this study was to determine whether an efficacy-enhancing teaching protocol was effective in improving immediate postoperative behaviors and selected short- and long-term health outcomes in women who underwent abdominal hysterectomies.	The model used was the self-efficacy theory of Albert Bandura, PhD	One hundred eight patients in a 486-bed teaching hospital in the Midwest who underwent hysterectomies participated. The participation rate was 85%, and the attrition rate was 17% during the six-month study.	The major finding was that participants in the efficacy-enhancing teaching group ambulated significantly longer than participants in the usual care group. This is an important finding because the most prevalent postoperative complications after hysterectomy are atelectasis, pneumonia, paralytic ileus, and deep vein thrombosis, and postoperative ambulation has been shown to decrease or prevent all of these complications. This finding could affect the overall health status of women undergoing hysterectomies.	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Saarela Katariina 2013	Finland	<p>The purpose of this thesis is to describe surgical counselling from the viewpoint of the advanced practice nurse. In this study, the term advanced practice nurse (APN) refers to a registered nurse who has completed additional training and who has a separately specified work description. The aim of this study is to plan and further develop surgical patient education on the basis of the knowledge produced.</p>	Qualitative research	<p>The data of the study consists of essays written by APNs (n=16) working in surgical counselling in their independent practices within the specific catchment area of one university hospital. The data was analyzed with inductive content analysis.</p>	<p>By means of content analysis, the study reached a theoretical outcome that depicts an interactive and dynamic counselling process as a means to achieve quality patient education. Each part of this counselling process manifests dynamism; the possibility of constant change. The results of this study can be used in the planning, development and enhancement of patient education in the operative units of hospitals and other, similar nursing contexts.</p>	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Kaija Lipponen Helvi Kyngäs Maria Kääriäinen 2006	Finland	The aim of the project was to chart and develop the quality of patient counselling in the Northern Ostrobothnia Hospital District.	It was an extensive study. Indicators were developed for the study based on extensive literary and conceptual analysis.	The indicators were evaluated by a panel of experts, and they were pre-tested. The indicators covered the following areas: the respondents' background information, receiving counselling, the counselling event, counselling resources and framework, and the effects and development of counselling. The data of the first stage were analysed using statistical and content analysis.	The extensive study revealed the following development challenges: the counselling event as a process, the organisation of counselling, interaction in counselling relationship, social support, counselling aimed at relatives, demonstration, written counselling material, counselling by phone and group counselling. These areas of patient counselling were focused on during the second stage of the development project by working groups consisting of hospital district staff (N=56) and nursing students from the Oulu Unit of Diaconia Polytechnic (N=19). The task of the working groups was to formulate a model of the area of focus to be applied into practice based on theoretical knowledge, test it, and thus demonstrate how patient counselling could be improved in the area in question.	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Chen CC, Collins SA, Rodgers AK, Paraiso MF, Walters MD, Barber MD. 2007	USA	The purpose of this study was to compare the incidence of perioperative complications in obese and normal-weight patients who undergo vaginal urogynecologic surgery.	A retrospective cohort analysis was conducted for obese patients (body mass index, > or = 30 kg/m ²) who underwent vaginal surgery and who were matched with patients with normal body mass indices (> 18.5 kg/m ² but < 30 kg/m ²) by surgical procedures.	A retrospective cohort analysis was conducted for obese patients (body mass index, > or = 30 kg/m ²) who underwent vaginal surgery and who were matched with patients with normal body mass indices (> 18.5 kg/m ² but < 30 kg/m ²) by surgical procedures.	Seven hundred forty-two patients underwent vaginal surgery during the study period; 235 women were considered to have obese body mass indices. 194 of these patients were matched with normal-weight control subjects. There was no statistical difference in the proportion of subjects who had at least 1 perioperative complication (20% [obese] vs 15% [nonobese]). However, obese subjects were more likely to have an operative site infection (adjusted odds ratio, 5.5; [95% CI, 1.7-24.7]; P = .01). The overall perioperative complication rate in obese and nonobese women is low, with obesity as an independent risk factor for the development of operative site infections.	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Borgey F, Thibon P , Ertzscheid M.-A. , Bernet C. , Gautier C. , Mourens C. , Bettinger A. , Aggoune M. , Galy E. , Lejeune B. , Kadi Z. 2012	France	To assess compliance with the French national guidelines for pre-operative skin preparation in 2007.	The study was performed from April to December 2007. The questionnaire-based audit was undertaken by two trained auditors. Data for patients and interventions were collected for 13 surgical specialties. At each health facility, data were rendered anonymous for statistical analysis.	A prospective audit was undertaken in French hospitals through interviews with patients and staff, and observation of professional practice. Data for 41,188 patients from all specialties at 609 facilities were analysed. Compliance with five major criteria selected from the guidelines was studied: patient information, pre-operative showering, pre-operative hair removal, surgical site disinfection and documentation of these procedures.	The following documentary evidence was found: information given to patient, 35.6% of cases; pre-operative surgical hygiene, 82.3% of cases; and pre-operative site disinfection, 71.7% of cases. The essential content of the French guidelines seems to be understood, but reminders need to be issued. Some recommendations may need to be adapted for certain specialties.	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Stefan Hirsemann, Dorit Sohr, Knud Gastmeier, Petra Gastmeier 2005	Germany	The aim of this study was to determine the incidence of surgical site infections (SSI) in an outpatient setting and to investigate whether the risk index of the National Nosocomial Infections Surveillance (NNIS) System is appropriate for outpatient settings.	A retrospective cohort design was used	SSI was investigated in following all hernia repairs and varicose veins operations over a 9-year period in a freestanding outpatient setting. The exposure variables studied were age, sex, and American Society of Anesthesiologists (ASA) score of the patient; duration of operation; performing surgeon's name; type of operation; type of anesthesia; and follow-up period. An univariable and a multivariable analysis were performed to determine risk factors for SSI.	A total of 1095 operations were performed: 714 on varicose veins and 381 on hernia repairs. The median follow-up period was 43 days. The crude SSI rate was 1.2% (varicose veins operations, 1.5%; hernia repair operations, 0.5%). According to the results of the logistic regression model, only 1 factor remained significant: Patients with spinal anesthesia were 11 times as likely to develop a SSI as patients with any other type of anesthesia (95% CI, 2.15-200.5). The NNIS risk index was not suitable for assessing SSI rates in this outpatient setting and for these specific procedures	

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
A. Lefebvre,P. Saliou, J.C. Lucet, O. Mimos, O. Keita-Perse, B.Grandbastien, F.Bruyère, P. Boisrenoult,D. Lepelletier, L.S. Aho-Glélé 2015	France	The aim of the study was to update the meta-analysis of published randomized controlled trials about hair removal for the prevention of SSIs, and conduct network meta-analyses to combine direct and indirect evidence and to compare chemical depilation with clipping.	Meta-analysis	The PubMed, ScienceDirect and Cochrane databases were searched for randomized controlled trials analysing different hair removal techniques and no hair removal in similar groups. Paired and network meta-analyses were conducted. Two readers independently assessed the study limitations for each selected article according to the Grading of Recommendations Assessment, Development and Evaluation (GRADE) method.	Nineteen studies met the inclusion criteria. No study compared clipping with chemical depilation. Network meta-analyses with shaving as the reference showed significantly fewer SSIs with clipping, chemical depilation, or no depilation [relative risk 0.55, 95% confidence interval 0.38–0.79; 0.60, 0.36–0.97; and 0.56, 0.34–0.96, respectively]. No significant difference was observed between the absence of depilation and chemical depilation or clipping (1.05, 0.55–2.00; 0.97, 0.51–1.82, respectively) or between chemical depilation and clipping (1.09, 0.59–2.01). This meta-analysis of 19 randomized controlled trials confirmed the absence of any benefit of depilation to prevent surgical site infection, and the higher risk of surgical site infection when shaving is used for depilation. Chemical depilation and clipping were compared for the first time.	

Table2 Nursing Improvement /Patient education / Infection Prevention researches/Surgical site infection researches

Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
Manyahi J. 2012	Tanzania	To determine the bacteria that isolates from postoperative wound infections and the antimicrobial susceptibility patterns at Muhimbili National Hospital and the Orthopedic Institute.	In Tanzania there has been limited data regarding the magnitude of SSIs due to antimicrobial resistant pathogens and also the resistant pattern to antibiotics commonly used in the treatment of these infections.	Descriptive Cross sectional study among the patients with postoperative wound infections in the general surgery and obstetrics or gynecology wards at Muhimbili National Hospital and orthopedics and trauma wards at Muhimbili Orthopedic Institute.	Pseudomonas aeruginosa was the most common isolate from SSI. Most of the gram negative isolates were resistant to widely used antimicrobial medicine. Also there an increase in ESBLs producing and MRSA as well. The choice of antibiotics for treatment of SSIs should be guided by routine antimicrobial sensitivity testing. Ciprofloxacin should replace first choice antibiotics in treatment of SSIs and strict guidelines for antibiotics prescriptions in treatment of SSIs should be established.	

<p>Mannien J, van Kanstren M, Nagelkerke N, Gyssens I, Kullberg B, Wille J, Boer A</p> <p>2006</p>	<p>Netherlands</p>	<p>To compare the rate of surgical site infection before and after an intervention period in which an optimized policy for antibiotic prophylaxis was implemented. To point out that a more cautious, restrictive policy would not have maleficent effect on patient outcomes.</p>	<p>Before and after trial with prospective SSI surveillance in the Dutch nosocomial surveillance network, using the criteria of the Centers for Disease Control, also post discharge surveillance for up to 1 year.</p>	<p>During the pre intervention period and a post intervention period (6-12 months) 12 Dutch hospitals collected data on antimicrobial prophylaxis and surgical site infection rates. The research was limited to performed surgical operations in four specialities: vascular, gynecological, intestinal and orthopedic surgery.</p>	<p>An optimized and relevant antibiotic prophylaxis policy had no detrimental effect on the outcome of clean and clean contaminated surgery, as measured by surgical site infection rate.</p>
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<p>Coulter A, Entwistle VA, Eccles A, Ryan S Shepperd S, Perera R.</p> <p>2015</p>	<p>UK</p>	<p>To assess the effects of personalized care planning for adults with chronic health conditions compared to usual care.</p>	<p>Randomised controlled trials and cluster-randomised trials involving adults with chronic conditions where the intervention included collaborative (between patients and clinicians)goal setting and action planning.</p>	<p>The Cochrane Central Register of Controlled Trials (CENTRAL),MEDLINE, EMBASE, PsycINFO, ProQuest, ProQuest, clinacaltrials.gov and WHO International Clinical Trials Registry Platform to July 2013.</p>	<p>19 studies involving a total 10,856 participants. All the 19 studies included components that were intended to support behavior change among patients, involving either face-to-face or telephone support. All but three individual care planning interventions took place in primary care of community settings, the remaining three were localized in hospital clinics.</p> <p>Personalized care planning leads to improvements in certain indicators of physical and psychological health status and self-management when compared to usual care given by health care professionals.</p>
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Toon CD, RamamoorthyR, Davidson BR, Gurusamy KS 2015	USA	To evaluate the benefits and risks of removing a dressing covering a closed surgical incision site within 48 hours permanently or beyond 48 hours of surgery permanently with interim dressing changes allowed on SSI.	Early versus delayed dressing removal after primary closure of clean and clean-contaminated wounds.	Cochrane Database Systematic review.The Cochrane Wounds Group Specialised Register; The Cochrane Central Register of Controlled Trials(CENTRAL);Database of Abstracts of Reviews of Effects(DARE);Ovid MEDLINE, Ovid EMBASE and EBSCO CINAHL. Also references of included trials to identify further potentially- relevant trials.	Four trials at high risk bias. Overall review included 280 people undergoing planned surgery. Participants were randomized to early dressing removal (removal of wound dressing within 48 hours of following surgery)(n=140)or delayed dressing removal(continued dressing of the wound beyond 48 hours)(n=140)in the three trials. There were no significant difference between the early dressing removal group and delayed dressing removal group among the patients who developed surgical site infection within 30 days. The hospital stay was significantly shorter and the cost of treatment less in the early dressing removal group than in the delayed dressing removal group in only one trial that reported the results.
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Dumville JC, Mc Farlane E, Edwards P, Lipp A, Holmes A.	USA	Surgical site infection rates in the month following clean surgery vary from 0.6%to 5.0%.Preoperative skin antiseptics is performed to reduce the risk od SSIs by removing soil and transiet organism from the skin where the surcigal incision will be made. The effectiviness of preoperative skin preparation is thought to be dependent on both the antiseptic used and the method of application .It is not clear if preoperative skin antiseptics actually reduces wound infection.	Randomised controlled trials evaluating the use of preoperative skin antiseptics applied immediatly prior incision in clean surgery.	Cochrane Database Systematic review 2015 Preoperative skin antiseptics for preventing surgical wound infections after clean surgery. Data extraction and assessment of risk of bias were undertaken independently by two review authors. The Cochrane Wounds Group Specialised Register, The Cochrane Central Register of Controlled Trials, Ovid MEDLINE, Ovid EMBASE, EBSCO CINAHL.	Thirteen studies were included in this review (2,623 participants) These evaluated several different types of skin antiseptics and eleven comparisons were made.
2015					

<p>Colhart I, Bagnall G, Evans A, Allbutt H, Haig A, Illing J, McKinstry B.</p>	<p>UK</p>	<p>Health professionals are expected to recognize their own learning needs while doing their own self-assessment. It has been espoused as an important learning outcome for practicing students. The aim of the review was to determine if the specific methods of self-assessment lead to change in learning behavior or clinical practice.</p>	<p>Evidence base on self- assessment Gordon ´s comprehensive review in 1991.</p>	<p>Were developed from the workshops with input from an expert BEME systematic review and followed BEME guidance. Databases searched included Medline, CINAHL,BNI, Embase, EBM Collection, Psychlit, HMIC, ERIC, BEI, TIMElit and RDRB.</p>	<p>Some evidence that the correctness of self-assessment can be enhanced by feedback especially given by video and verbally. The methodological issues emerging from this review point out a need for more severe study designs.</p>
<p>2008</p>					

Rabih O. Darouiche et al. 2010	USA (New England)	According to the fact human skin is a major source of pathogens that cause SSI, optimization of preoperative skin antisepsis may decrease postoperative infections. Supposing the preoperative skin cleansing with chlorhexidine alcohol is more protective against infection than povidone iodine.	Prospective, randomized clinical trial at six university-affiliated hospitals in the United States. Patients 18 years and older who were undergoing clean-contaminated surgery (colorectal, small intestinal, gastroesophageal, biliary, thoracic, gynecologic, or urologic operations were eligible for enrollment. Exclusion criteria: allergy to chlorhexidine, alcohol, or iodophors, evidence of infection at the operation site and inability to follow the patients course 30 days after the operation	Randomly assigned adults undergoing clean contaminated surgery in 6 hospitals to preoperative skin preparation with either chlorhexidine alcohol scrub or povidone iodine scrub and paint. Primary outcome was any SSI within 30 days after surgery. Secondary outcomes included individual types of SSIs.	A total of 849 subjects (409 in the chlorhexidine –alcohol group and 440 in the povidone-iodine group) qualified for the intention- to- treat analysis. The overall rate of SSI was significantly lower in the chlorhexidine-alcohol group than in the povidone-iodine group(9,5%vs16,1%,P=0.004;relative risk 0.59;95%confidence interval,0.41 to 0.85).Chlorhexidine-alcohol was significantly more protective than povidone-iodine against both superficial incisional infections(4.2%vs.8.6%P=0.008)and deep incisional infections(1%vs.3%,P=0.05)but not against organ-space infections(4.4%vs.4.5%). Similar results were observed in the pre-protocol analysis of the 813 patients who remained in the study during the 30 day follow up period.
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Tanner J, Woodings D, Moncaster K. 2006	USA	To examine the amount of SSIs in cases when traditionally included the routine removal of body hair from the intended surgical wound site. The aim of the study was to determine if routine pre-operative hair removal results in fewer SSIs than not removing hair.	Cochrane Database Systematic Review. The reviewers searched the Cochrane Wound Group Specialized Register (October 2005),The Cochrane Central Register of Controlled Trials (The Cochrane Library Issue 3,2005)MEDLINE, (1966 to 2005)EMBASE(1980 to 2005) CINAHL (1982 to 2005)and the ZETOC database of conference proceedings (1993 to 2005). Also contacted manufactures of hair removal products.	Three authors independently assessed the relevance and quality of each trial. data was extracted independently by one author and cross checked for accuracy by a second author.	Three trials involving 625 people compared hair removal using either depilatory cream or razors with no hair removal and found no statistically significant difference between the groups of surgical site infections.The evidence finds no difference in SSIs among patients who have had hair removed before surgery to those who have not. The clipping results in fewer SSIs than shaving using a razor. There is insufficient evidence regarding depilatory cream compared with shaving using razor. There is no difference in SSIs if the patients are being shaved or clipped one day before the surgery on at the same day than operation.
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<p>Kivelä K Elo S Kyngäs H Kääriäinen M. 2014</p>	<p>Finland</p>	<p>The aim of the study was to describe the effects of health education on adult patients with chronic diseases.</p>	<p>The reviewers searched electronic databases .The inclusion criteria covered health education for adults with chronic diseases by health care professionals. The studies were original, randomized controlled trials or quasi-experimental designs.</p>	<p>A systematic review. The reviewers searched electronic database and performed a manual search for studies published from 2009 to 2013.The addition criteria included health education for adults with chronic diseases.</p>	<p>Thirteen studies were selected using the inclusion criteria. The results indicate that health coaching and educating produces positive effects on patients physiological, statistically significant results revealed better weight management, increased physical activity and improved physical and mental health status.</p>
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Reference	Country	Purpose and aim of the study	Design	Data and methods	Results	(Ethical issues, Validity and Reliability) Other important remarks if needed
An example: Afshari et al. 2012	Switzerland	Benefits and harms of various strategies with regards to antibiotic stewardship, infection control purposes and the role of biomarkers the impact of molecular. To ensure greater appreciation of prescribing behavior while improving the quality of interventions in a multidisciplinary setting.	An overview of a selected subset of recent journals to critical care, clinical infectious diseases and infection control during last 12 months with a special aim at patients hospitalized in ICUs. Contributing factors and behavior change strategies to influence antibiotic prescribing in critical care.	A Systematic review to study the effectiveness and sustainability of various interventions for changing infection control behavior, with barriers towards and facilitators of behavior change. Five qualitative and five quantitative studies were included.	The role of behavior change strategies for infection control purposes. More interventional studies are required to improve behavior change strategies in infection control. Most infection-prevention papers did not fulfill the quality criteria, an early stage of the research. Overall, very few studies applied robust methodology.	

Appendix 2; questionnaire in Finnish

Kysely potilasohjeiden laadusta leikkaukseen tulevalle gynekologiselle potilaalle

Ikä:

Toimenpide:

Vastatkaa kysymyksiin ympäröimällä vain yksi vaihtoehto. Kysymyksiin 3 ja 7 vastatkaa avoimesti. Kyselyyn vastaamalla autatte meitä kehittämään leikkaukseen tulevan potilaan potilasohjeita.

1. Olivatko ohjeet selkeät ja ymmärrettävät?

erittäin selkeät melko selkeät en osaa sanoa ei kovin selkeät ei ollenkaan selkeät

1

2

3

4

5

2. Oliko annettujen ohjeiden noudattaminen haastavaa?

erittäin helppoa melko helppoa en osaa sanoa melko haastavaa erittäin haastavaa

1

2

3

4

5

3. Jos oli, miksi?

4. Opastettiin ohjeissa leikkaukseen liittyvän mahdollisen haavainfektion ehkäisystä?

erittäin hyvin melko hyvin en osaa sanoa melko vähän ei ollenkaan

1 2 3 4 5

5. Kuinka hyvin tiesitte etukäteen voivanne vaikuttaa haavainfektion ennaltaehkäisyyn ja siten toipumiseenne leikkauksesta?

erittäin hyvin melko hyvin en osaa sanoa melko vähän en ollenkaan

1 2 3 4 5

6. Olitteko tyytyväinen saamiinne ohjeisiin?

erittäin tyytyväinen melko tyytyväinen en osaa sanoa melko tyytymätön hyvin tyytymätön

1 2 3 4 5

7. Mitä lisäisitte saamiinne ohjeisiin?

Palauttakaa kysely hoito-osastollenne saapuessanne sairaalaan.
Kiitos vastauksistanne, käsittelemme ne luottamuksellisesti.

Rea Grady, Anu Moniruzzaman

MHC 2013

Laurea Otaniemi

Appendix 3; questionnaire in English

Survey on the quality of the patient's instructions for patients arriving to gynecological surgery

Age:

Action:

Please answer the questions by circling only one option. Give an open answer to questions 3 and 7. By answering to the questionnaire, you will help us to develop instructions for patients coming for a surgery.

1. Were the instructions clear and understandable?

very clear	quite clear	I cannot tell	not very clear	not at all clear
1	2	3	4	5

2. Was it challenging to follow given instructions?

very easy	quite easy	I cannot tell	quite challenging	very challenging
1	2	3	4	5

3. If so, why?

4. Did the instructions explain about prevention of a possible wound infection related to a surgery?

very well	quite well	I cannot tell	not so well	not at all
1	2	3	4	5

5. How well did you know of being able to prevent from wound infection beforehand, and so to speed up the recovery from surgery?

very well	quite well	I cannot tell	not so well	not at all
1	2	3	4	5

6. Were you satisfied with instructions that you were given?

very satisfied	quite satisfied	I cannot tell	not so satisfied	not at all
1	2	3	4	5

7. What would you like to add into the instructions you were given?

Please return the questionnaire in your treatment department when arriving for surgery. Thank You for your answer, we will treat them confidentially.

Rea Grady, Anu Moniruzzaman

MHC 2013

Laurea Otaniemi

Appendix 4; Research permit

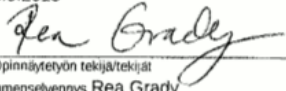
HELSINGIN JA UUDENMAAN
SAIRAANHOITOPIIRI

OPINNÄYTETYÖN TUTKIMUSLUPAHAKEMUS

Liite 1

Opinnäytetyön tekijää koskevat tiedot	Suku- ja etunimet Grady Rea Katriina	
	Virka/toimi tai oppiarvokoulutustausta Sairaanhoitaja AMK-tutkinto, Kätilöopiston leikkausosasto	
	HUS:n palveluksessa <input checked="" type="checkbox"/> Kyllä <input type="checkbox"/> Ei	
	Sähköpostiosoite/puh/gsm reagrady77@gmail.com, rea.grady@hus.fi	
	Kotiosoite Minttutie 5b, 04330 Tuusula	
	Yliopisto ja laitos/ammattikorkeakoulu/oppilaitos, jossa opiskelee Laurea Otaniemi	
Yliopiston laitoksen/ammattikorkeakoulun/oppilaitoksen osoite Metsäpojankuja 3, 02130 Espoo		
Opinnäytetyön ohjaaja oppilaitoksessa	Opinnäytetyön ohjaaja(t), ohjaajien oppiarvot ja yhteystiedot (sähköposti/puhelin) Pääohjaaja Maria Ekström, Laurean yliopettaja maria.ekstrom@laurea.fi, Sari Sarlio-Siintola, Laurean yliopettaja sari.sarlio@laurea.fi	
	Opinnäytetyön ohjaaja(t), ohjaajien ilmoitus siitä, onko opinnäytetyön tutkimussuunnitelma hyväksytty esitetyssä muodossa Sari Sarlio-Siintola hyväksytty 10.2.2014	
HUS:n vastuhenkilöä koskevat tiedot	Suku- ja etunimi/virka/toimi Heija Rauu, os.hoit.	
	Työpöikän osoite Kätilöopisto, PL 610, 00029 HUS	
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	HUS:n tuosalue, tulosyksikkö tai liikelaitos, jossa vastuhenkilö työskentelee Naís	
Opinnäytetyötä koskevat tiedot	Opinnäytetyön nimi julkisessa muodossa Pre-and Postoperative infection preventive information for surgical patient	
	Asiasanat (max 5 kpl) Pre-and postoperative information, Infection prevention, Surgical site infection, Patients experiences, Patients own participation on infection prevention	
	Opinnäytetyön taso <input type="checkbox"/> Lisensiaattitutkinto <input type="checkbox"/> Maisteritutkinto <input checked="" type="checkbox"/> Ylempi AMK-tutkinto <input type="checkbox"/> Kandidaatti <input type="checkbox"/> AMK-tutkinto <input type="checkbox"/> Muu, mikä?	Opinnäytetyön tieteenala <input type="checkbox"/> Lääketiede <input type="checkbox"/> Hammaslääketiede <input checked="" type="checkbox"/> Hoitotiede <input type="checkbox"/> Terveystieteiden tiede <input type="checkbox"/> Muu, mikä?
	Opinnäytetyö on osa laajempaa HUS-hanketta? <input checked="" type="checkbox"/> Ei <input type="checkbox"/> Kyllä, mitä?	Arvioitu aloituspvm. 10.2.2014

Opinnäytetyön suorituspaikat HUS:ssa	
<input type="checkbox"/>	HYKS-sairaanhoitoalue
<input type="checkbox"/>	HYKS Akuutti
<input type="checkbox"/>	HYKS Lasten ja nuorten sairaudet (LaNu)
<input checked="" type="checkbox"/>	HYKS Leikkaussalit, teho- ja kivunhoito (ATEK)
<input checked="" type="checkbox"/>	HYKS Naistentaudit ja synnytykset (NaiS)
<input type="checkbox"/>	HYKS Psykiatria
<input type="checkbox"/>	HYKS Pää- ja kaulakeskus
<input type="checkbox"/>	HYKS Sisätaudit ja kuntoutus (Sisu)
<input type="checkbox"/>	HYKS Sydän- ja keuhkokeskus (SK-keskus)
<input type="checkbox"/>	HYKS Syöpäkeskus
<input type="checkbox"/>	HYKS Tukielin- ja plastiikkakirurgia
<input type="checkbox"/>	HYKS Tulehduskeskus
<input type="checkbox"/>	HYKS Vatsakeskus
<input type="checkbox"/>	HYKS-sairaanhoitoalueen johto
<input type="checkbox"/>	Hyvinkään sairaanhoitoalue
<input type="checkbox"/>	Lohjan sairaanhoitoalue
<input type="checkbox"/>	Länsi-Uudenmaan sairaanhoitoalue
<input type="checkbox"/>	Porvoon sairaanhoitoalue
<input type="checkbox"/>	HUS Yhtymähallinto
<input type="checkbox"/>	HUS-Apteekki
<input type="checkbox"/>	HUS-Desiko
<input type="checkbox"/>	HUS-Kiinteistöt Oy
<input type="checkbox"/>	HUS-Logistiikka
<input type="checkbox"/>	HUS-Kuvantaminen
<input type="checkbox"/>	HUS-Servis
<input type="checkbox"/>	HUS-Tilakeskus
<input type="checkbox"/>	HUSLAB
<input type="checkbox"/>	Ravoli
<input type="checkbox"/>	Uudenmaan sairaalapesula Oy
<input type="checkbox"/>	Muu, mikä

Kohderyhmä <input checked="" type="checkbox"/> Potilaat <input type="checkbox"/> Omaiset <input type="checkbox"/> Henkilökunta <input checked="" type="checkbox"/> Asiakirjat Muu, mikä?		Tutkittavien/havaintoyksiköiden määrä 40
Aineiston keruumenetelmä <input checked="" type="checkbox"/> Kysely <input type="checkbox"/> Haastattelu <input type="checkbox"/> Havainnointi <input checked="" type="checkbox"/> Asiakirja-analyysi <input type="checkbox"/> Muu, mikä?		
HUS:n ulkopuoliset yhteistyötahot		
Aiheuttaako opinnäyte kustannuksia HUS:lle? <input type="checkbox"/> Kyllä (Kustannusarvio ja rahoitussuunnitelma erikseen liitteellä) <input checked="" type="checkbox"/> Ei (Tutkimusluvan myöntäjä voi vaatia selvitystä tapauskohtaisesti)		Opinnäytetyön hyödyt/vaikutukset HUS:n toimintaan <input checked="" type="checkbox"/> Väitön soveltavuusarvo toimintaan, mihin Potilasohjeisiin <input type="checkbox"/> Ei väitöntä sovellettavuutta
Opinnäytetyön tekijänä sitoudun noudattamaan sairaalan tutkimusluvan myöntäjälle. Päiväys 6.9.2015  Opinnäytetyön tekijä/tekijät nimenselvennys Rea Grady		
Opinnäytetyön tutkimusluvan valmistaja HUS:ssa Päiväys 17.11.2015  Opinnäytetyön tutkimusluvan valmistaja nimenselvennys		Opinnäytetyön tutkimusluvan puoltaja HUS:ssa Päiväys  Opinnäytetyön tutkimusluvan puoltaja nimenselvennys

Hakemukseen on liitetty seuraavat liitteet

Tarvittavat liitteet

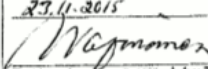
- Opinnäytetyön suunnitelma ja selostus opinnäytetyön suorittamisesta HUS:ssa
 Tutkimussuunnitelman tiivistelmä
 Aineiston keruulomake
 Kysely/haastattelulomakkeen saatekirje

Lisäksi tarvittaessa

- Opinnäytetyötä suorittava muu henkilöstö
 Kustannusarvio ja rahoitussuunnitelma
 Hakenus tietojen saamiseksi salassa pidettävistä asiakirjoista
 Vainoositoumus/salassapito- ja käyttäjäoitus
 Tutkittavan tiedote ja suostumus
 Tutkittavien tiedote ja suostumus

HUS Naistentaudit ja synnytyskeskus
 Käynti: Naistenkl., Haartmaninkatu 2, Helsinki
 Postiosoite: PL 140, 00029 HUS

Alla olevaa päätöskohtaa käytetään silloin, kun päätös voidaan antaa lomakepäätöksenä (kts. JYL 2/2015, kohta 4.3)

LOMAKE- PÄÄTÖS	Lomakepäätöksen numero <u>7/2015</u>
	<input checked="" type="checkbox"/> Myönnetään hakemuksen mukaisesti <input type="checkbox"/> Myönnetään edellyttäen, että <input type="checkbox"/> Hakemus hylätään seuraavin perusteluin *)
	*) Oikaisuvaatimusohje liitteenä
	Tutkimusluvan alkamispäivä <u>2.9.2015</u> Tutkimusluvan päättymispäivä <u>31.7.2016</u>
	Päiväys <u>23.11.2015</u>
	 Tutkimusluvan myöntäjä Juhani Tabanainen nimenseivennys Professori, ylläkäri HYKS Naistenklinikka Käynti: Haartmaninkatu 2, Helsinki Postiosoite: PL 140, 00029 HUS

Opinnäytetyön tekijä	Opinnäytetyöntekijä tai tekijät. Jos tekijöitä on useita, ensimmäiseksi merkityn henkilön osoite- ja yhteystiedot
Opinnäytetyön ohjaaja HUS:n vastuuhenkilö	Yliopiston tai oppilaitoksen ohjaaja(t) ja yhteystiedot Tutkimuksen vastuuhenkilön ohjauksessa opiskelija voi suorittaa opinnäytetyön lakien ja asetusten, viranomaismääräysten ja HUS:n määräysten ja ohjeiden mukaisesti ja raportoida opinnäytetyöstä tutkimusluvan myöntäjälle. Vastuuhenkilö seuraa tutkimuksen kulkua ja huolehtii sen järjestämisestä koskevasta tiedottamisesta ja etsii opinnäytetyön tarvitsemat yhdyshenkilöt ao. tutkimusyksiköistä. Jos tutkimus kohdistuu sairaanhoitoalueen useaan tulosyksikköön, vastuuhenkilö voidaan nimetä sairaanhoitoalueelta. Jos tutkimus kohdistuu usealle sairaanhoitoalueelle tai koko HUS:iin, vastuuhenkilö voidaan nimetä yhtymähallinnosta.
Opinnäytetyötä koskevat tiedot	Koska nimi tulee julkiseen rekisteriin, opinnäytetyön nimeksi on syytä valita otsikko, joka kuvaa tehtävää työtä. Opinnäytetyön tyyppi luokitellaan esim. pro gradu, kliininen hoitotiede Opinnäytetyön suorituspaikat: merkitään kaikki, joista aineisto kerätään. Tutkittava(t) kohderyhmät ja havaintoyksiköt kuvataan esim. Potilaat N=10, Omaiset N=10, Asiakirjat N=10. Aineiston keruumenetelmät luokitellaan.
Asiasanat	Käytetään esim. YSA/FinMeSH tai hoitotyön asiasanastoa enintään 5 kpl
HUS:n ulkopuoliset yhteistyötahot	Kuvataan, mitkä muut laitokset ja yhteistyötahot ovat mukana esim. monikeskustutkimuksen osapuolet.
Aiheuttaako opinnäytetyö kustannuksia HUS:lle	Opinnäytetyö ei saa aiheuttaa tavanomaiseen toimintaan nähden ylimääräisiä kustannuksia tutkittavalle tai sairaalalle. Aloitustilvan myöntäjä voi vaatia perustelut siitä, miksi kustannuksia ei aiheudu. HUS:n kannalta merkittävistä kustannuksista eritellään tarvittava henkilökunnan työpanos (haastatteluaika/hlö), monistus- ja materiaalikulut, asiakirjapainotukset yms. Ylimääräisistä kustannuksista laaditaan kustannusarvio ja rahoitussuunnitelma, jotka toimitetaan erillisenä liitteenä.
Opinnäytetyön hyödyt ja vaikutukset HUS:n toimintaan	Opinnäytetyön tekijän ja ohjaajan näkemys opinnäytetyön hyödyistä/vaikutuksista HUS:n toimintaan.
Eettinen arviointi	Luvan myöntäjä arvioi, tarvitaanko eettisen toimikunnan lausuntoa.
Allekirjoitukset	Opinnäytetyön tekijän, HUS:n vastuuhenkilön ja puoltajan (tapauskohtaisesti) sekä opinnäytetyön tutkimusluvan valmistelijan (tapauskohtaisesti) allekirjoitukset. Tapauskohtaisesti on harkittava puoltajan ja valmistelijan tarve. Lupa myönnetään ohjeen mukaan joko lomakepäätöksenä tai viranhaltijapäätöksenä.
Liitteet	Tutkimuslupahakemukseen liitetään opinnäytetyön suunnitelma (ml tarvittava selostus opinnäytetyön suorittamisesta HUS:ssa), opinnäytetyön tutkimussuunnitelman tiivistelmä, aineistonkeruulomake ja kysely/haastattelulomakkeen saatekirje. Tutkimusluvan myöntäjä voi lisäksi tarvittaessa vaatia muuta liitteaineistoa.

Appendix 5; Research permit


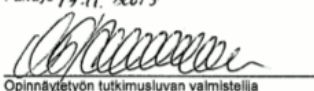
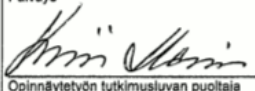
HELSINGIN JA UUDENMAAN
SAIRAANHOITOPAIIRI

OPINNÄYTETYÖN TUTKIMUSLUPAHAKEMUS

Liite 1

Opinnäytetyön tekijää koskevat tiedot	Suku- ja etunimet Moniruzzaman Anu Farah Nabila
	Virka/toimi tai oppiarvo/koulutustausta Osastonhoitaja, Sairaanhoitaja AMK, Kätilö AMK
	HUS:n palveluksessa <input type="checkbox"/> Kyllä <input checked="" type="checkbox"/> Ei
	Sähköpostiosoite/puh/gsm anu.moniruz72@gmail.com
	Kotiosoite Oolannintie 2 C 22, 01520 Vantaa
	Yliopisto ja laitos/ammattikorkeakoulu/oppilaitos, jossa opiskelee Laurea ammattikorkeakoulu
	Yliopiston laitoksen/ammattikorkeakoulun/oppilaitoksen osoite Metsänpojankuja 3,02130 Espoo
Opinnäytetyön ohjaaja oppilaitoksessa	Opinnäytetyön ohjaaja(t), ohjaajien oppiarvot ja yhteystiedot (sähköposti/puhelin) Maria Ekström, Laurean opettaja, maria.ekstrom@laurea.fi
	Opinnäytetyön ohjaaja(t), ohjaajien ilmoitus siitä, onko opinnäytetyön tutkimussuunnitelma hyväksytty esitetyssä muodossa Şari Sarlio-Siintola, Laurean opettaja, sari.sarlio@laurea.fi
HUS:n vastuuhenkilöä koskevat tiedot	Suku- ja etunimi/virka/toimi Heija Rauti, os.hoit.
	Työpaikan osoite Kätilöopisto, PL 610, 00029 HUS
	Sähköpostiosoite/puh/gsm rauti.heija@hus.fi
	HUS:n tulosalue, tulosyksikkö tai liikelaitos, jossa vastuuhenkilö työskentelee NaiS
Opinnäytetyötä koskevat tiedot	Opinnäytetyön nimi julkisessa muodossa Pre- and Postoperative Preventive Information for Surgical Patient
	Asiasanat (max 5 kpl) Pre- and Post operative information, Infection prevention, Surgical site infection, Patients experiences, Own participation on the infection prevention
Opinnäytetyön taso	
<input type="checkbox"/> Lisensiaattitutkinto <input type="checkbox"/> Maisteritutkinto <input checked="" type="checkbox"/> Ylempi AMK-tutkinto <input type="checkbox"/> Kandidaatti <input type="checkbox"/> AMK-tutkinto <input type="checkbox"/> Muu, mikä?	
Opinnäytetyön tieteenala	
<input type="checkbox"/> Lääketiede <input type="checkbox"/> Hammaslääketiede <input checked="" type="checkbox"/> Hoitotiede <input type="checkbox"/> Terveystieteiden tiedot <input type="checkbox"/> Muu, mikä?	
Opinnäytetyö on osa laajempaa HUS-hanketta?	
<input checked="" type="checkbox"/> Ei <input type="checkbox"/> Kyllä, mitä?	
Arvioitu aloituspvm. 10.02.2014	
Arvioitu päättymispvm. 31.12.2015	
Opinnäytetyön suorituspaikat HUS:ssa	
HYKS-sairaanhoidon alue <input type="checkbox"/> HYKS Akuutti <input type="checkbox"/> HYKS Lasten ja nuorten sairaudet (LaNu) <input type="checkbox"/> HYKS Leikkaussali, teho- ja kivunhoito (ATeK) <input checked="" type="checkbox"/> HYKS Naistentaudit ja synnytys (NaiS) <input type="checkbox"/> HYKS Psykiatria <input type="checkbox"/> HYKS Pää- ja kaulakeskus <input type="checkbox"/> HYKS Sisätaudit ja kuntoutus (Sisu) <input type="checkbox"/> HYKS Sydän- ja keuhkokeskus (SK-keskus) <input type="checkbox"/> HYKS Syöpäkeskus <input type="checkbox"/> HYKS Tukielin- ja plastiikkakirurgia <input type="checkbox"/> HYKS Tulehduskeskus <input type="checkbox"/> HYKS Vatsakeskus <input type="checkbox"/> HYKS-sairaanhoidon alueen johto	
<input type="checkbox"/> Hyvinkään sairaanhoitoalue <input type="checkbox"/> Lohjan sairaanhoitoalue <input type="checkbox"/> Länsi-Uudenmaan sairaanhoitoalue <input type="checkbox"/> Porvoon sairaanhoitoalue <input type="checkbox"/> HUS Yhtymähallinto <input type="checkbox"/> HUS-Apteekki <input type="checkbox"/> HUS-Desiko <input type="checkbox"/> HUS-Kiinteistöt Oy <input type="checkbox"/> HUS-Logistiikka <input type="checkbox"/> HUS-Kuvantaminen <input type="checkbox"/> HUS-Servis <input type="checkbox"/> HUS-Tilakeskus <input type="checkbox"/> HUSLAB <input type="checkbox"/> Ravioli <input type="checkbox"/> Uudenmaan sairaalapesula Oy <input type="checkbox"/> Muu, mikä	



Kohderyhmä <input checked="" type="checkbox"/> Potilaat <input type="checkbox"/> Omaiset <input type="checkbox"/> Henkilökunta <input checked="" type="checkbox"/> Asiakirjat <input type="checkbox"/> Muu, mikä?		Tutkittavien/havaintoyksikköjen määrä 40
Aineiston keruumenetelmä <input checked="" type="checkbox"/> Kysely <input type="checkbox"/> Haastattelu <input type="checkbox"/> Havainnointi <input checked="" type="checkbox"/> Asiakirja-analyysi <input type="checkbox"/> Muu, mikä?		
HUS:n ulkopuoliset yhteistyötahot		
Aiheuttaako opinnäyte kustannuksia HUS:lle? <input type="checkbox"/> Kyllä (Kustannusarvio ja rahoitussuunnitelma erillisellä liitteellä) <input checked="" type="checkbox"/> Ei (Tutkimusluvan myöntäjä voi vaatia selvitystä tapauskohtaisesti)		Opinnäytetyön hyödyt/vaiikutukset HUS:n toimintaan <input type="checkbox"/> Välitön soveltavuusarvo toimintaan, mihin <input type="checkbox"/> Ei välitöntä sovellettavuutta
Opinnäytetyön tekijänä sitoudun noudattamaan sairaalan antamia ohjeita ja sääntöjä ja raportoimaan opinnäytetyöni tuloksista tutkimusluvan myöntäjälle.		
Päiväys 04.09.2015  Opinnäytetyön tekijä/tekijät nimenselvitys Anu Moniruzzaman		Päiväys Päivi Heiska / OY HUS:n vastuuhenkilö nimenselvitys
Opinnäytetyön tutkimusluvan valmistelija HUS:ssa Päiväys 13.11.2015  Opinnäytetyön tutkimusluvan valmistelija nimenselvitys		Opinnäytetyön tutkimusluvan puoltaja HUS:ssa Päiväys  Opinnäytetyön tutkimusluvan puoltaja nimenselvitys

Hakemukseen on liitetty seuraavat liitteet


Tarvittavat liitteet

- Opinnäytetyön suunnitelma ja selostus opinnäytetyön suorittamisesta HUS:ssa
 Tutkimussuunnitelman tiivistelmä
 Aineiston keruulomake
 Kysely/haastattelulomakkeen saatekirje

- Lisäksi tarvittavaa:
 Opinnäytetyön puoltava muu henkilö
 Kustannusarvio ja rahoitussuunnitelma
 Hakemus tietojen saamiseksi salassa pidettävistä asiakirjoista
 Valtiolosittamus/salassapito- ja käyttöäisittomus
 Tutkittavan tiedote ja suostumus
 Eettisen toimikunnan lausunto
 STM:n lupa
 Henkilörekisteriseloste



Alla olevaa päätöskohtaa käytetään silloin, kun päätös voidaan antaa lomakepäätöksenä (kts. JYL 2/2015, kohta 4.3)

LOMAKE- PÄÄTÖS	Lomakepäätöksen numero <u>8/2015</u>
	<input checked="" type="checkbox"/> Myönnetään hakemuksen mukaisesti
	<input type="checkbox"/> Myönnetään edellyttäen, että
<input type="checkbox"/> Hakemus hylätään seuraavin perusteluin *)	
*) Oikaisuvaatimusohje liitteenä	
Tutkimusluvan alkamispäivä <u>9.9.2015</u>	Tutkimusluvan päättymispäivä <u>31.7.2016</u>
Päiväys <u>23.11.2015</u>	
	
Tutkimusluvan myöntäjä nimenselvennys	Juha Tapanainen Professori, ylilääkäri HYKS Naistenklinikka Käynti: Haartmaninkatu 2, Helsinki Postiosoitte: PL 140, 00029 HUS

Opinnäytetyön tekijä	Opinnäytetyöntekijä tai tekijät. Jos tekijöitä on useita, ensimmäiseksi merkityn henkilön osoite- ja yhteystiedot
Opinnäytetyön ohjaaja	Yliopiston tai oppilaitoksen ohjaaja(t) ja yhteystiedot
HUS:n vastuhenkilö	Tutkimuksen vastuuhenkilön ohjauksessa opiskelija voi suorittaa opinnäytetyön lakien ja asetusten, viranomais määräysten ja HUS:n määräysten ja ohjeiden mukaisesti ja raportoida opinnäytetyöstä tutkimusluvan myöntäjälle. Vastuuhenkilö seuraa tutkimuksen kulkua ja huolehtii sen järjestämisestä koskevasta tiedottamisesta ja etsii opinnäytetyön tarvitsemat yhdyshenkilöt ao. tutkimusyksiköistä. Jos tutkimus kohdistuu sairaanhoitoalueen useaan tulosyksikköön, vastuuhenkilö voidaan nimetä sairaanhoitoalueelta. Jos tutkimus kohdistuu usealle sairaanhoitoalueelle tai koko HUS:iin, vastuuhenkilö voidaan nimetä yhtymähallinnosta.
Opinnäytetyötä koskevat tiedot	Koska nimi tulee julkiseen rekisteriin, opinnäytetyön nimeksi on syytä valita otsikko, joka kuvaa tehtävää työtä. Opinnäytetyön tyyppi luokitellaan esim. pro gradu, klininen hoitotiede Opinnäytetyön suorituspaikat: merkitään kaikki, joista aineisto kerätään. Tutkittava(t) kohderyhmät ja havaintoyksiköt kuvataan esim. Potilaat N=10, Omaiset N=10, Asiakirjat N=10. Aineiston keruumenetelmät luokitellaan.
Asiasanat	Käytetään esim. YSA/FinMeSH tai hoitotyön asiasanastoa enintään 5 kpl
HUS:n ulkopuoliset yhteistyötahot	Kuvataan, mitkä muut laitokset ja yhteistyötahot ovat mukana esim. monikeskustutkimuksen osapuolet.
Aiheuttaako opinnäytetyö kustannuksia HUS:lle	Opinnäytetyö ei saa aiheuttaa tavanomaiseen toimintaan nähden ylimääräisiä kustannuksia tutkittavalle tai sairaalalle. Aloitustilavuuden myöntäjä voi vaatia perustelut siitä, miksi kustannuksia ei aiheudu. HUS:n kannalta merkittävistä kustannuksista eritellään tarvittava henkilökunnan työpanos (haastatteluaika/hlö), monistus- ja materiaalikulut, asiakirjapainotuskulut yms. Ylimääräisistä kustannuksista laaditaan kustannusarvio ja rahoitussuunnitelma, jotka toimitetaan erillisenä liitteenä.
Opinnäytetyön hyödyt ja vaikutukset HUS:n toimintaan	Opinnäytetyön tekijän ja ohjaajan näkemys opinnäytetyön hyödyistä/vaikutuksista HUS:n toimintaan.
Eettinen arviointi	Luvan myöntäjä arviointi, tarvitaanko eettisen toimikunnan lausuntoa.
Allekirjoitukset	Opinnäytetyön tekijän, HUS:n vastuuhenkilön ja puoltajan (tapauskohtaisesti) sekä opinnäytetyön tutkimusluvan valmistelijan (tapauskohtaisesti) allekirjoitukset. Tapauskohtaisesti on harkittava puoltajan ja valmistelijan tarve. Lupa myönnetään ohjeen mukaan joko lomakepäätöksenä tai viranhaltijapäätöksenä.
Liitteet	Tutkimuslupahakemukseen liitetään opinnäytetyön suunnitelma (ml tarvittava selostus opinnäytetyön suorittamisesta HUS:ssa), opinnäytetyön tutkimussuunnitelman tiivistelmä, aineistonkeruulomake ja kysely/haastattelulomakkeen saatekirje. Tutkimusluvan myöntäjä voi lisäksi tarvittaessa vaatia muita liiteaineistoa.



Appendix 6; Cover letter for the patient

Arvoisa potilaamme,

Olette tulossa hoitoon Helsingin ja Uudenmaan sairaanhoitopiiriin (HUS) Kätilöopiston sairaalaan. Hoitoon ja siihen liittyviin tehtäviin perustuen otamme Teihin yhteyttä tutkimustarkoituksessa.

HUS:ssa on annettu lupa suorittaa terveydenhuollon ammattiopintoihin kuuluva opinnäytteeksi tarkoitettu tutkimus: Kirurgisen potilaan infektioita ehkäisevä pre- ja postoperatiivinen ohjeistus (Pre- and Post Operative infection preventive information for Surgical patient). Tämän tutkimuksen tarkoituksena on kehittää kirurgisen potilaan potilasohjeita ja siten vaikuttaa leikkauksiin liittyvien infektioiden määrään. Tutkimuksen suorittajina toimivat Rea Grady ja Anu Moniruzzaman.

Kutsumme Teitä osallistumaan tähän tutkimukseen. Sen vuoksi kerromme seuraavassa tarkemmin, miten tutkimukseen voi osallistua.

Saatte laatimamme kyselylomakkeen ja voitte vastata siihen oman mielipiteenne mukaisesti. Kaikki Teiltä kyselytutkimuksen aikana kerättävät tiedot käsitellään luottamuksellisina ilman nimeänne tai muita tietoja henkilöllisyydestänne. Palauttakaa kyselylomake hoito-osastollenne saapuessanne leikkaukseen.

Tähän tutkimukseen osallistuminen on täysin vapaaehtoista. Osallistuminen tai osallistumatta jättäminen ei vaikuta hoitoonne HUS:ssa nyt tai tulevaisuudessa.

Rea Grady, rea.grady@hus.fi, p.045 887 0761

Anu Moniruzzaman, anu.moniruz72@gmail.com, p.044 303 9269

Kiitos vastauksistanne!

Appendix 7; Informed Consent (Finnish)

SUOSTUMUS PRE- JA POSTOPERATIIVISIA POTILASOHJEITA KOSKEVAAN KYSELYTUTKIMUKSEEN

Suostun osallistumaan pre- ja postoperatiivisia potilasohjeita koskevaan kyselytutkimukseen, jonka sisällöstä minulle on tiedotettu edeltävästi sekä kirjallisessa että suullisessa muodossa. Tutkimukseen osallistuminen on täysin vapaaehtoista.

Minua ei voida tunnistaa lopullisesta tutkimusraportista. Henkilötietojani tai perheenjäsenteni henkilötietoja ei kerätä eikä käsitellä tässä tutkimuksessa. Tutkimukseen osallistujista ei kerätä rekisteriä missään muodossa, ja kerätty haastattelumateriaali hävitetään tutkimuksen päätyttyä.

Antamani vastauksia käsitellään luottamuksellisesti ja vain tutkijoiden itsensä toimesta. Voin koska tahansa perua osallistumiseni ilman perusteluja, eikä siitä koidu seuraamuksia minulle. Voin myös jo kyselyyn vastattuani pyytää ilman erillistä perustelua tutkimuksen tekijää poistamaan antamani vastauslomakkeen tutkimuksestaan.

Allekirjoituksellani vahvistan osallistumiseni tähän tutkimukseen ja suostun vapaaehtoisesti tutkimushenkilöksi

Paikka ja aika: _____

Tutkimukseen osallistujan allekirjoitus ja nimenselvennös:

Appendix 8; Workshop invitation

Kätilöopiston sairaala

KUTSU YHTEISTYÖTAPAAMISEEN

Gynekologinen poliklinikka
Osasto 7, Osasto 8 ja
Leikkaussali

HUS:ssa on annettu lupa suorittaa terveydenhuollon ammattiopintoihin kuuluva opinnäytteeksi tarkoitettu tutkimus: Kirurgisen potilaan infektiota ehkäisevä pre- ja postoperatiivinen ohjeistus (Pre- and Post Operative infection preventive information for Surgical patient). Tämän tutkimuksen tarkoituksena on kehittää kirurgisen potilaan potilasohjeita ja siten vaikuttaa leikkauksiin liittyvien infektioiden määrään. Tutkimuksen suorittajina toimivat Rea Grady ja Anu Moniruzzaman.

Pre-operatiivisella poliklinikkakäynnillä / osastolla ollessaan potilaat ovat saaneet laatimamme potilasohjeita koskevan kyselylomakkeen. Potilaiden osallistuminen tähän tutkimukseen on ollut täysin vapaaehtoista. Potilaat ovat palauttaneet lomakkeen hoito-osastolleen leikkauksen saapuessaan.

Tutkimukseen perustuen järjestämme yhteistyötapaamisen työpajan merkeissä perjantaina, 6.5.2016 klo: 08.30 - 11.00 Kätilöopistolla K-kerroksessa tilassa Into. Tapaamisessa käsittelemme tutkimuksen teemaa, potilaiden antamia vastauksia ja keskustelemme jo olemassa olevista potilasohjeista sekä niiden kehittämisehdotuksista. Toivomme, että kullakin osastolta tilaisuuteen osallistuisi 3-4 aiheesta kiinnostunutta henkilöä.

Ilmoittautuminen viimeistään 22.4.2016. Osallistujille kahvitarjoilu.

Lämpimästi tervetuloa tapaamiseen keskustelemaan tutkimukseemme liittyen,

Rea Grady ja Anu Moniruzzaman

Kiitos yhteistyöstänne.

Rea Grady, rea_grady@hus.fi, p.045 887 0761
Anu Moniruzzaman, anu.moniruzzaman@hel.fi p.044 303 9269

Kirurgisen potilaan infektiota ehkäisevä pre- ja postoperatiivinen ohjaaminen

Rea Grady | Kätilöopisto | Työpaja 6.5.2016
Anu Moniruzzaman



www.laurea.fi



- Tutkimuksemme tarkoituksena on kehittää preoperatiivisia potilasohjeita Kätilöopiston sairaalassa, jotta potilaan postoperatiivinen toipuminen olisi helpompaa. Keskitymme tutkimuksessamme potilasohjauksen infektiota ehkäisevään sisältöön.
- Vuosittain maailmanlaajuisesti suoritetaan yli 234 miljoonaa leikkausta.
- Kirurgisten toimenpiteiden tarkoituksena on vähentää tai poistaa potilaan terveyteen haitallisesti vaikuttavia tekijöitä.



- Ennen toimenpidettä potilaat saavat preoperatiivisesti tietoa suullisesti sekä kirjallisesti tai vain kirjallisesti ja joskus myös puhelimitse valmistautumisestaan leikkaukseen.
- Suoritimme kyselytutkimuksen, jossa analysoitiin Kätilöopistolla jo olemassa olevia preoperatiivisia potilasohjeita. Potilaat vastasivat kysymyksiin mielipiteidensä mukaisesti.
- Eri tutkimusten mukaan potilaat eivät saa riittävästi tietoa toimenpiteisiin liittyvien infektioiden ehkäisystä.



1

Kirurginen haavainfektio

- Puutteellinen preoperatiivinen valmistautuminen voi hankaloittaa potilaan postoperatiivista toipumista monin tavoin.
- Kirurginen haavainfektio on yksi vakavimmista leikkauksiin liittyvistä komplikaatioista. Potilas on infektion saatuaan pitkään toiminta- ja työkyvytön ja yhteiskunnalle kallis hoitaa.
- Kirurgisen haavainfektion syntyyn voi potilas itse vaikuttaa jo valmistautuessaan leikkaukseen.
- Suurimmassa osassa infektiotapauksista, potilaan ihon oma bakteerikanta on toiminut haavainfektion aiheuttajana.



4

Potilasohjauksen hyödyt

- Hyvän pre - ja postoperatiivisen ohjauksen on todettu vähentävän infektiolta lisäämällä tiedon ymmärtämistä ja sitoutuneisuutta omaan hoitoonsa.
- Potilaan hyvä valmistautuminen leikkaukseen vähentää myös leikkausosaston aikaviiveitä ja sitä kautta auttaa vähentämään leikkaukseen liittyviä infektiolta.
- EU:n terveystaloudellinen tavoite potilasturvallisuuden lisäämiseksi on potilaiden oman aktiivisuuden lisääminen infektioiden torjunnassa.



7

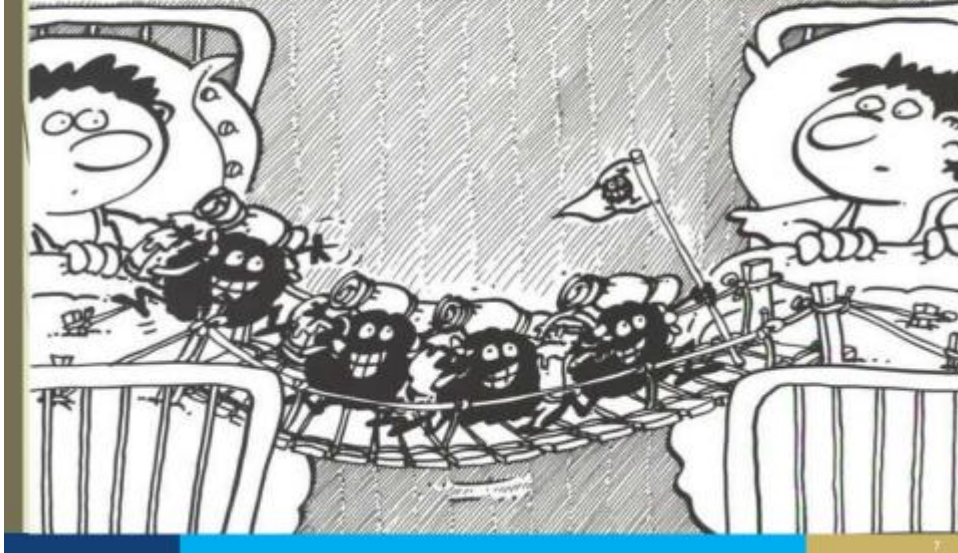
Infektioiden ehkäisyyn perusta on hyvä käsihygienia. Joka kolmas terveydenhoitoon liittyvä infektio olisi ehkäistävässä.



Alueet joilla bakteerit viihtyvät, jopa käsidesin käytön jälkeen.

8

Ristitartunnat



Kysymykset ryhmätyöskentelyyn

1. Mitä hyvä potilasohjaus sisältää?
2. Mitkä ovat potilasohjausta estäviä ja häiritseviä tekijöitä?
3. Miten kehittäisitte preoperatiivisia potilasohjeita?




KIRURGINEN INFEKTIO

Anu Moniruzzaman | HUS | 06.05.2016
Rea Grady | Kätilöopisto



www.laurea.fi



- Kirurgiset infektiot ovat yleisimpiä infektioita terveydenhuollossa
- Aiheuttavat paljon kustannuksia yhteiskunnalle, työnantajille ja haittaa potilaille->lisää kalliita hoitopäiviä sairaalassa, pidentyneitä sairaalajaksoja, sairaspöissaoloja töistä jne.
- Potilaat saavat hoito-ohjeet sairaalasta kirjeitse, puhelimitse tai muulla sovitulla tavalla kuinka valmistautua leikkaukseen ja ennaltaehkäistä kirurgisen infektion syntyä ja toiset hoito-ohjeet kotiin lähtiessä

Riskiä nostavat:

- pitkittynyt sairaalassaolo
- diabetes
- lihavuus
- tupakointi
- verensiirto
- huono ravitseminen

KIRURGISTEN INFEKTIOIDEN TORJUNTA TERVEYDENHUOLLOSSA

- ▶ **TÄRKEIN VELVOLLISUUS** on huolehtia KUNNOLLISESTA KÄSIHYGIENIESTA vedellä, saippualla ja käsihuhuhteilla
- ▶ Tärkeää kiinnittää huomiota potilaiden osallistamiseen infektioiden torjunnassa ja hoitajien kouluttamiseen potilasohjauksessa (varmistaa, että potilas on varmasti ymmärtänyt ohjeet asianmukaisesti)
- ▶ Arviolta kolmasosa kirurgisista infektioista olisi estettävissä

IHON EHEYS

- ▶ Ehjä ja terve iho on paras suoja infektioita vastaan
- ▶ Leikkaus on aina infektoriski potilaalla
- ▶ Ihmisen oman ihon bakteerifloora (normaali kasvusto) aiheuttaa suurimman osan kirurgisista infektioista

7

KIRURGISTEN HAAVOJEN LUOKAT

Chart 2 - Classification of wounds relative to the microbial content

Type of wound	Characteristic	Examples
Clean	Free from microorganisms	Heart surgery
Clean contaminated	Non-significant contamination and less than 6h elapsing until medical care	Biliary and gastric surgeries
Contaminated	Without local infection and more than 6h elapsing until medical care	Colon surgeries
Infected	Intense inflammatory reaction and frank infectious process	Appendicitis and colecistitis

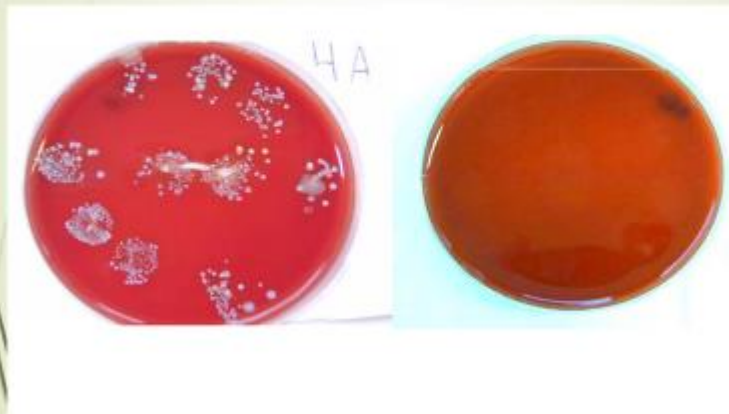
8

Kirurgisen infektion oireet

- kivulias haava, vaikka ulospäin ei olisikaan merkkejä
- korkea tai alhainen kehon lämpötila, alhainen RR tai nopea pulssi
- verinen vuoto tai muu märkäinen erite, joka tulee ulos haavasta-> voi haista pahalle
- lisääntynyt turvotus
- haava voi olla myös infektoitunut ilman klassisia haavan merkkejä

7

Sormet ennen ja jälkeen desifioinnin



8

Appendix 11; Findings of the group-oriented work

1. Mitä hyvä potilasohjaus sisältää?

- Perustelut ohjeille
 - merkitys hoidolle todiksi selväksi
- Vain ydin-asiat - Ei liikaa sisältää
- Yksilöllisyys huomioitu
- Raivallinen tila
- Looginen eteneminen
 - eriteltä vaiheittain esim. edellisen tilin, oamulla, sairastajan tila
- Ohjaukseen mukaan?

2. Mitkä ovat potilasohjausta estäviä ja häiritseviä tekijöitä?

- Omat puitteet ohjaukseen
- Kulttuurit
 - mistä asioista voidaan puhua?
 - olekat asiat eivät selviä
- Kiire
- Ei pysty keskittymään, häviää nopeasti kotiin
- Jotkut pot. selkään saane, että kukaan potilasta hoidetaan kukaan - niin kyllä kuin muut asiat
- Sairastusympäristö
- Jännitys omien tunteiden (ei pysty vastustamaan tietoa)
- potilas ei ole hoitoympäristön
- Ei ole korva ja oppimista tila, mistä omat ohjeet
- "Liika info"
- Tuotteellinen kielitaito
- muisti - sairaus (potilas yksin ohjaustilanteessa)
- potilas ei ymmärrä ohjeiden merkitystä tärkeyttä

3. Miten kehittäisitte preoperatiivisia potilasohjeita?

- OIKEA-AIKAINEN OHJAUS
 - ERILLINEN VALMISTAUTUMISEEN JA OMA KOTIUTUMISEN JÄLKEEN
- KUVIA
 - VISUAALISEMPI OHJE
- YKSIN KERTAUSTA
- RYHMITTÄIN
 - KPL - JAKO
 - ⇒ SELKEYTTÄ
- Potilaiden pitäisi ymmärtää, että ohjeilla on tarkoitus esim. laulut potis
- Enemmän pesuohjeita
- DM - OBESIITEET
- PERUSSAIR. HUOMIOITAVIEN -YKSILÖLLISEN OHJEET
- Potilaiden tulisi ymmärtää, että heidän on vastuu omista hoidoista
- Sotto ja varmistus, että ohjeet ymmärretty
- Perustelut ohjeille
 - esim. ravinnon ja olo, ruu- pesä - miksi tar.
- keitä nou- dattaa