

Set-up of surgical instruments during emergency Cesarean section

Advantages and disadvantages of using a standardized set-up of the Mayo stand from the surgical nurse's perspective

- A qualitative study

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Preface

Our inspiration for the master's thesis came during our practice as surgical nursing students. In our experience, it took time to organize the Mayo stand and there was no quick and easy solution how to do this. Everyone organized it in their own manner, according to what they believed was best. This task requires experience and can be difficult when you lack experience.

We authors think Cesarean section is an exciting and fascinating surgery, as did one of our participants:

“It's one of those surgeries that gives you goosebumps because it's not just about one life, it's about at least two. And you know that it can turn around so quickly, from that everything is fine to that it is very urgent” (Participant 2).

In the Norwegian journal of Clinical Nursing, Sykepleien, we discovered several research articles written by Unni Igesund and others (Igesund & Eide, 2018; Igesund et al., 2021; Igesund et al., 2019). They highlighted that there are a few hospitals in Norway where the surgical nurses use a standard for setting up the instruments for surgeries (Igesund et al., 2019). We became curious and wanted to find out what experiences and attitudes surgical nurses have regarding the use of a standardization for this important task of planning, organizing, and setting up the Mayo stand.

The work on the master's thesis has been instructive and challenging, both academically and personally. We would like to thank each other for our fantastic cooperation and support.

We would like to thank our supervisors Linda Mihaila Hansen and Judy Munday. They have given us good, constructive feedback and supported us all the way. We would also like to thank the twelve surgical nurses who agreed to participate in our project, for taking the time to share their experiences with us.

Last but not the least, we would like to thank Ellen Sejersted, the librarian at Agder University, who helped us compose search words, recommended databases and guided us using Endnote™ and Kildekompasset.

Sammendrag

Bakgrunn: Operasjonssykepleiere har ansvar for instrumentene under kirurgiske inngrep. Mister man kontrollen over instrumentene kan det ha negative konsekvenser for pasienten og det kirurgiske teamet. Noen sykehus bruker standardisert oppdekking av assistansebordet på kirurgiske inngrep, blant annet keisersnitt.

Hensikt: Å undersøke operasjonssykepleieres erfaringer og holdninger til en standardisert oppdekking av assistansebordet ved akutt keisersnitt.

Problemstilling: Hva er fordelene og ulempene ved å bruke en standardisert oppdekking av assistansebordet til akutt keisersnitt?

Metode: Vi samlet data gjennom 12 kvalitative, semi-strukturerte dybdeintervjuer med operasjonssykepleiere. Data ble analysert ved hjelp av Malterud's systematiske tekstkondensering.

Resultater: Analysen viste 4 resultatkategorier og 12 underkategorier. Det viktigste for deltakerne var å ha kontroll over instrumentene. Standardisert oppdekking viste seg spesielt nyttig for uerfarne operasjonssykepleiere, i akutte situasjoner, i samarbeidet med gynekologene og ved samtidighetskonflikter. Noen ulemper kom fram, som at overgangen til å innføre en standard kan skape utfordringer, spesielt for erfarne operasjonssykepleiere, og at standarden ikke passer alle ergonomiske behov og situasjoner. Det var noen uenigheter om individuelle tilpasninger i oppdekkingen ble sett på som en fordel eller en ulempe. Det ble understreket at standardisert oppdekking aldri måtte erstatte tellekontrollen.

Konklusjon: En standardisert oppdekking kan sørge for å kvalitetssikre optimalt samarbeid og gjøre at operasjonssykepleiere kan føle seg trygge, uavhengig av erfaringsgrad. Bruk av en standard gir allikevel ikke nødvendigvis det beste resultatet i alle situasjoner og kan være utfordrende, spesielt i implementeringsfasen.

Nøkkelord: Operasjonssykepleier, assistansebord, standard oppdekking, organisering, sikkerhet, erfaring, akutt keisersnitt.

Abstract

Background: Surgical nurses have responsibility for the instruments during surgery. Losing control of the instruments can have negative consequences for the patient and the surgical team. Some hospitals use a standardized set-up of the Mayo stand for surgeries, including Cesarean Section.

Purpose: To examine the surgical nurses' experiences and attitudes regarding using a standardized set-up of the Mayo stand during emergency Cesarean section.

Research question: What are the advantages and disadvantages of using a standardized set-up of the Mayo stand during emergency Cesarean section?

Methods: We collected data through qualitative, semi-structured, in-depth interviews with 12 surgical nurses. Data was analyzed using Malterud's systematic text condensation.

Findings: The analysis revealed 4 result categories and 12 subcategories. The most important thing for the participants was to keep control of the instruments. Standardized set-up proved most useful for the inexperienced surgical nurses, in acute situations, in cooperation with gynecologists and during concurrency conflicts. Some disadvantages emerged, such as that the implementation can be challenging, especially for the experienced and a standard does not suit all ergonomic needs and situations. Some disagreed whether individual adaptations to the set-up were an advantage or a disadvantage. They emphasized that a standardized set-up must never replace a counting control.

Conclusion: Ideally, a standardized set-up can ensure the quality of optimal collaboration and make surgical nurses feel safe, regardless of experience. However, using a standard is not necessarily the best in all situations and can be challenging, especially during implementation.

Keywords: Surgical nurse, Mayo stand, standardized set-up, organizing, surgical safety, experience, emergency Cesarean section.

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1.0 Introduction

1.1 Background

In Norway, during a Cesarean section, two surgical nurses work together. The circulating nurse, that remains “non-scrubbed”, manages patient positioning, antimicrobial skin preparation, documentation, surgical count along with the sterile surgical nurse and serves the team in the sterile field among other responsibilities. The sterile surgical nurse assembles the sterile instruments, controls them and supplies the surgeon in a manner to maximize efficiency and safety (Cuming, 2019, s. 12). All the sterile instruments come in trays and instruments composition varies from institution to institution (Cromd, 2019, s. 194).

The Mayo stand is a small, movable table for sterile instruments and supplies used during surgery positioned close to the sterile surgical site (Farlex, 2012). The sterile surgical nurse chooses, based on knowledge of the nature of the procedure, which instruments are appropriate to have on the Mayo stand (Igesund & Eide, 2018, s. 375). This selection requires a general understanding and knowledge of the surgical procedure and anatomy, as well as the purpose of the instruments (Cromd, 2019, s. 194).

The entire surgical team has a responsibility to work together for the best possible outcome for the patient (Kennedy, 2013). Surgical nurses are expected to be prepared to undertake quality improvement work and to ensure patient safety (Spesialisthelsetjenesteloven, 1999). They are expected to provide individual and professional nursing based on evidence-based practice and maintain quality and patient safety (NSFLOS, 2015). The surgical nurse protects the patient by preventing further injury and suffering than the treatment itself constitutes, for example in relation to proper control and handling of instruments, compresses, as well as medical-technical and technical equipment (NSFLOS, 2015). Losing control of instruments can have negative consequences for the patient and the surgical team including sharp injuries, contamination of equipment with infection as a result, incorrect medication, forgotten equipment, burns, unnecessary use of time, unnecessary damage to the equipment and poor cooperation with the surgeon (Igesund & Eide, 2018, s. 375-379). We think this highlights the importance of the surgical nurse being familiar with the latest research and knowing the safest way to plan and organize the Mayo stand.

Proper training and varied experience are considered key elements providing the ability to deliver high quality care in the operating room for enhancing patient safety (Ingvarsdottir & Halldorsdottir, 2017). Dr. Patricia Benner's nursing theory proposes that expert nurses develop their skills and understanding of patient care over time through a proper educational background as well as a multitude of experiences (Benner, 1995). Healthcare professionals must learn methods for finding available knowledge, assessing it and applying it in practice (Nortvedt et al., 2012, s. 20).

In a complex environment like the operating room, the sterile surgical nurses can find themselves dealing with many parallel tasks. It is important to be aware of the next step of the surgery (Igesund et al., 2021), and to do that, it's important to have experience. According to Benner, the novice nurse must have rules to act on, because he/she lacks experience with the situation (Benner, 1995). As surgical nursing students, we were surprised that this complex task had no specific protocol. We experienced that the surgical nurses made their own assessments and set up the equipment they considered best for each surgery. When we learned that some hospitals use a standardized set-up, we became curious about the differences and the surgical nurse's opinions and attitudes towards a standardized set-up. The present study was performed to gather further knowledge regarding the advantages and disadvantages of using a standardized set-up from the surgical nurse's perspective.

1.2 Presentation of research question and delimitations

A Cesarean section is a surgery performed to remove a child from the mother's womb. Cesarean section can be lifesaving for both mother and child, but at the same time it is a major surgery that can have serious complications such as postpartum hemorrhage, uterine rupture or death (Helsedirektoratet, 2018; Simpson, 2007b). During emergency Cesarean section, the baby should be delivered quickly (Haukeland universitetssjukehus, 2019). Sterile assistance is essential to save time, by being systematic, keeping order and developing good systems to work efficiently, safely and precisely (Igesund & Eide, 2018, s. 375-376).

Simpson (2007a) writes that all hospitals that offer obstetrics should be able to perform an emergency Cesarean section within 30 minutes of the decision being made. This underlines the impression we have obtained in practice; that an emergency Cesarean section is one of the procedures that surgical nurses must be most prepared for. Therefore, we chose to narrow our

research question towards emergency Cesarean section. We wanted to examine experienced surgical nurses' experiences from practice with organizing the Mayo stand, and what they consider advantages and disadvantages regarding the use of a standardized set-up.

Our chosen research question was as follows:

What are the advantages and disadvantages of using a standardized set-up of the Mayo stand during emergency Cesarean section?

1.3 Purpose

The purpose of this study is to examine the surgical nurses' experiences and attitudes regarding the use of a standardized set-up of the Mayo stand. We hope that sharing experiences may create discussion regarding standardization of the Mayo stand and whether surgical departments should develop procedures and national guidelines for standardized set-ups of instruments.

We hope our project can be of benefit to the health service by providing motivation for further research in the field and by engaging professional surgical nurses to prepare professional procedures on standardized setups and perhaps motivate for the preparation of a national guideline. We hope this qualitative research can provide new insight into surgical nurses' experiences and attitudes, although we are aware that we can't measure if the surgical nurse's performance is quantitatively better or if patient safety is improved.

Igesund et al. (2019, 2021) has undertaken groundbreaking research in Norway related to standardization in relation to set-up of instruments of the Mayo stand. Except from their research, little research appears to be available regarding standardizing the Mayo stand during surgery, and nothing about surgical nurses' experiences with the phenomenon. Here we can see a knowledge gap and opportunities for new research. Igesund et al.'s (2021) scoping review recommends further research on surgical nurses' experiences related to standardized set-ups, and this gave us the inspiration for our research question.

2.0 Theoretical framework

This section includes relevant theory that are connected to our theme and research question. We define different concepts such as Cesarean section, set-up of instruments, standardization, patient safety and quality assurance. We will also present relevant research to provide further understanding of these concepts and further illuminate the importance of our chosen subject.

2.1 Search strategy

Prior to conducting the study, we searched for relevant literature on our topic.

The PICo form in Table 1 was developed to structure our research question and as a starting point for conducting structured searches in databases. An explanation of PICo is provided in Table 1 (Helsebiblioteket, 2016).

Table 1: Initial PICo

P: Population	Experienced surgical nurses, who have worked with and without a standardized set-up of the Mayo stand
I: Phenomenon of interest	Experience with and attitudes towards using standardized procedures for set-up of the Mayo stand for emergency Cesarean section
Co: Context	The operating theatre, the sterile field

We did a non-strategic search in SweMed + to find English Mesh terms. Furthermore, we applied via mesh.uia.no. We also received useful keywords from the librarian Ellen Sejersted at the University of Agder (UiA). Subsequently we developed our PICo form further utilizing the keywords (see Table 2).

Table 2: PICo with keywords.

PICo		Search terms	Keywords
P:	AND	Surgical nurse	(operating OR scrub OR “operating theatre” OR “operating room” OR perioperative* OR intraoperative* OR surgical N2 (nurs* OR care)

I:	AND/ OR	Standardi zation	Guideline* OR Standard* OR recommendation* OR “recommended practice*” OR checklist* OR procedure* OR “recommended practice*” OR PT/TI “systematic review” OR guidance*
	AND	Set-up of instrume nttable	(“set-up*” OR “set up” OR setup* OR organi* OR laying* OR table* OR tray* OR surgical) N4 (instrument* OR equipment*) OR (instrument* OR back* OR mayo OR suture) N1 (table* OR stand)
	AND/ OR	Acute cesarean section	cesarean* OR cesarean* OR “C-section” OR sectio OR section OR sections OR obstetric OR (Abdominal* N1 deliver*) OR “cesarean birth” OR “cesarean deliver*”
	AND/ OR	Surgical teamwor k	“Concurrency conflict” OR “Simultaneity conflict” OR interruption* OR distraction* OR “surgical teamwork” OR cooperation
Co:	AND/ OR	The surgical teatre	(operating OR surgical) N1 (room* OR studio* OR theatre* OR suit*) OR Sterile N1 field OR Surgery OR surgical
Studied esign	AND/ OR	Qualitati ve studies	Attitude* OR experience* OR opinion* OR qualitative OR phenomenolog* OR interview OR thematic OR themes

We searched broadly for relevant research to get an overview using the following databases: Medline & CINAHL via EBSCOhost, Cochrane, PubMed and Google Scholar. We mainly used Medline and Cumulative Index for Nursing and Allied Health (CINAHL) because these databases are suitable for finding good quality nursing research according to our librarian Ellen Sejersted. In addition, we searched UpToDate and Best Practice for evidence-based recommendations. Further, we searched literature other authors used in their research via the reference lists of articles. We included encyclopedias, guidelines, standards, evidence-based procedures, scoping reviews, doctorates, peer-reviewed individual studies, but excluded grey literature, letters and articles that are not peer-reviewed. Only articles written in Norwegian, Danish, Swedish, Icelandic and English were included due to lack of resources for translating papers in other languages, and the time constraints of a master thesis. Research about logistics outside the sterile field, sterile dressing, simulation as training, team communication and infection was excluded. Articles from 2002-2022 were included. We tried including the most

up-to-date articles for our thesis. Some of the oldest articles regarding patient safety and methods were included due to relevance as we considered them still up to date.

A great amount of research focuses on Cesarean section, but the focus is often on the role of the midwife or surgeon. We did not find much about the role of surgical nurse or standardization of the Mayo stand during Cesarean section, but some general information about standardized set-up of the Mayo stand was discovered and quite a lot about patient safety and safe surgery. In April 2022 we conducted a new literature search and discovered new research of interest to be included in this thesis.

Findings from the sought literature will now be presented regarding the concepts of Cesarean section, set-up of instruments on the Mayo stand, standardization, patient safety and quality assurance.

2.2 Cesarean section

A Cesarean section is the delivery of a baby or babies through abdominal and uterine incisions. It is generally used when the delivery is delayed and can result in adverse outcomes to the baby, the mother or even both (Carzo, 2019). Risk factors and possible indications for Cesarean section include previous Cesarean section and other surgeries on the uterine wall; previous traumatic vaginal birth; a baby in breech position; diabetes; obesity; induced birth (especially first-time births and former Cesarean section); mental health problems; birth anxiety and increasing age after 35 years (Mascali et al., 2020).

Elective Cesarean section is decided at least eight hours before the woman is in childbirth. In Norway, emergency Cesarean section is graded by urgency as priority one, two and three. Priority One means that the procedure should take place as soon as possible. Priority two is that the Cesarean section must be performed soon within a certain time, often between 20-30 minutes. Priority Three refers to a Cesarean section that is planned or that there is one hour to several before it must be performed (Mascali et al., 2020).

The risk of retained instruments and sponges increases significantly in patients with a high Body Mass Index (BMI), during emergency surgeries, in the event of changes in procedure and in changes in the surgical team or in the event of disturbances and when the count is

delayed. Since Cesarean section can be so acute, sometimes the surgical team must proceed without a complete count of the instruments (Simpson, 2007b).

In Norway, of a total of 52,897 births in 2020, 8,349 (15.8%), were performed by Cesarean section and of these, 5,547 were emergency Cesareans (66.4%) (Folkehelseinstituttet, 2021). Therefore, approximately one third of Cesarean sections are planned and two thirds are emergency Cesarean sections (Mascali et al., 2020). Cesarean section is the most frequent, major surgery in the United States (Carzo, 2019). The rate of Cesarean section in Norway for the past 20 years has been stable (Mascali et al., 2020). In the United States the proportion of births by Cesarean section has increased every year and almost doubled from 2000 to 2015, when around 21% of the world's 140 million births took place by Cesarean section (Broadwall, 2018). This is a big difference compared to Norway. The Nordic countries and the Netherlands are among countries with the lowest rate of Cesarean section in the world (Mascali et al., 2020).

A Cesarean section can develop into a post-partum hemorrhage with massive bleeding or a hysterectomy, involving other specialists to the team. In case of a long, complicated surgery it also may require a change in team members. Every effort should be made for an accurate count of instruments, sponges, and needles before starting the Cesarean section. If there is any doubt, an x-ray can be performed after surgery to check for any retained equipment (Simpson, 2007b).

2.3 Set-up of instruments on the Mayo stand

Frequently used instruments are arranged on the Mayo stand, near the sterile surgical field. Selecting instruments and organizing them in an appropriate manner both before and during the various surgeries requires specialized expertise in surgical procedures, anatomy, pathology, sterile technique, and the function of the instruments. The instruments in the operating room are divided into different basic instrument trays that contain standard instruments used for the various surgeries. It is important to sort the instruments in a logical and appropriate way so they can be located quickly when needed (Cromd, 2019, s. 194-195).

A professional development project by Igesund (2016) and surgical nursing students found that surgical nurses organized the Mayo stand based on assessments of safety, the sterile field, structure to create an overview, standardization, collaboration with surgeon and flow in the instrumentation. Safety is impacted by the number of instruments on the Mayo stand in risky phases of the surgery and safe placement of sharp instruments that prevent stab wounds (Igesund & Eide, 2018, s. 377).

International guidelines related to organizing instruments and setting up the Mayo stand are prepared by major national professional organizations for surgical nurses and technicians, such as the Association of PeriOperative Registered Nurses (AORN) and the Association of Surgical Technologists (AST) (Igesund et al., 2019). Only one guideline, prepared by surgical technologist, sets out recommendations that specify a standardized, systematic and practical establishing the sterile field in the operating room (AST, 2019; Igesund et al., 2021).

Utilizing a routine for setting up the Mayo stand contributes to economizing time and supports the principles of asepsis. Variations occur, including considering surgeon's preferences, emergency procedure versus scheduled procedure, and product differences (AST, 2019). According to the surgical technologist's guidelines, the surgical technologist should plan the steps for the set-up that reflects these variations. It is important to establish a logical, sequential, and efficient routine for setting up the Mayo stand in accordance with the procedure, physician preference, and facility policy. The Mayo stand should contain instruments most frequently used, and they should be placed in even numbers (AST, 2019). It is therefore easy to gain a quick overview if something is missing. Which instruments needed on the Mayo stand may change according to the different phases in a surgery (Eide, 2018, s. 380). The instruments set up on the Mayo stand can also be according to standardized institutional policy (Cromd, 2019, s. 194).

According to Cromd (2019) in the book "Alexanders care of the patient", the set-up of instruments on the Mayo stand in most operating rooms is planned, standardized, structured and organized in a manner to ensure continuity if changing the sterile surgical nurse with another. Cromd (2019) also states that each facility should ensure standardization of set-ups by creating tools that can help during that extensive orientation process.

It may seem that there is an individual culture for organizing the Mayo stand in Norway. In

Igesund et al. 's (2019) exploratory cross-sectional survey only 4 of 16 hospitals that participated in the study had procedures for how the employees were to set up the instrument tables for various surgeries. There are no Norwegian evidence-based national guidelines or procedures available on how to set up the Mayo stand. There is only one relevant evidence-based guideline for surgical count available at the website Helsebiblioteket.no. Written procedures and guidelines for setting-up and organizing the Mayo stand are used to a small extent in Norway (Igesund et al., 2021). Access to evidence-based guidelines and standardization of procedures and techniques help prevent human error (Igesund et al., 2019).

A multi-center study from Glaser 2022 explored whether there was an existing standard within clinics for an instrument table set-up. They found that the surgical nurses within each participating clinic did set up the instruments in almost the exact same way (93,3%) for Functional Endoscopic Sinus Surgery (FESS). Only one third (33,3%) of the participants stated that they followed an internal standard. 66.7% stated that they set up the Mayo stand as they were trained to as beginners. Less than half of the surgical nurses participating in the study stated that they knew literature covering the topic of instrument table set-ups. 93.3% of the participants stated that they set up the table in a way they personally consider ideal. Set-ups were adapted to different surgeons as one third of the participants confirmed (Glaser et al., 2022).

2.4 Standardization

World Health Organization (WHO) has defined standardization as «the process of developing, agreeing upon and implementing uniform technical specifications, criteria, methods, processes, designs or practices that can increase compatibility, interoperability, safety, repeatability and quality» (Leotsakos et al, 2014).

Association of PeriOperative Registered Nurses (AORN) describes a standard as an authoritative statement that defines values and priorities (Girard, 2006). A standard is a common recipe for how something should be made or implemented, and standardization is the process from an idea to a fully developed standard (StandardNorge, 2021). A standard is considered the ultimate declaration and is less flexible than recommended practices or guidelines (Girard, 2006). There are a number of standards to ensure that medical practice and equipment are safe and of sound quality (StandardNorge, 2021). Despite the use of

standardization in other industries and its obvious potential to minimize accidents and catastrophic errors, standardized health care processes have been slow to gain traction in demonstrating their impact within health care (Leotsakos, 2014).

Standardizing the set-up of instruments during surgeries is about creating a procedure for how, in the best possible way, according to the knowledge available, the instruments can be sorted and placed on the instrument table in the same way, each time, for that procedure. When the surgical nurses know where the instruments are located, attention can be more focused on the sterile field and surgical nurses can maintain the workflow and act quickly in acute situations (Igesund & Eide, 2018, s. 375-379). It is suggested that standardizing techniques can make it easier for colleagues to capture if there is something they are doing that deviates from the standard and that could potentially increase the risk of adverse events (Wahr, 2020).

Human errors or communication failures are failures contribute to most adverse events compared to for example, dramatic ones such as fire in the operating room or infection associated with medically implanted objects, for example, central line (Wahr, 2020). A standard provides evidence of best practice and can be used for quality assurance (Girard, 2006). Standardization, implementation and standardizing techniques for equipment and technology can reduce malfunction and human errors (Wahr, 2020). The standard must be adapted to the situation and not the other way around. In meeting with the patient in the operating room, it is not just a matter of doing what needs to be done, but doing the best for this patient (Dåvøy, 2018, s. 158).

2.5 Patient safety and quality assurance

The responsibility and functional description for the surgical nurses in Norway state that surgical nurses must practice individual and professional nursing based on evidence-based practice and maintain quality and patient safety. The surgical nurse must collaborate with other professional groups to ensure quality and continuity for patients. Surgical nurses should provide care, observe the patient's condition, and take responsibility by assessing, prioritizing, implementing and evaluating necessary and relevant surgical nursing interventions (NSFLOS, 2015).

Patient safety has been defined as reduction of risk of unnecessary harm associated with health care as well as the prevention of errors and avoidable adverse event to protect patients from injury (Ingvarsdottir & Halldorsdottir, 2017). Patient safety is one of the fundamental concerns of the World Health Organization (WHO). WHO have launched a patient safety program globally and published guidelines and recommended practice for ensuring the safety of surgical patients and reduce adverse events (Peñataro-Pintado et al., 2020). Studies show that adverse events that cause complications occur in 3-22% of all hospitalized patients. Up to half of these events are related to surgery (Davis et al., 2002; de Vries et al., 2008). It is estimated that at least half of the adverse events can be prevented (Haugen & Dāvøy, 2018, s. 181). The most widely reported event in the operating room concerned with patient safety are errors related to unintended retention of a foreign body, procedure, surgical site and patient identity (Peñataro-Pintado et al., 2020). In a quantitative survey conducted by Ebbeke (2007), 64% of surgical nurses had experienced that correct counting prevents foreign bodies from being forgotten in the patient.

Procedures must be prepared in evidence-based manner through experience, patient participation and research (Hjelen, 2018). Such evidence-based procedures can be of great help when decisions are to be made, as they can prevent unwanted variation and promote good quality (Helsedirektoratet, 2012). WHO's checklist and other checklists help to ensure that health care ensures safe patient care is provided, regardless of human factors (Haynes et al., 2009; Storesund et al., 2020). WHO emphasises that implementing standardized safety procedures, such as “safe surgery” checklists, can prevent errors, especially if there are many people involved in a surgery and they are using advanced techniques (Igesund et al., 2021).

To prevent adverse events and errors and reduce morbidity and mortality, the culture of safety and quality is therefore an essential element (Peñataro-Pintado et al., 2020). All surgical nurses have an ethical and moral responsibility to provide patient with healthy, reliable, and safe care. Safe care means that the surgical nurses use evidence-based knowledge in patient care concerning assessment of the patient's health and comorbidity condition relative to the surgical intervention, maintain a hygienic environment to prevent infection and perform nursing procedures to maintain the patients postoperative healing and recovery. Safe care also includes safe handling of surgical equipment (Sandelin et al., 2019).

In Ingvarsdottir & Halldorsdottir's (2017) study surgical nurses expressed that non-technical and technical skills should be nurtured in professional education and continuing education for surgical nurses. They considered proper training and varied experience key elements for patient safety. Non-technical skills, situation awareness, communication, teamwork, task management and handling stress have been identified as important aspects in a surgical nurse performance and this will again increase patient safety (Ingvarsdottir & Halldorsdottir, 2017).

The qualitative focus group study of Hjelen & Sagbakken (2018) the surgical nurses included believe that they lack knowledge of evidence-based practice as well as the concept of using evidence-based practice (Hjelen & Sagbakken, 2018). Practicing evidence-based practice is defined as making professional decisions based on systematically acquired research-based knowledge, experience-based knowledge and the patient's wishes and needs in a given situation (Nortvedt et al., 2012, s. 17).

Non-technical skills, situation awareness, communication, teamwork, task management and handling stress have been identified as important aspects in a surgical nurse performance and this will again increase patient safety (Ingvarsdottir & Halldorsdottir, 2017).

One of the reasons why wide scale standardization hasn't "worked" in healthcare the way it has in other high-risk fields care are the failure to link the lack of standardization with the occurrence of errors and patient harm (Leotsakos et al., 2014). Another reason is that despite a consensus among patient safety experts that it is failures of systems that cause most injuries, a continuing belief by almost all health care consumers and providers that it is individual health care professionals who are the major cause of harm (Leotsakos et al, 2014).

3.0 Method

In this chapter, we will explain the method and design we chose to answer our research question. The chapter also includes the qualitative semi-structured individual interview, data analysis, ethical assessments, and the project's methodological considerations.

3.1 Qualitative method and design

The choice of method is based on how we can best provide an answer to the project's research question (Malterud, 2017, s. 30). In our master's project, we wanted to explore surgical nurses' experiences and reflections around the use of a standardized set-up of the Mayo stand and therefore a qualitative approach is appropriate.

Qualitative method focuses on interpretations, descriptions and analysis of phenomena based on human experiences (Malterud, 2017, s. 30). A qualitative design was chosen, using interviews as a method to address our research question because these approaches are suitable for developing new descriptions and illuminating people's experiences, thoughts and attitudes (Malterud, 2017, s. 31).

A hermeneutic and inductive approach to the analysis was chosen. We have sought to interpret parts of the transcripts after the interviews, that is the meaningful units, and then see them as a new whole. In the literature this is described as the shift between parts and whole for the hermeneutic circle (Kvale & Brinkmann, 2015, s. 237).

As we are novices to the qualitative analysis, we chose to follow Malterud's strategy called Systematic text condensation. Systematic text condensation is inspired by phenomenology but is not a phenomenological method of analysis. The method is developed to carry out the analysis process in a systematic way without prerequisites related to philosophical roots (Malterud, 2012b; 2017, s. 115-116).

3.2 The qualitative semi-structured individual interview

Qualitative interviews are increasingly used to gain knowledge of people's experiences (Kvale & Brinkmann, 2015, s. 29; Malterud, 2017, s. 69). We conducted semi-structured individual

interviews with 12 participants. The interviews utilized an interview guide, but with the opportunity to ask follow-up questions and dialogs (Malterud, 2017, s. 133-135). Conversations and open, dialogue-based approaches are important for the development of qualitative health professional knowledge (Wifstad, 2018, s. 125-126). We used a semi-structured interview guide to maintain focus without structuring the conversation too much. We prepared the interview guide based on knowledge we acquired through research literature and theory, as well as our experiences from practice. The interview guide consisted of questions we believed would help us gain responses that would answer and illuminate the research question (Malterud, 2017, s. 133-134). We amended the interview guide slightly along the way as we learned more about the interview process and reassessed the questions before each interview to fit each participant's experience.

Prior to the actual interviews, we conducted a pilot interview with a fellow student. The purpose was to practice the interview situation to be as well prepared as possible. We received some useful feedback, and it gave us the opportunity to improve the interview guide, test the recording equipment and increase self-confidence around the interview situation. The sample interview was not included in the analysis of the findings.

3.2.1 Sampling and inclusion criteria

Surgical nurses with experience with both standardization and non-standardization, but also surgical nurses who only had experience without standardization, as well as some who only had experience with using a standardized set-up of the Mayo stand during emergency Cesarean section were sought for inclusion.

Furthermore, participants were eligible for inclusion if they had at least two years' experience from working as surgical nurses in an operating theatre. These are considered as experienced surgical nurses (Koh et al., 2014). We believed these professional surgical nurses were in a position where they could reflect on the advantages and disadvantages and assess what provides the safest practice. This was a purposive sample, which means that the individuals included had the best possible potential to shed light on the problem. We discussed how many interviews we should conduct with our supervisors and found that ten to twelve was a suitable amount for our project. As we conducted the last couple of interviews, we felt we reached saturation. The last interviews did not bring much new knowledge but emphasized the existing knowledge by new examples from the field. The saturation concept

presupposes a step-by-step procedure in which the scope of empirical data is assessed continuously. Saturation is achieved when new data no longer adds new knowledge (Malterud, 2017, s. 64-66). Therefore, we were satisfied with our pre-determined quantity.

3.2.2 Recruitment

We contacted the department manager at the relevant hospitals by e-mail. They provided us with a contact person who helped us to get contact information of surgical nurses among their employees who matched our criteria.

Our twelve participants are from five different hospitals in Norway. Of these five hospitals two are University hospitals, two regional hospitals and one local hospital.

3.2.3 Conducting the interviews

All three researchers conducted four interviews each and transcribed their own audio-recorded interviews. This mainly to make the interview situation more relaxed for the participants, and so that it would be easier to transcribe the interviews we conducted and to increase the possibility of discovering weakness in the material (Malterud, 2017, s. 77-80).

The interviews were conducted in Norwegian, and we tried our best to preserve the meaning of the content. Interviews were transcribed immediately after they were conducted before we conducted further interviews. Through the interviews and transcription, we gained some new insights and could refine the approach for the following interviews. By understanding the parts of the interview, we gained a new understanding of the whole as described in the hermeneutic circle (Thomassen, 2006, s. 91).

We aimed to perform all the interviews in person at the participants' hospital or where they preferred to be interviewed, but this turned out to be difficult because of the Covid-19 pandemic. Three interviews were therefore conducted on Zoom, following UiAs precautions. Eight interviews were conducted in-person at the participants hospital, during work hours and one interview was conducted outside working hours at the local University.

3.2.4 The role of the researcher

All three researchers are surgical nurse students and our only experience with the set-up of the Mayo stand, is through literature and practice. Our knowledge gives us greater understanding of the field but being students also gives us a greater challenge to put our preconceptions aside. All research requires reflexivity, which means that we are aware of our own preconceptions, values, attitudes, role, and responsibilities (Malterud, 2017, s. 44-46; Polit & Beck, 2014, s. 75). We tried to put our preconceptions aside when conducting the interviews, when analyzing data and interpreting the findings of the interviews. We are aware that how we led the conversations and interpreted depends on who we are, our prejudices, background, experiences, and knowledge (Malterud, 2017, s. 44-46). We were conscious of our own attitudes and focused on obtaining the participants experiences about topics as well as we emphasized that there are no right or wrong answers or opinions.

As beginners to the field of research we tried to be open to dilemmas and conflicts that could arise during the research process. Ethical principles were followed during the process such as informed consent, confidentiality and we tried to be open and accommodate our participants (Kvale & Brinkmann, 2015, s. 104-107). We were well prepared and had an open mind with room for doubt and thought and unexpected conclusions. Our intention was to represent the voice of our participants as loyally as possible (Malterud, 2017, s. 41-50).

3.3 Data Analysis

Malterud's Systematic Text Condensation (STC) method was chosen to analyze the data. The method is suggested to be useful for beginners in qualitative research and it is appropriate for analysis of qualitative data such as interview studies (Malterud, 2012b; 2017, s. 97). STC is inspired by Giorgi's psychological phenomenological analysis (Malterud, 2017, s. 115).

STC consists of four steps. The first involves gaining a "total impression – from chaos to themes". The second step involves "identifying and sorting meaning units – from themes to codes". The third step is, "condensation - from code to meaning" and the final step includes "synthesizing – from condensation to descriptions and concepts" (Malterud, 2012b). This is an inductive way to understand a phenomenon and gain new insight to develop new theory. How we approached these four steps is outlined in the following sections.

3.3.1 Total impression

According to Malterud's STC, a step-by-step analysis was undertaken where step one and two were conducted before all the interviews were completed. This gave us an opportunity to sharpen the research question and focus during the rest of the interviews (Malterud, 2017, s. 111). The transcribed interviews were read separately, and each researcher wrote down the themes discovered in the text maintaining awareness of preconceptions whilst trying to be open-minded to find what the surgical nurses tried to say about using a standardized set-up and not what we expected them to tell us. Afterwards we discussed the themes between us and agreed on these six preliminary themes: *From beginner to experienced, The restructuring process, Teamwork, When it's urgent, Patient safety and To find your own way.*

3.3.2 Meaning units- from themes to codes

The software NVivo 12 Pro™ was used to organize all the data. The themes were noted down and became our code groups in NVivo. The researchers read through the interviews and identified the meaning units. A meaning unit is a part of the text that can stand alone and still give a meaning. In STC only text that is relevant to the research question is considered as meaning units (Malterud, 2017, s. 101). Meaning units were sorted into code groups. Coding involves a systematic decontextualization to sort many pages with text, but is not the final analysis (Malterud, 2017, s. 104). During this step all the researchers discussed each meaning unit, to avoid losing parts of the text that could be meaningful. This is recommended by Malterud (2017, s. 100). Some of the code groups first presented could possibly have been related to more than one theme. Therefore, as an example the code "Patient safety" was changed to "In control". In the process of sorting the meaning units it was discovered that the code groups could accommodate several phenomena associated with the research question. Therefore, the meaning units were sorted into subgroups under each code group. Steps were taken back and forth in this process and the text was read through repeatedly. Some of the subgroups were found to be fused together and some of the meaning units did fit better in other groups. As an example, "Shift change" and "Replacement" were fused into the subgroup "Replacement". At this point the code groups were developed to four code groups: *From beginner to experienced, Breaking the habit, Cooperation on call and In control.* There were two to five subgroups in each code group.

3.3.3 Condensation

Step three involved systematically considering each subgroup and developing an imaginary quote that reflected all the meaning units in this group. We started by taking a meaning unit from the first subgroup that was especially rich in content and then we supplemented with other meaning units until the total meaning was covered. The first subgroups were condensed by all the authors to ensure the same understanding of the procedure. The rest of the subgroups were condensed individually but controlled by the other authors. Two examples of the development from meaning units to condensate can be found in Appendix 9.

During this step a great amount of text from twelve participants were condensed to a usable amount. At this point the code groups and the meaning units were reassessed once again to distribute the content in the best possible way. In the end an illustrative quote that could reflect the meaning of the imaginary quote was chosen to illustrate our findings. One illustrative quote is presented in each subchapter of the findings.

3.3.4 Synthesizing

In this step the text was recontextualized. The parts sorted and explored in the earlier steps were now explained and summarized in the findings and shared with the readers. With the condensations in mind, an analytical text in each subgroup was made to explain our findings. The illustrative quotes were presented to illustrate this. In the end the code groups and the subgroups were discussed and the result categories and categories developed. (Malterud, 2017, s. 99-111). By understanding the parts of the interview, we gained a new understanding of the whole as described in the hermeneutic circle (Thomassen, 2006, s. 91-92).

Table 3: The development from code groups and subgroups to result categories and subcategories.

Preliminary themes	Code groups	Subgroups	Result categories	Subcategories
From beginner to experienced	From beginner to experienced	<ul style="list-style-type: none"> • Students training • New employees • Long experience • All ways lead to Rome • Similar practice without a standard 	Developing expertise	<ul style="list-style-type: none"> • Lacking experience • Greater experience • Finding their own way • Students in the Operating Room

To find your own way.		This preliminary theme was merged in to the codegroup “from beginner to experienced” in the subgroup “All ways lead to Rome” and further the subcategory “Finding their own way”.		
The restructuring process	Breaking the habit	<ul style="list-style-type: none"> • Evidence based practice • The implementation process • Willing to change 	The challenges of changing practice	<ul style="list-style-type: none"> • Evidence-based practice • Breaking the habit
Teamwork	Cooperation on call	<ul style="list-style-type: none"> • Replacement • The surgeons' instruments • Surgical teamwork • Concurrency conflict 	On call 24/7	<ul style="list-style-type: none"> • Replacing the sterile surgical nurse • Surgical teamwork
Patient safety	In control	<ul style="list-style-type: none"> • When adrenaline kicks in • Overview of the instruments • To think for yourself • Safe habits • To work fast 	In control	<ul style="list-style-type: none"> • When adrenalin kicks in • Controlling the instruments • To think for yourself • In case of emergency
When it's urgent		This preliminary was merged in to the codegroup “In control” in the subgroup “to work fast” and further the subcategory “In case of emergency”.		

3.4 Ethical assessments

3.4.1 Applications and approvals

The project application was sent to Norwegian Center for Research Data (NSD) privacy services early in the process, in September 2021. After receiving an approval from NSD, an application was sent to the Faculty’s Ethics Committee (FEK). FEK did not propose forwarding to the Regional Ethics Committee (REK), so this was not necessary. Applications were also sent to the Hospitals Data Protection Office for permission to carry out the project. All approvals were in place before data collection commenced in December 2021 (UiA, 2020).

3.4.2 Informed consent

Written information about the project was sent by email, first to our contact person, the head of the surgical department. They provided contact information for those they believed had the preferred experience. Later, these potential participants were contacted by email, with information about the project and were asked to participate in an interview. We also emphasized that the participants could withdraw from our project at any time, without any negative consequences. We informed the participants in writing and orally. Prior to the interviews, written consent of the participants was collected (Appendix 7).

3.4.3 Confidentiality

After interviewing, all data material must be obtained and stored securely (Malterud, 2017, s. 82). To secure confidentiality, audio recordings without internet connection were used. Dictaphones were kept inaccessible to anyone other than the researchers, in a locked cabinet. We transcribed the interviews continuously. The interviews were conducted and transcribed by the same researcher. All documents and files that contained personal information were saved on the locked OneDrive of UiA and all audio files were deleted after finishing the transcription (Universitetet i Agder, 2018).

The participants decided if they wanted to attend the interviews in their own free time or at their workplace. In this way, they could decide if they wanted to tell their supervisor about their participation or keep it confidential.

For privacy reasons, participants were given a pseudonym. We made it our responsibility to make sure that the participants did not feel pressured to say more than they wanted (Malterud, 2012a). We consider our research low-risk, and the main burden to participants was to spend time planning and conducting the interviews. The processing of personal data in the project was in accordance with the privacy legislation and was carried out in accordance with what is documented in our notification form to NSD.

3.5 Methodological considerations

In qualitative research, the terms used for quality criteria are being debated. We chose to use the terms proposed by Lincoln and Guba (1985) which are often regarded as the “gold

standard” for qualitative research. They suggest credibility, dependability, transferability, and confirmation to develop trustworthiness (Polit & Beck, 2018, s. 295-296).

3.5.1 Credibility

Credibility is a crucial criterion in qualitative research and is about conducting the study in a way that ensures believability of the findings. (Polit & Beck, 2018, s. 296). When qualitative data is analyzed, it is often possible to interpret the data in different ways. The analysis can be affected by the method of analyses used, the researcher's preconception and the question you ask (Larun, 2010). Therefore, to demonstrate credibility, it was important to explain the choices we made along the way and describe the analysis step by step so the reader can understand the findings (Polit & Beck, 2018, s. 296).

To ensure credibility, all three researchers were involved in the entire analysis process, ensuring that the data from our participant’s experiences and descriptions were put into a system. First, we selected the most suitable meaning units, taking care that they were not too broad and not too narrow, then we coded them and eventually put them into subcategories (Graneheim & Lundman, 2004). We reflected both individually and together to ensure that all data was covered, and that the main findings were uncovered in the end. We worked carefully with the preparation of the interviews, the interviews themselves and the implementation of the analysis. To ensure that our findings were correct, relevant, and trustworthy, we took steps back and forth and evaluated our steps repeatedly to ensure that our findings are correct and relevant. To ensure credibility, we included a wide range of surgical nurses from five different hospitals with various experience, both with and without using a standardization of the set-up for the Mayo stand (Graneheim & Lundman, 2004).

3.5.2 Dependability

Dependability refers to the stability (reliability) of data over time and conditions. If the study findings would be repeated if the inquiry was replicated with the same or similar participants in the same or similar context, dependability is achieved. Credibility cannot be attained in the absence of dependability (Polit & Beck, 2018, s. 296). It is important to keep in mind that any exchange of knowledge represents opportunities for misunderstandings (Malterud, 2017, s. 193). Therefore, to ensure dependability, and credibility, all three of us have been involved in all steps of the interpretation process and the whole thesis. This may have prevented

misunderstandings and provided more objectivity. All three of us reflected together and individually on the code groups and subcodes and further on the result categories and subcategories and how well they covered the data, to exclude bias. We also sought confirmation and guidance from our two experienced supervisors, as we lack experience in the field of research.

3.5.3 Transferability

Transferability is about the extent to which qualitative findings can be transferred and used in other settings or groups (Polit & Beck, 2018, s. 296). Knowledge is power, and should be shared with others (Malterud, 2017, s. 18) We ended up with many perspectives from surgical nurses with varied experiences. Some participants could refer to experience from both Norway and abroad, which can suggest increased transferability.

We experienced that we achieved saturation at the end of our data collection. Therefore, we believe that our findings can represent advantages and disadvantages of the set-up of the Mayo stand for emergency Cesarean sections in other surgical departments as well. We believe some of the findings can be transferred to other surgeries, elective Cesarean, and some more prolonged surgeries and some of the findings can be transferred to other emergency surgeries. This because many of our participants also talked about these types of surgeries, and not only focused on emergency Cesarean section during our interviews.

According to Graneheim & Lundman (2004), we as authors can suggest transferability but finally it is the reader who judges the transferability. We described the entire process and sought to present our findings in a clear manner using citations demonstrating the meaning of content so that the reader can judge if the findings are transferable to another context.

3.5.4 Confirmability

Confirmability is about being objective and that the findings reflect the participants' voice and not the researcher's biases (Polit & Beck, 2018, s. 296). We reflected on our preconceptions as inexperienced surgical nursing students through the whole work with this Master thesis. We focused on remaining open and objective when reading the transcript of the interviews. We have critically evaluated and discussed each other's interpretations so that our findings were a result of the participants' expressions and opinions and not our own preconceptions.

4.0 Findings

We examined the experience of our included participants. Six participants had experience from both with and without using a standardized set-up. Two participants had only experience using a standardized set-up and four had only experience without using a standardized set-up. Two of the participants were male and ten of them female. The participants had experience from three different countries and their seniority as surgical nurses ranged from 2 to 38 years.

Table 4: Our findings with four results categories and twelve subcategories.

Result categories	Subcategories
Developing expertise	<ul style="list-style-type: none">• Lacking experience• Greater experience• Finding their own way• Students in the Operating Room
The challenges of changing practice	<ul style="list-style-type: none">• Evidence-based practice• Breaking the habit
On call 24/7	<ul style="list-style-type: none">• Replacing the sterile surgical nurse• Surgical teamwork
In control	<ul style="list-style-type: none">• When adrenalin kicks in• Controlling the instruments• To think for yourself• In case of emergency

4.1 Developing expertise

Through this thesis we have come to understand that experience is important when it comes to planning and setting up the Mayo stand.

We will now present the following subcategories: Lacking experience, Greater experience, Finding their own way and Students in operation room.

4.1.1 Lacking experience

“It is not so easy to know when you are new. It is a novice phase in a way, and it is difficult to know exactly what instruments to set up at the start and to make your own decisions. You just must trust what your supervisor has taught you and follow it. And then it comes a little more gradually, the knowledge of what is okay to use on your Mayo stand or not” (Participant 1).

Our participants expressed that it can be challenging to plan the set-up of the Mayo stand when experience is lacking. They emphasized the importance of feeling safe and claimed that the more insecure the surgical nurse is, the more security is provided by using a standardized set-up. They expressed that being confident in the situation will make them able to stay focused on the surgery and be one step ahead, instead of focusing on whether they have all the instruments on the Mayo stand.

Many of our participants commented that in an emergency, such as before and during an emergency Cesarean section, there is no extra time to discuss or dwell on how to set up the Mayo stand. Using a standard, the focus can be moved from this uncertainty to the field.

Some of the participants mentioned that when the alarm goes off, the more experienced surgical nurse shouldn't have to use time explaining to the inexperienced surgical nurse how to set-up the Mayo stand, and the inexperienced surgical nurse might not have the time to ask about the best way to set-up the Mayo stand. Here a standard is very useful because the more experienced surgical nurse can concentrate on the patient and the inexperienced surgical nurses can feel they can work independently and safely on their own.

4.1.2 Greater experience

Most of our participants believed that surgical nurses with greater experience are not dependent on using a standardized set-up of the Mayo stand. When they are experienced, the surgical nurses can make their own assessments along the way on what equipment is needed during the surgery. They become more confident in themselves, and they are more capable of seeing other ways of doing things. Several mentioned that many surgical nurses think that their way of setting up the Mayo stand is the best.

They all agreed that the set-up of the Mayo stand for a Cesarean section is not difficult. It was

mentioned that surgical nurses must have high demands of themselves, keep track and learn each step of the surgery. When they learn this, many agreed that they do not need a standardized set-up. In general, our participants thought those with less experience benefit more from a standardized set-up than those with extensive experience.

Some participants expressed that they like being flexible and be able to vary and think for themselves. If they were used to their own way of organizing the instruments, standardization could be a disadvantage:

“...it would be a disadvantage if I had to do things differently than I do now. It would be a disadvantage because you're so incorporated into it now, the way you want it. And the older you get, the more you must have it that way” (Participant 6).

4.1.3 Finding their own way

Several of our participants expressed that by using a standardized set-up of the Mayo stand, they felt that they must work in a way that doesn't suit everyone.

Most of the participants expressed the importance of not making mistakes that can harm the patient, to be unable to hurt themselves and the surgeon relative to the knife blade and other sharp instruments. They all eventually find a way to set up the Mayo stand including these important principles and find a system that works. They expressed that they should be able to work in different ways and that it is all right if it can be professionally justified, and meant they still reach the same goal.

"The disadvantage of a standardized set-up can be that we basically want to do things a little differently. Everyone has their own logical system inside their head that is logical to them. And it's not certain that it is very logical for everyone else” (Participant 2).

One participant said that when they have substitutes, they get many good tips from them. They learn from each other and in that way develop and improve their own set-up.

Many expressed that their colleagues set up the Mayo stand for an emergency Cesarean section almost the same way, even though they do not use a standardized set-up. Those from

other hospitals may work a little differently. Some expressed that in a way, they develop what they perceive to be their own individual standard, although that is not the definition of a standard.

4.1.4 Students in the Operating Room

"I have almost had most of the surgical nurses here as my students and I see that they do exactly the same as me, they still hold on to the same way of organizing the Mayo stand"
(Participant 6).

Many mention that in relation to students, using a standardized set-up can be an advantage. It can make it a lot easier for them to get to the level they should be at if they become familiar with a standard type of set-up. They pointed out that in the beginning, the students have no background for assessing what is necessary to have on the Mayo stand and that they spend a lot of energy wondering what and where to put things. The students follow a recipe, whether it is the supervisor's way or a standard. The participants said that it can be confusing for the students when different supervisors do not agree on how the Mayo stand should be set up. They mentioned that using a standard could illuminate this challenge.

One participant mentioned the positive side of supervisors setting up the Mayo stand differently; that the students learn a lot, especially how everyday life is. The students learn that they must make their own decisions. They also learn that they must plan the set-up in a way they manage to keep track, have control, and are comfortable with it. This participant also pointed out that without a standard, it might take longer before the students become confident in what is the right thing to do, but they also learn that there are several ways to get a good result.

Some participants experienced that the students were very loyal to the standardized set-up because they believed that they saw the purpose of it. They emphasized that if you are taught something from the very beginning, it becomes completely natural. When using a standard, the students learn to set up the Mayo stand quickly, and it becomes easier for them to gain control. Some pointed out that it can make it easier for supervisors when everyone works the same way.

4.2 The challenges of changing practice

We have understood that changing a habit can be challenging, especially for the experienced nurses.

We will now present the subcategories Evidence-based practice and Breaking the habit.

4.2.1 Evidence-based practice

“We are so many, and we must work in teams. Having a fixed recipe helps. It has to do with quality assurance” (Participant 3).

Several participants mentioned that a standardized set-up of the Mayo stand must be evidence-based and professionally justified so they will see the purpose of using it. They must see the purpose, or they will use their own way as they used to. The participants said that it is important to use clear procedures during emergencies because the standard has been evaluated, so it should be the ideal way of working. At the same time, they were concerned that the procedure must be updated regularly as surgeries, techniques, and technology change over time. The procedure must be evaluated and adjusted along the way. If this is not done, someone pointed out that the standardized set-up may be unsuitable, and people could become less loyal to follow it.

Many of the participants were concerned about which standard to choose, and that not everyone necessarily "agrees" with the chosen standard. Those who already worked using a standardization said it was predictable and they are satisfied with it, but they found it challenging when they work at a new hospital without a standard or with a different standard. Some missed a national standard, while others thought that a standard must be made to fit each hospital and disagreed that everyone could use the same standard because the gynecologists use different equipment, and some might work a little differently. One participant mentioned that when surgical nurses work in different countries they use different set-ups, and there is no global standardization.

4.2.2 Breaking the habit

"There is something about when you have worked for a few years and developed your way of doing things. You have your own way that you are familiar with and feel comfortable with,

then it is not so easy to change and do it differently. It feels a bit unnecessary"

(Participant 1).

Some of our participants said that when they do something in a certain way for a long time, they feel comfortable and safe. Any change to this daily routine can make them feel uncertain and unsafe, at least for a while. It takes some time to make new habits. Many of the experienced participants said that the transition to standardization can be frustrating and challenging. Some of the experienced nurses see the benefits of standardization but think the challenge of changing their way of setting up the Mayo stand is too great. They said that they become uncomfortable with the way it should be set up and lose the control that you usually have. This becomes especially evident in acute situations where they must handle stress and action must be taken quickly.

However other participants said that the transition happens quite quickly because there are not so many instruments during emergency Cesarean section and the set-up is similar. They also highlight that people are generally reluctant to do new things at the start. Several participants pointed out that attitude means a lot, and that coercion does not always lead to the best results. Coercion might give more resistance and more negative attitudes towards the standard. Several therefore mentioned the advantage of introducing standardization early on. Many were open to standardization when they introduced new surgery and new techniques.

Most of the participants agree that the implementation should take place in calm circumstances. First during elective Cesarean section and then transfer it to emergency Cesarean section where they also must deal with nervousness. The participants who had a standardized set-up of the Mayo stand said that everyone relates to and is true to the standardization. Everyone has approved of it, and the standardization was strictly adhered to because it could be a disadvantage having a standard if not everyone follows it. They said it usually hangs a picture of the standardization inside the operating room which can be of great help in the beginning if they don't remember the standardized set-up.

4.3 On call 24/7

During an emergency Cesarean section, the surgical team must work together to deliver the baby within minutes. Effective collaboration in the team can be timesaving and lifesaving.

We will now present the subcategories Replacing the surgical nurse and Surgical teamwork.

4.3.1 Replacing the sterile surgical nurse

Most of the participants agreed that there is an advantage to using a standardized set-up of the Mayo stand when the surgical nurse must be replaced during surgery. They explained that it makes it easier to gain control if everyone works the same way. It could be time- saving and it could avoid disturbances for the surgeon and the rest of the team, and it can help to avoid mistakes when there are many people involved.

Most participants with experience with and without a standard set-up had encountered that if a surgery exceeds their shift to the next shift, and they must replace staff, they were more comfortable taking over a standardized Mayo stand than a Mayo stand that is not standardized. They explained that they did not have to use time and energy to reorganize the Mayo stand to their own system. Although, many mentioned that an emergency Cesarean section is usually a short procedure with few instruments and that it is rarely necessary to replace the staff, although it can happen. Some had experienced that staff could get dizzy or for other reasons must leave the operating room during surgery. Additionally, it can be a demanding surgery, not only acute because the child is delivered quickly, but the bleeding afterwards can take a long time if hemostasis becomes difficult. Then it may be necessary to replace the surgical nurse.

“If everyone just places things where they want, it is difficult to take over sometimes. It can be a bit challenging sometimes if it is a bit messy and if the one you are taking over for is very messy” (Participant 11).

4.3.2 Surgical teamwork

“Where there are shifts and a lot of personnel involved, where there are major sources of error. You know it is easier to make mistakes when a lot of people are involved. You may not get the overview completely when it goes fast, it bleeds, there is a lot going on at the same time” (Participant 2).

During the interviews, it was revealed that a standardized set-up can be an advantage because

it provides quality assurance regarding an aspect of care upon which many different people collaborate.

It was highlighted by the participants that when using a standard, the gynecologists know where the equipment is located on the Mayo stand. They expressed that this allows them to find safely and quickly what they need if it is very urgent or if there is only one gynecologist and the surgical nurse must assist. They also said that when concurrency conflicts arise the gynecologists must serve themselves from the Mayo stand because one of the surgical nurses must leave the OR due to another emergency surgery. Many of the surgical nurses pointed out that the risk of concurrency conflict could be an important reason for having a standardized set-up during an emergency Cesarean section. It is especially vulnerable at night shifts where there are only two surgical nurses on call. On some smaller hospitals there are only one surgical nurse at the night shifts.

It was also pointed out that the collaboration between the circulating- and the sterile surgical nurse can be smoother when using a standardized set-up because then they have the same preferences for which equipment to prepare first. One of the surgical nurses also mentioned that the coordinating surgical nurse may identify "errors" more easily when everyone uses the same set-up.

Some of the surgical nurses were concerned that a disadvantage of such standardization could be that the detection of the instruments could not be adapted to the individual's needs and appropriateness. Regardless, they expressed that it is important to be focused and have an ongoing dialogue about different needs and priorities.

4.4 In control

Many of our participants mentioned the importance of being in control of the situation and knowing exactly where instruments are located on the Mayo stand.

We will now present the subcategories When adrenalin kicks in, Controlling the instruments, To think for yourself and In case of emergency.

4.4.1 When adrenalin kicks in

Our participants talked about the emotional aspect that can distract them during an emergency Cesarean section. This is not necessarily related to the nature of the procedure, because they all agreed that the procedure itself is manageable, but it is more related to the acute part that can be challenging to deal with. For instance, in some circumstances it is urgent to save (the baby and the mother's) lives and things can suddenly change. Women may bleed a lot and the surgical nurse may need to take steps to stop the bleeding.

“It is something you must mentally prepare for. It doesn't matter if it's urgent or planned, it doesn't have so much to say. You must be on your toes and have control either way. Because it should basically go just as fast. But you are a bit shaky” (Participant 5).

One of our participants said that she could remember the feeling of stress and adrenaline during her first time alone in the sterile field in an emergency Cesarean section. Several participants mentioned that They are stressed and new, they cannot concentrate on everything at once, and that with a standardized way of setting up the Mayo stand it is at least one less thing to worry about. Many agreed that in the beginning, they stressed about organizing the Mayo stand.

One of the participants focused on feeling safe and well to perform better. They expressed that if they feel insecure, it can make them struggle with the simplest things. It was highlighted that this alone could be an argument towards standardization.

4.4.2 Controlling the instruments

Our participants mentioned that the most important thing during surgery is to keep control of the instruments and get to count before the start of surgery. They also highlighted that it is not always possible if it is very urgent. Then they must keep control on what they bring up to the Mayo stand, and then try to count along the way.

“I think the most important thing is that the sterile surgical nurse has control and focus. If he sets up the equipment he is used to, the way he wants it, then I believe that patient safety is taken care of” (Participant 5).

Some of our participants said that the advantage of using a standardization is that there is never any doubt about where to put the instruments and that it might be easier to count the equipment. Some mentioned patient safety in relation to the fact that it could be easier to avoid mistakes and easier to detect if any of the instruments were missing, for example with the use of even numbers in a standard. Sharp injuries could also be prevented through standardization.

One participant emphasized the importance of not letting standardization give them a false sense of security and replacing a counting control. It was said that they must always know the numbers of the instruments, what they miss and what is handed over to the midwife along with the baby, so therefore early counting control is very important.

The vast majority of those we interviewed mentioned that the instruments used during Cesarean section are not many and that the procedure itself is not complicated. Some (especially the more experienced) therefore thought that a standardizing of procedure was unnecessary to keep control.

4.4.3 To think for yourself

Some of our participants feared that a disadvantage of a standardized set-up could be that you stop thinking for yourself if you work in an automated way. Several emphasized the importance of thinking for themselves, that they need to know that what they are doing is professional and safe for the patient.

“You create your system where you have control over things. And I think it's important that you have...If everything is to be standardized, then I see that it can be a bit negative because then it may be that you stop thinking. And that is something you must not do” (Participant 2).

Some of the participants mentioned that the standard does not necessarily fit as well for those who are left-handed. It was also pointed out that the standard is the same if there are one or two gynecologists present. Some preferred to plan the set-up themselves according to what is appropriate and adapt the set-up to every individual, ergonomic needs, and the situation to keep control of the instruments.

4.4.4 In case of emergency

Most participants agreed that the advantage of using a standardization is that it is a quick and easy way to set-up the Mayo stand because they don't have to spend time thinking about where to place the instruments and gain a quick overview of the equipment. Some claim that they can react faster in case of bleeding or other complications than without a standardization. Others disagreed and didn't think they would be working any faster with a standardization. Some mentioned that a standardization can contribute to surgical nurses working automatically and ergonomically, which can make them act quickly and efficiently, when you do not have time to think.

All participants agreed that it is extra important to avoid misunderstandings when it is urgent. Some said that they thought a standardized set-up could help avoiding misunderstandings with the use of substitutes from other countries because they could just follow the picture and then they knew what they needed.

Several mentioned that security could be provided when the surgeons know where the instruments are located if they must supply themselves from the Mayo stand when it is hectic in the start-up phase. They highlighted that the surgical nurse must always know where the instruments are to perform the procedure quickly and release the child from the womb within a few minutes.

"I have more control over my instruments with a standardized set-up. I'm quicker to react faster to unexpected things that happen, like bleeding" (Participant 4).

Some participants thought that with experience you will feel confident and work fast in an emergency, regardless of whether you use a standard or not. Many agreed that enough training is the key and that you should know by heart where the instruments are to ensure fast and good treatment.

Regardless of whether a Cesarean section is urgent or not, a few suggested that the surgical nurse should always act like it is an emergency by setting up the Mayo-stand as quick as possible and by putting up the things they need first, first. They said that they never know when it suddenly can change, and the situation can become urgent.

5.0 Discussion

5.1 Discussion of the Findings

The purpose of this project was to explore the advantages and disadvantages of using a standardized set-up of the Mayo stand during emergency Cesarean section from the surgical nurse's perspective.

The main findings of the project were that using a standardized set-up of the Mayo stand is perceived by surgical nurses to be an advantage during training of students as well as for inexperienced surgical nurses, in case of changes of the surgical nurse and in relation to concurrency conflicts. The disadvantages brought to light are insecurity during the transition phase for the experienced surgical nurses that have developed their own “best practice” and that the chosen standard does not necessarily fit every individual surgical nurse, ergonomic needs and each situation. During emergencies such as Cesarean sections, our findings reveal that the most important thing is that the surgical nurse feels safe and in control of the situation, regardless of using a standard or not.

In this chapter we will discuss the project's findings and see them in relation to previous theory and research. We will also present our own reflections and thoughts on the topic.

First, we will discuss the result category Developing expertise. Furthermore, we will discuss the other result categories The challenges of changing practice, On call 24/7 and In control.

5.1.1 Developing expertise

Our participants expressed that it was more challenging setting-up the Mayo stand being a novice surgical nurse relative to an experienced surgical nurse. We got the impression that there was a big difference between those who had great experience and those who lack experience. Benner (1995) describes how nurses progress in the development of expertise. The newly qualified nurse gradually acquires expert competence, from being a newly qualified nurse with theoretical knowledge to, through experience in practice, achieving a higher level of competence and then finally becoming an expert (Benner, 1995).

Organizing and setting up the Mayo stand for surgical procedures is a complex task that ensures that instruments, equipment, and medicines are continuously available, controlled and appropriately placed (Igesund & Eide, 2018, s. 375-379). This task, like many others, requires training before getting comfortable. Our participants expressed that in a novice phase it's difficult to know which instruments to set up and to make their own decisions. Igesund (2016) claims that if individuals are taught something from the very beginning, then it becomes completely natural.

Our participants said that the advantages of standardization could be that the inexperienced surgical nurses could work more independently and safely, and at the same time have focus on the surgery instead of the set-up. Our participants agreed that the more experience you gain, the easier it is to organize the Mayo stand. They also expressed that with experience confidence is gained and they are more able to think and evaluate different situations. In Ingvarsdottir & Halldorsdottir's (2017) phenomenological study surgical nurses expressed that nontechnical and technical skills should be nurtured in professional education and continuing education for surgical nurses. Their study emphasized that experienced surgical nurses are in a key position to identify threats to patient safety and should be empowered to enhance patient safety in the operating room. The surgical nurses included considered proper training and varied experience key elements for patient safety (Ingvarsdottir & Halldorsdottir, 2017).

Our participants expressed the belief that the instruments and set-up for a Cesarean section are not especially challenging. Although, it is expected that inexperienced surgical nurses should be familiar with the procedure and each step of the surgery. Koh et al.'s (2014) observational study compared the task management of unexperienced and experienced surgical nurses during Cesarean section, finding that the novice surgical nurses showed less ability to anticipate the surgeons' needs. It took them longer to hand over instruments and they made many more mistakes when it came to unsuccessful anticipation related to instruments. The experienced nurses performed better than novice nurses in all aspects of task management (Koh et al., 2014). This suggests to us that novice nurses do not only have a feeling of underachieving, they are underachieving compared to experienced surgical nurses. In the multi-centered study of Glaser et.al. (2022) the surgical nurses participating agreed that a standardized set-up could help the inexperienced surgical nurses in the operating room to familiarize themselves more quickly. Our participants agreed that the more insecure they are,

the more secure it is to use a standardized set-up of the Mayo stand. Koh et al.'s (2014) mentioned that the novice nurse has a limited capacity for all simultaneous tasks in the operating room because they are new to the field. Some of our participants emphasized that a standardized set-up would give them one less thing to worry about. As novice surgical nurses ourselves, we can relate to the feeling of having limited capacity. We imagine that having one less thing to worry about would give us more capacity to focus on other tasks.

A scoping review from Igesund et al.'s (2021) says that for students and inexperienced surgical nurses, available guidelines, standards, or professional procedures will provide important decision support. Some of our participants mentioned that it could be a good idea to implement a standard only for the students and in that way fade out the employees who prefer a non-standardized set-up. Most of our participants discussed students and standardization. They expressed that they understand it can be confusing for students when their supervisors set up the Mayo stand differently. They seemed to understand and accept that students spend a long time finding their own way because supervisors plan and set up the Mayo stand differently. Our participants said that it probably takes longer before the students become confident with this task without a standard set-up, but they also learn that there are several ways to get a good result. According to Igesund's (2016) professional development project students pointed out that supervisors set up the Mayo stand differently, and they demanded a standard for this task. If the supervisors have different systems for setting up and organizing the Mayo stand, it can prevent the students from receiving mass training and mastering it. Igesund's (2016) project shows that students are looking for a "recipe" they can incorporate, which facilitates better learning. Supervisors need an overview and control if they must take over the assistance while teaching. Students are therefore often asked to set up the Mayo stand using the supervisor's system (Igesund, 2016).

Experienced surgical nurses know that the set-up of the Mayo stand must be adapted to suit each patient and situation and that predictable and unpredictable changes along the way require continuous reorganization of the instruments (Igesund, 2021). Our participants mentioned that experienced surgical nurses often wish to do things in their own way, rather than following a standard. Sometimes people prefer different routes to reach the same goal. Some of our participants emphasized the importance of having a system that works for you. Being flexible and making their own choices were important to them. Igesund (2021) suggests that this can result in different individual systems leading to an undesirable variation in

patient treatment and quality. Some are concerned that this could be a threat to patient safety (Leotsakos et al., 2014). However, Skjold-Ødegaard & Søreide (2020) claim that variation in surgical procedures is not a bad thing but patient outcomes may be unacceptably heterogeneous, especially if delivered beyond the intended use. Opponents to standardization consider it the opposite of individualized and patient-centered care and a one-size-fits all, narrow minded attitude (Skjold-Ødegaard & Søreide, 2020).

Some participants meant it was better without a standardization, among other things because they learned a lot from each other and constantly developed their own standard. They mentioned that if they see colleagues doing something clever, they can embrace that idea. On the other hand, the literature states that a standardization does allow health care workers to learn from each other's experiences and problem solving more easily (Leotsakos et al, 2014).

To us, it seems that nurses can learn from each other, and from experience, regardless of whether they use a standard or not, but in different ways. If each individual surgical nurse must develop a best practice for setting up the Mayo stand, this entails a great deal of responsibility. This requires competence at a high level (Igesund, et al 2021). Our findings indicate that a standardization could be of help and support if you are relatively new and lack some of this high-level competence.

5.1.2 The challenges of changing practice

The surgical nurses using a standardized set-up of the Mayo stand for Cesarean section appeared to be satisfied with the standard and followed it strictly. They saw the purpose of it and meant that the standardization increases patient safety when performing an emergency Cesarean section. This is about surgical nurses providing individual and professional nursing based on evidence-based practice and maintain quality and patient safety (NSFLOS, 2015). One of the reasons why standardization hasn't worked in health care is the failure to link the lack of standardization with the occurrence of errors or patient harm (Leotsakos et al., 2014).

Some participants highlighted that if a standardized set-up was proven better than a non-standardized set-up, they would accept it and go through the uncomfortable process of changing their own preferences and measures to ensure good treatment. But until that day they couldn't see that the advantages could compensate for the disadvantages. Glaser et al. (2022) showed that a vast majority of the 15 surgical nurses included said they would support

a written down standardized set-up of instrument tables for each surgery type, even though 93.3% stated that they set up the table in the way they personally consider ideal.

Many of our participants made it clear that a procedure for emergency situations was important, and some also highlighted that a standardization for emergencies such as Cesarean section was wise. Written procedures and standardization for organizing and set-ups of the Mayo stand are of limited use in Norway (Igesund et al. 2019). It may have to do with the fact that no Norwegian evidence-based, national guidelines or standards for the set-up and organization of the Mayo stand are identified (Igesund et al., 2021). Research agrees that the use of evidence-based recommendations, standardizing procedures and techniques contribute to safer processes (Igesund et al., 2021; Ingvarsdottir & Halldorsdottir, 2017; Leotsakos et al., 2014). Standardization reduces variation, improves efficiency, and minimizes errors (Leotsakos et al., 2014). Some of our participants expressed that it should be the ideal way of working if the standardization has been evaluated and updated.

Our participants who didn't work with a standardization expressed that the standardized set-up of the Mayo stand must be evidence-based so that they would see the purpose of using it. They expressed the belief that the procedure must also be evaluated and updated. This suggests to us that surgical nurses are concerned with using evidence-based practice in the work context opposed to what emerged in the focus group study of Hjelen & Sagbakken (2018) and the thesis of Hjelen (2013) where they uncovered surgical nurses have little regard for evidence-based knowledge through changes in practice and surgical nurses relate primarily to experience-based knowledge. However, findings from Glaser et al.'s (2022) study led to the assumption that the set-up of the Mayo stand is more influenced by acquired habits that develop within teams working in the same environment and less by written and known guidelines. Many of the experienced surgical nurses were not interested in changing their habits. Most of our participants agreed that the transition would be uncomfortable in the beginning, but some said that the transition happens quite quickly because there are not many instruments during an emergency Cesarean section. Some highlighted that people are generally reluctant to changes in the beginning. The literature confirms this. Change is often greeted with resistance (Leotsakos et al., 2014). Igesund et al. (2021) wrote that introducing a standardized set-up that may break an established routine can be stupefying for the experienced surgical nurse.

Disagreements regarding which standard should be implemented arose. Some of our participants mentioned they missed a national standard, and one talked about challenges without a global standardization. However, according to the study by Leotsakos et al. (2014) global differences in operating procedures make it difficult to standardize protocols. There is a concern that if systems become too standardized, behavior becomes automatic and can offer false reassurance that risks are being minimized (Leotsakos et al., 2014).

Standardization has become a prominent tool for achieving patient safety. The implementation of standardizing procedures creates the dilemma of maintaining individual autonomy versus doing what is best for the department and the team. The greatest threat to successful implementation and maintenance of clinical standard work is the elimination of autonomy (Avansino et al., 2013; Ernst & Jensen Schleiter, 2018; Leotsakos et al., 2014). However, opposition to the use of standards in the operating room may seem incomprehensible when research agrees that standardization contributes to increasing safety in the operating room (Igesund et al., 2021).

5.1.3 On call 24/7

Our participants emphasized the importance of good teamwork during an emergency Cesarean section and that the surgical nurses' set-ups and instrument management affects the teamwork with the gynecologist. Non-technical skills, communication and teamwork are vital aspects of a surgical nurse's performance, and influences the patient's safety (Ingvarsdottir & Halldorsdottir, 2017). Avoiding disruptions in the surgical flow, related to teamwork problems, equipment factors, extraneous distractions, training-related issues, and resource accessibility, contributes to prevention of surgical errors (Wiegermann et al., 2007). In the surgical department the surgical nurses must cooperate with many professions to ensure professionally accepted treatment (NSFLOS, 2015). 7 days a week and 24 hours a day the surgical team must be ready to act when the alarm goes off and there are only a few minutes until the expectant mother enters the operating room.

One of our participants who worked at a hospital with a standardized set-up of the Mayo stand for Cesarean section pointed out that one of the main reasons for using this standard was to ensure patient safety and good cooperation with the gynecologists during surgencies and concurrency conflicts. Many agreed on this being an advantage. At a smaller, local hospital

the surgical nurses we interviewed didn't see the same need. They explained they were a small group of people working together, they knew the gynecologists well and were familiar with their preferences. This is confirmed by studies showing that team members knowing each other has a positive impact on teamwork and probably on patient safety (Gillespie et al., 2012; Kaldheim & Slettebø, 2016; Kang et al., 2015; Oksavik et al., 2021).

Working around the clock, it can be necessary to change team members during surgeries. We discovered positive attitudes towards a standardization related to the change of the sterile nurse. A standardization made them find the instruments where they expected them to be and gained the control more easily without disturbances/distraction.

Surgical nurses not using a standard confirmed what Igesund et al. (2021) wrote about using time reorganizing the Mayo stand into their own system. This requires time and attention and competes with the sterile assistance associated with the surgery. This could be a great argument pro a standardization when you know that errors often occur in these transitions where two demanding processes distract each other (Igesund et al., 2021). On the other hand, many of our participants said that replacing the sterile nurse is rarely necessary during an emergency Cesarean section because it doesn't last very long. One even emphasized that you never change the sterile nurse during an emergency Cesarean section because it is so important to keep control in the acute situation that the surgical nurse stays until the end, to know that everything is under control. This sounds wise considering that the risks of retained instruments and sponges increase with changes in the surgical team (Simpson, 2007b). Knowing other risk factors like high BMI and emergency surgery also is present (Simpson, 2007b), risk factors should be avoided if possible. Others said that it could occur that they had to change the sterile nurse if someone became dizzy or for other reasons. In case of complications, like post-partum haemorrhage or a hysterectomy, the surgery might take longer than expected and a change in team members may be required (Simpson, 2007b).

If changing the sterile nurse is necessary, almost all our participants mentioned that a standardized set-up could be an advantage to gain control over the instruments quicker than without a standard to ensure continuity in the surgery. This is confirmed by Cromd (2019, s. 194) when she claims that "in most operation rooms the instruments are set up in a planned, standardized, organized and functional manner to maintain continuity when the original scrub person is replaced by another". An exploratory cross-sectional survey of Igesund et al. (2019)

identified that setting up the Mayo stand in a standardized manner is not the norm in Norway. They found that the four hospitals currently using a procedure for setting up instruments are bigger hospitals with national and multi-regional services. While working on our thesis we wonder whether it could be a greater need for standardized procedures on set-ups at bigger hospitals with many employees, on hospitals with a greater use of substitutes and where there is a greater risk for concurrency conflicts. Igesund et al. (2019) recommends that each facility should ensure standardization of set-ups regardless.

The literature suggests that a common system that everyone knows is a prerequisite for other team members to detect errors in complex situations like surgery (Igesund et al., 2021; Wahr, 2020). It can be easier for colleagues to capture if something deviates from the standard and that can potentially increase the risk of adverse events (Wahr, 2020). One of our participants also mentioned this potential advantage of a standard. Another surgical nurse highlighted the fact that during an emergency Cesarean section the circulating nurse has many simultaneous tasks and that the sterile surgical nurse can't rely on that the circulating nurse will detect potential errors on the Mayo stand at the same time.

5.1.4 In control

This result category was presented by split opinions among our participants. It varied if they believed a standard was the best prerequisite to be in control or not. Our participants said that it is important to keep control of the instruments and your emotions during an emergency. Our participants talked about the stress during emergency Cesarean section and how the acute part could be challenging to deal with. Stress can affect the performance of the team and lead to unexpected events. Handling stress is an important aspect of the surgical nurse's performance and will increase patient safety (Ingvarsdottir & Halldorsdottir, 2017).

Our impression after conducting the interviews and our practical studies is that an emergency Cesarean section is one of the most urgent procedures a surgical nurse must handle, and 2/3 of all Cesarean sections in Norway are emergency sections (Mascali et al., 2020). Surgical nurses work in a highly technological environment, and acute situations can result in adverse outcomes for the baby, mother or even both (Carzo, 2019).

The surgical nurses in our study felt that they performed better when they felt safe. Our participants said that the advantage of standardization could be that they had more control and know exactly what to do. On the other hand, handling stress could be easier to deal with without a standard for experienced surgical nurses if their own set-up is what makes them safe. Those with greater experience said that in emergency situations they have confidence and experience to work fast and safely, regardless of whether they are using a standard or not. The experienced surgical nurses act automatically there and then, and they do not always reflect on how and why they act. This is some of the tacit knowledge they possess. (Dåvøy, 2018, s. 159). Our participants highlighted that a standardized set-up might help the less experienced surgical nurses to act automatically in a well-considered way which ensures ergonomics and efficiency. Another important perspective is that adherence to fixed procedures will be inhibiting for the professionally experienced nurse, and the treatment will not always end up being the best (Dåvøy, 2018, s. 157).

All participants emphasized that the surgical nurse must keep track of the instruments used during the surgery. Then the instruments must be organized so that they are easily accessible, and in a way that the surgical nurse always keeps track (Igesund & Eide, 2018, s. 375). Many of our participants said that a standardized set-up is a quick and easy way to set-up the Mayo stand when it is urgent. Some said that they could react faster in an emergency when using a standardized set-up, while others disagreed and said they work just as fast with their own system. Those who used standardization said it was related to patient safety and that it could be easier to avoid mistakes. Safe care and patient safety include safe handling of surgical equipment, prevention of error and reduction of risk of unnecessary harm (Ingvarsdottir & Halldorsdottir, 2017; Sandelin et al., 2019). Safety is also impacted by the number of instruments on the Mayo stand in risky phases of the surgery and safe placement of sharp instruments that prevent sharp injuries (Igesund & Eide, 2018, s. 377).

Our participants highlighted that most surgical nurses set up the Mayo stand almost identically even without a standardization. This could be interpreted as a standardization is not required to keep control of the instruments, at least not for the experienced surgical nurses. It could also be an argument pro standardization because it would be easy to design a standard that could maintain other advantages and provide safe handling of instruments among the novice surgical nurses. On the other hand, some participants stated that the instruments could vary and that they couldn't imagine a standard that could fit all surgeons at

every hospital in Norway. Literature supports these findings. Skjold-Ødegaard & Søreide (2020) state that clearly the multi-contextual nature of healthcare does not enable standardization in all circumstances because patients show many diversities, as well as healthcare professionals have diverse opinions and perspectives. The standard must be adapted to the situation and not the other way around. (Dåvøy, 2018, s. 158). However, the surgical nurses using a standard said they were strict that no one changed the set-up at all, because then they would lose the advantage related to concurrency conflict.

Using surgical procedures is important in the beginning. But when new knowledge develops, procedures may have to give way to better practice. Surgical nursing should not be random but based on thoughtful and discretionary actions. Good and well thought out procedures must be used with professional judgment. That is, one must always reflect on all actions, and reflect if it is the best solution and why. Professional judgment and knowledge belong together. (Dåvøy, 2018, s. 157, 161). Some of our participants mentioned that surgical nurses must not stop thinking, even though they are using a standard. Ingvarsdottir & Halldorsdottir (2017) pointed out how common sense had to be applied. They emphasized the importance of being able to adjust the procedures according to needs and not be too literal in their usage and interpretation. Although new, less experienced surgical nurses need a completely different follow-up than experienced surgical nurses (Dåvøy, 2018, s. 156). Considering our findings, we realize that it can be an advantage for students and inexperienced surgical nurses to use a standard to keep control of the instruments during a Cesarean section, but it should be done through reflection and professional judgement.

Our participants said that when using a standardization there isn't any doubt about where the instruments are located, and it might be easier to count them. According to the responsibility- and function description of surgical nurses, the surgical nurse must contribute to proper patient treatment and patient safety in relation to having control over instruments and equipment (NSFLOS, 2015). Peñataro-Pintado et al. (2020); Simpson (2007b) state that the risk of retained instruments and sponges increases during emergency surgeries. Sometimes the surgical team must proceed quickly without a complete count of the instruments because it is so urgent (Simpson, 2007b). Every effort should be made for a correct counting of instruments and sponges before starting the surgery because this can prevent retained instruments or sponges inside the patient (Ebbecke, 2007; Simpson, 2007b). Some of the more experienced participants said that it's important that the standardized set-up of the Mayo stand

doesn't replace a counting control, because it can give a false sense of security.

Many expressed that they could organize the Mayo stand faster when using a standardized set-up and that the counting of instruments is faster. Igesund & Eide (2018, s. 375-379) emphasize that it is important to sort the instruments in a logical and appropriate way so that they can be located quickly when needed. We wonder if during an emergency Cesarean section this time saved could potentially decrease the risk for retained instruments in the patient when using a standardized set-up for the Mayo stand if it gives extra time to complete the count.

5.2 Strengths and limitations

No potential conflicts of interest were reported by the authors. As part of the study methodology, steps were taken to eliminate potential author bias. All three authors read all twelve interviews and participated in the analysis process together. We agreed upon all meaning units, codes, and categories. However, judgement of the similarities within and the difference between categories could provide the opportunity for bias if our assessments of the data were unconsciously affected by our preconceptions (Graneheim & Lundman, 2004).

The findings were translated from Norwegian to English. We did not present our findings and interpretations to our participants. This can be a weakness as they could not give us feedback whether we understood their statements correctly. By omitting participant validation, the participants have not had the opportunity to supplement with reflections after the interviews. However, we think that we have illustrated our findings accurately by including relevant illustrative quotes from our transcribed text for the categories (Malterud, 2017, s. 193-194).

To confirm our findings, we read through the original transcripts. We have challenged the findings and quality assured that they can be returned to the raw data and looked for contradictions. Furthermore, we linked the collected empirical data to the theoretical foundation. To ensure credibility, we have also searched for new literature as well as looked for contradictions. Some of our findings were consistent with previous research literature.

The person who participates in a conversation often remembers moments that can clarify ambiguities, or that are important in the text. This can play a big role when the oral conversation is translated into text. When the researchers do their own transcription work, the

possibility of discovering weaknesses in the material increases (Malterud, 2017, s. 79-81). We believe this strengthens the credibility of the analysis material. Therefore, each of us transcribed the interviews we conducted ourselves.

We recognized the importance of using the same interview guide for all participants. On the other hand, we discovered that interviewing is an evolving process where we as interviewers gained new insight into the theme that may have subsequently influenced our follow-up questions. The fact that we are inexperienced to the art of interviewing, may have been a limitation. Aristoteles noted that there are different forms of knowledge that are learned in different ways. For example, one becomes a good builder by building a house. The skills, knowledge and personal judgment required to conduct a high-quality qualitative interview require training (Kvale & Brinkmann, 2015, s. 87-91). Prior to the actual interviews, we therefore conducted a trial interview with a fellow student. The trial interview was instructive, and we got to practice how to ask follow-up questions. We got some useful feedback on the interview guide and the interview situation. The purpose of the trial interview was to practice the interview situation to be as well prepared as possible. After receiving feedback, we slightly altered and specified some of the questions. Our fellow student provided constructive criticism and confirmation that the questions were relevant (Malterud, 2017, s. 87-88, 170-171).

We have been true to our choice of systematic text condensation as an analysis method and followed it carefully step-by-step. STC analysis requires that the researchers identify their own preconceptions to not let them affect the analysis process. This presupposes “bracketing” (Malterud, 2012b; 2017, s. 116). As surgical nurse students, we were aware of our preconceptions. But in the aspect of interpretation, we are new to the role as researchers. The interpretation could be influenced by our personal history, education, and experience as we collected data and performed the analysis. Some of our preconceptions may be unconscious and this may have affected the way we have collected, read, and interpreted our data, which might have been a weakness if we haven’t been sufficiently objective.

This is a qualitative study of limited size as we only have twelve participants, so findings cannot be generalized. On the other hand, we reached the saturation concept and had a rich variation of participants in different ages from five different hospitals and believe that our findings can be transferred to similar settings. We included some surgical nurses who lack

experience from using both standardized and non-standardized set-up of the Mayo stand. We wonder whether they could reflect on both sides of the matter, or if their preconceptions affected their answers more than an actual experience of the phenomenon.

Three of our interviews had to be conducted through Zoom™ which can be challenging if technical problems or other disruptions occur (Kvale & Brinkmann, 2015, s. 206). However, we had no technical problems, and our impression is that it worked well.

The method chosen is well suited for our theme and research question as qualitative methods and interviews can open for more research on this area. The knowledge that exists about this topic is not great. We came up with some new descriptions based on the surgical nurses' own experiences. This strengthens the credibility of the study.

6.0 Conclusion

Our project has shed light on the advantages and disadvantages of using a standardized set-up of the Mayo stand during emergency Cesarean section. Our participants agreed that the most important thing for them is to be in control of the instruments at any time during surgery.

Our participants were concerned with patient safety and what is best for the patient during a Cesarean section. That is, for the team to function optimally and feel safe with their tasks.

According to many of our participants using a standardized set-up of the Mayo stand can be an advantage during the training of students because then they receive mass training and might master the set-up at an earlier stage. The disadvantages brought to light were that during the transition phase a standardized set-up can lead to insecurity for the experienced surgical nurses that are used to setting up the Mayo stand in their own way. This could potentially be extra challenging in emergency situations.

Based up on our findings, concurrency conflicts are an important reason to use standardization to provide good cooperation with the gynecologists. This was particularly the case at bigger hospitals with many employees. Other advantages highlighted were the security a standardized set-up could be for the inexperienced surgical nurses, especially during emergency Cesarean section, where you must think and act fast and efficiently despite being inexperienced. Most of the surgical nurses included could see the advantage of using a standardized set-up when changes of the sterile surgical nurse were necessary. Then they could find the instruments where they expected them to be and gain control more easily without distractions. However, this was mostly seen as an argument for more prolonged procedures. The experienced surgical nurses highlighted that they have control even without a standardized set-up because there are not many instruments, and the procedure is considered easy to learn. Also, the procedure does not vary much from one gynecologist to another.

Another disadvantage is that every surgical nurse doesn't necessarily agree with the chosen standard and the standard does not necessarily fit in every situation. It was highlighted that a disadvantage of standardization could be if nurses stop thinking for themselves and if they cannot adapt the set-up and instrumentation to ergonomic needs and different situations. It was also emphasized that a standardized set-up must never replace the vital counting controls.

Through this thesis we got the impression that a standardized set-up is a good way to quality assure something a lot of surgical nurses with different prerequisites shall perform and, in this way, ensure patient safety. Ideally it can also ensure optimal teamwork and help the team members feel safe regardless of experience. But we also got the impression that using a standard does not necessarily give the best outcome in absolutely all situations and can be challenging during the implementation phase.

After writing this thesis, we found many advantages and some disadvantages that are worth considering in our future work environment. Our goal was to highlight both sides.

6.1 Implications of the study

Maintaining patient safety is complex, where a standardization might be a tool to help surgical nurses in their work. The findings in this project can contribute to increased focus on the surgical nurses' challenges and responsibilities related to the set-up of the Mayo stand. The development of the surgical nurse profession is based on the best available knowledge. Unfortunately, there is not much evidence-based research related to the standardization of the set-up of the Mayo stand in surgery. A few hospitals in Norway have implemented a standardized set-up for Cesarean sections. More research on the topic would be of interest and finding out if a standard improves patient safety and efficiency on this task as it has turned out to do in other areas. We hope our findings can be useful when designing the focus of further research.

Based on our findings and theory, a standardized set-up of the Mayo stand could help students and inexperienced surgical nurses work faster and safer. We suggest further research on the implementation process of a standardized set-up of the Mayo stand. Studies could be conducted to show the potential effect of a standardized set-up and compare standardized and non-standardized set-ups. This would be of interest both for Cesarean section and emergency surgeries, as well as prolonged surgeries where changing the sterile surgical nurse is required. It would be of interest to examine the gynecologists' experience of cooperation in the sterile field with focus on concurrency conflicts with and without using a standardized set-up.

At last, we suggest developing a Norwegian guideline regarding how to set-up the Mayo stand for Cesarean section. This guideline could be a decision support for the surgical nurses and potentially a starting point for developing standards for setting up the Mayo stands in Norwegian hospitals.

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Appendix 1: Distribution of responsibilities

We divided the work evenly between the three of us and worked all together on the literature, methods and analysis using the software NVivo™. Our collaboration exceeded all expectations. Even though we all have children that have been in quarantine and/or isolation, we managed to work online using Teams, and worked efficiently.

All three of us contributed equally to this Master thesis. We distributed the interviews between us, conducted four interviews each and transcribed the same interview that we had conducted. Some of the chapters we wrote individually, but we read through each other's work and gave feedback and corrected each other's text. In this way we have all contributed and affected the whole text in this master thesis together.

Appendix 2: Approval FEK



Linn Terese Oa
Ourom

Besøksadresse:
Universitetsveien 25
Kristiansand

Ref: [object Object]

Tidspunkt for godkjenning: : 01/11/2021

Søknad om etisk godkjenning av forskningsprosjekt - Hva er fordelene og ulempene med standardisert oppdekking av assistansebordet til akutt keisersnitt?

Vi informerer om at din søknad er ferdig behandlet og godkjent.

Kommentar fra godkjenner:

Hilsen
Forskningsetisk komite
Fakultet for helse - og idrettsvitenskap
Universitetet i Agder

UNIVERSITETET I AGDER
POSTBOKS 422 4604 KRISTIANSAND
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FAKTURAADRESSE:
UNIVERSITETET I AGDER,
FAKTURAMOTTAK
POSTBOKS 383 ALNABRU 0614 OSLO

Appendix 3: Approval NSD

 Skriv ut

NSD sin vurdering

Prosjekttittel

Hva er fordelene og ulempene ved å standardisere assistansebordet ved akutt keisersnitt?

Referansenummer

825484

Registrert

07.09.2021 av Brynhildur Gudmundsdottir - brynhg06@student.uia.no

Behandlingsansvarlig institusjon

Universitetet i Agder / Fakultet for helse- og idrettsvitenskap / Institutt for helse- og sykepleievitenskap

Prosjektansvarlig (vitenskapelig ansatt/veileder eller stipendiat)

Linda Iren Mihaila Hansen, linda.hansen@uia.no, tlf: 98090172

Type prosjekt

Studentprosjekt, masterstudium

Kontaktinformasjon, student

Brynhildur Gudmundsdottir, binna28@hotmail.com, tlf: 97574524

Prosjektperiode

16.08.2021 - 31.12.2022

Status

17.09.2021 - Vurdert

Vurdering (1)**17.09.2021 - Vurdert**

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet med vedlegg den 17.09.2021, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

DEL PROSJEKTET MED PROSJEKTANSVARLIG

For studenter er det obligatorisk å dele prosjektet med prosjektansvarlig (veileder). Del ved å trykke på knappen «Del prosjekt» i menylinjen øverst i meldeskjemaet. Prosjektansvarlig bes akseptere invitasjonen innen en uke. Om invitasjonen utløper, må han/hun inviteres på nytt.

TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 31.12.2022.

LOVLIG GRUNNLAG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse som kan dokumenteres, og som den registrerte kan trekke tilbake.

Lovlig grunnlag for behandlingen vil dermed være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke behandles til nye, uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), og dataportabilitet (art. 20).

NSD vurderer at informasjonen om behandlingen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og/eller rådføre dere med behandlingsansvarlig institusjon.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde: <https://www.nsd.no/personverntjenester/fylle-ut-meldeskjema-for-personopplysninger/melde-endringer-i-meldeskjema>
Du må vente på svar fra NSD før endringen gjennomføres.

OPPFØLGING AV PROSJEKTET

NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.
Lykke til med prosjektet!

Appendix 4: Approval from hospitals data protection office

[REDACTED]	[REDACTED]
------------	------------

PERSONVERNOMBUDETS UTTAELSE

Til: [REDACTED]

Fra: [REDACTED]

Dato: 07.12.2021

Saksnummer: 21/25478

«Fordeler og ulemper ved standardisert oppdekking av assistansebord til akutt keisersnitt?»

Dette er en masteroppgave som vil bli gjennomført av tre masterstudenter i operasjonssykepleie. Vi ønsker å vite mer om erfaringer fra praksis om erfarne operasjonssykepleiere foretrekker en standardisering av assistansebordet til akutt keisersnitt. Vi ønsker å se på ulike erfaringer og synspunkt på hva fordelene og ulempene ved en slik standardisering kan være. Det å dele erfaringer kan gi økt kunnskap og pasientsikkerhet.

Universitetet i Agder, fakultetet for helse- og idrettsvitenskap er ansvarlig for prosjektet. Bodil Ane Helland, Brynhildur Gudmundsdottir, Linn Terese Oa Ourom, masterstudenter i spesialsykepleie med fordypning i operasjon.

Personvernombudet har vurdert det til at den planlagte databehandlingen av personopplysninger tilfredsstiller de krav som stilles i helse- og personvernlovgivningen. Personvernombudet har ingen innvendinger til at den planlagte databehandlingen av personopplysninger kan igangsettes under forutsetning av følgende:

1. Forskningsansvarlig / databehandlingsansvarlig er Universitetet i Agder.
2. Behandling av personopplysningene / helseopplysninger i studien skjer i samsvar med og innenfor det formål som er oppgitt i meldingen.
3. Studien er godkjent av aktuelle avdelingsledere ved [REDACTED]
4. Prosjektet er forelagt NSD.
5. Studien er frivillig og samtykkebasert.
6. Data lagres avidentifisert. Kryssliste som kobler avidentifiserte data med personopplysninger lagres separat og avlåst.
7. Data slettes eller anonymiseres etter prosjektslutt.
8. Dersom formålet, utvalget av inkluderte eller databehandlingen endres må personvernombudet gis forhåndsinformasjon om dette.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Appendix 5: Approval from hospitals data protection office

Foretaksnivå			Skjema
Datainnsamling - Søknadsskjema etterutdanning, videreutdanning, masterstudenter eller annet			Side 1 av 3
Dokument ID: 1.1.6.3-6	Godkjent dato: 11.11.2019	Gyldig til: 11.11.2021	Revisjon: 5.01

Foretaksnivå\Virksomhetsgrunnlag, ledelse, administrasjon\Forskning og fagutvikling\Kompetanseheving

Til Saksbehandler Utvikling og utdanning	
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SØKNAD OM TILLATELSE TIL INNHENTING AV DATA I FORBINDELSE MED ETTERUTDANNING, VIDEREUTDANNING, MASTEROPPGAVER ELLER ANNET.

Det forutsettes at gjeldene lover, forskningsetiske retningslinjer og metoder for datainnsamling følges!

I forbindelse med oppgaveskriving eller artikkelskriving kan det være ønskelig å innhente opplysninger direkte fra ansatte, pasienter eller pårørende. I den anledning søker undertegnede om tillatelse til å gjennomføre datainnsamling.

FYLLES UT AV SØKER

Navn på student/søker	Brynhildur Gudmundsdottir, Bodil Ane Helland og Linn Terese Oa Ourom
Arbeidssted/studie	Universitetet i Agder
Datainnsamling i forbindelse med:	Etterutdanning Videreutdanning Master x Annet (Fyll ut annet)

Tema og foreløpig problemformulering på oppgaven min er

Tema	Standardisert oppdekking av instrumenter på assistansebordet på akutt keisersnitt
Problemformulering	Hva er fordeler og ulemper ved standardisert oppdekking av assistansebordet på akutt keisersnitt?
Veileder ved universitetet	Linda Mihaila Hansen og Judy Munday
E-post	linda.hansen@uia.no
Telefon	98090172

Presiseringer i forhold til datainnsamlingen:

Hensikt med datainnsamling	Forbedre operasjonssykepleie med fokus på pasientsikkerhet i forbindelse med oppdekking av assistansebordet til operasjoner
Metode for datainnsamling (intervju, spørreskjema, observasjon, video- eller lydopptak)	Kvalitativt intervju, individuelt. Lydopptak brukes til datainnsamling Hvis det blir nødvendig å bruke zoom e.l. for å gjøre intervjuene over nett, vil det likevel kun bli brukt ekstern lydopptaker for å ta opp intervjuene.
Populasjon/utvalg	<input checked="" type="checkbox"/> [Redacted] <input type="checkbox"/> Pasienter (legg ved nødvendige godkjenninger) <input type="checkbox"/> Pårørende (legg ved nødvendige godkjenninger)
Forskning på	<input checked="" type="checkbox"/> Friske mennesker <input type="checkbox"/> Syke mennesker <input type="checkbox"/> Humant biologisk materiale <input type="checkbox"/> Helseopplysninger
Hvor oppbevares innsamlede data?	Samlede data blir kodet, oppbevares separat på UiA sin plattform (passordbeskyttet) og forskers private PC (passordbeskyttet). Data avidentifiseres og slettes ved prosjektets slutt, senest 31.12.22 <i>Merk at alle personopplysninger forutsettes avidentifisert (kodet). Data og kodelister skal oppbevares separat. Uttreksdata for videre analyse (SPSS, Excel el) skal være avidentifisert/pseudonymisert.</i>
På hvilket format skal innsamlede data lagres?	<input checked="" type="checkbox"/> Elektronisk <input type="checkbox"/> Papir
Utarbeidet av: Arbeidsgruppe	Faqsansvarlig: [Redacted]
	Godkjent av: [Redacted]

Datainnsamling - Søknadsskjema etterutdanning, videreutdanning, masterstudenter eller annet		Side: 2 Av: 3
Dokument-id: I.1.6.3-6	Utarbeidet av: Arbeidsgruppe	Fagansvarlig: [redacted]
	Godkjent dato: 11.11.2019	Godkjent av: [redacted]
		Revisjon: 5.01

Foretaksnivå\Virksomhetsgrunnlag, ledelse, administrasjon\Forskning og fagutvikling\Kompetanseheving

Ved elektronisk lagring skal kun godkjent løsning benyttes:	<input type="checkbox"/> Medinsight (kan inneholde kodeliste) <input type="checkbox"/> eReg (kan inneholde kodeliste) <input type="checkbox"/> Filområde tildelt av saksbehandler <input checked="" type="checkbox"/> Annet sted, oppgis: UiAs OneDrive
Skal data sendes ut av landet?	<input checked="" type="checkbox"/> Nei <input type="checkbox"/> Ja Til hvem/hvor/hvordan:
Hvor/hvordan skal koblingsnøkler/kodelister oppbevares?	<input type="checkbox"/> Medinsight eller eReg (kan inneholde kodeliste) <input checked="" type="checkbox"/> Annet sted. Hvor og hvordan beskyttet: Passordbeskyttet på egen PC (merk: sikret, adskilt fra innsamlede data)
Ønsket antall respondenter ved [redacted]	6-8
Tidspunkt/varighet ved [redacted]	60-90 min per intervju
Enhet/Avdeling (datainnsamling)	[redacted]

Vedlegg (Sett kryss)

Vedlagt	Ikke aktuelt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Kopi av søknad til REK
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Kopi av godkjenning/uttalelse fra REK (både opprinnelig uttalelse og evt senere uttalelser om endringer)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Kopi av godkjenning fra FEK
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Kopi av godkjenning fra NSD
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Kopi av informasjonsskriv til pasient/ansatt, inkl samtykkeskjema godkjent av veileder
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Prosjektskisse
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Taushetserklæring [redacted]
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Databrukerkontrakt [redacted]

Ved ønske om utfyllende informasjon, og ved bekreftelse/ avslag på denne søknaden, vennligst ta kontakt med	Navn Brynhildur Gudmundsdottir	E-post brynhg06@student.uia.no	Telefon 97574524
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Med hilsen

Dato 01.11.21

Signatur

Navn student Brynhildur Gudmundsdottir, Linn Terese Oa Ourom og Bodil Ane Helland	E-post brynhg06@student.uia.no, linnt04@student.uia.no, bodilah@student.uia.no	Telefon 97574524
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Innhenting av data må skje etter retningslinje "Datainnsamling, Etterutdanning, videreutdanning og masterstudenter" i EKWeb.

Godkjenning av innsamling av pasient- og pårørende data

Informasjonssikkerhetsleder og Personvernombud gjennomgår søknaden med tanke på ivaretagelse av informasjonssikkerhet og personvern, og gir sin tilrådning til Forskningssjef.

Dato:	Forskingssjef:
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Godkjenning av tilgang til elektronisk pasientjournal

Omfang av tilganger	Org.enhet i Personalportalen
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Datainnsamling - Søknadsskjema etterutdanning, videreutdanning, masterstudenter eller annet					Side: 3
					Av: 3
Dokument-id: I.1.6.3-6	Utarbeidet av: Arbeidsgruppe	Fagansvarlig: [REDACTED]	Godkjent dato: 11.11.2019	Godkjent av: [REDACTED]	Revisjon: 5.01

Foretaksnivå\Virksomhetsgrunnlag, ledelse, administrasjon\Forskning og fagutvikling\Kompetanseheving

Dato:	Forskningsjef:
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Kryssreferanser

[I.1.6.3-7](#)

Datainnsamling - Etterutdanning, videreutdanning og masterstudenter

Appendix 6: Interview guide

Fase 1: Rammesetting

1. Løst prat (5 min)

Takk for at du var villig til å delta og bli intervjuet av oss!

Hilse på respondenten. Uformell prat.

2. Informasjon (5 min)

Tema: Standardisering, oppdekking av instrumentbord ved operasjoner, keisersnitt og pasientsikkerhet.

Problemstilling: *Hva er fordeler og ulemper ved å bruke en standardisering av assistansebordet til akutt keisersnitt?*

Formål med studien:

Vi ønsker å se på operasjonssykepleieres erfaring med bruk av standardisert oppdekking av instrumentbord og hva dere anser som fordeler og ulemper ved dette. Vi håper dette kan gi ny innsikt og kunnskap for å øke pasientsikkerheten, og som kan si noe om man bør arbeide med at flere sykehus skal ta i bruk en slik standardisering.

Begrepsavklaring:

Standardisering betyr her skriftlige prosedyrer/ retningslinjer som er utarbeidet for hvordan alle operasjonssykepleiere på den gitte operasjonsavdelingen skal dekke opp assistansebordet (og evt. bakbordet).

Akutt keisersnitt inkluderer her alle hastegrader av keisersnitt.

Assistansebordet er et flyttbart bord som benyttes til steril oppdekking av utstyr som brukes nærmest operasjonsfeltet.

Konfidensialitet:

Vi har taushetsplikt og vi følger NSD sine retningslinjer. Du har rett til å trekke deg fra prosjektet når som helst innen vi leverer oppgaven i april 2022.

Vi vil benytte båndopptaker. Datalagring skjer på UiAs passordbeskyttede OneDrive. Før offentliggjøring vil alle data bli anonymisert. Du og de andre respondentene vil bli tildelt koder uten

sammenheng med persondata. Før innlevering kan vi sende deg et utkast av oppgaven slik at du får mulighet til å gi tilbakemelding på om vi har tolket dataene riktig. Ta kontakt med oss hvis dette er ønskelig.

Har respondenten spørsmål?

Har du noen spørsmål?

Vi er ute etter din erfaring og tanker omkring tema og det er derfor ingen rette eller gale svar.

Start opptak.

Fase 2: Erfaringer

3. Overgangsspørsmål: (5 min)

Etterspør respondentens ERFARINGER omkring temaet:

- 1) Hvor mange år har du arbeidet som operasjonssykepleier?
- 2) Hvor har du arbeidet og hvilken seksjon/hvor arbeider du nå?
- 3) Hvor lenge har du jobbet med standardisert oppdekking av assistansebordet til keisersnitt?
- 4) Hvor lenge har du jobbet med en ikke- standardisert oppdekking av assistansebordet til keisersnitt?
- 5) Under din utdanning hadde du standardisert oppdekking eller ikke-standardisert?
- *Fortell gjerne litt mer om det*
- 6) Hvor mange keisersnitt kan det være du er med på, si omtrent på en måned?
- 7) Hvor mange av disse er akutte? Omtrent.

Fase 3: Fokusering

4. Nøkkelspørsmål: (30-45 min)

AVDELINGENS PROSEDYRER - STANDARDISERING

- 8) Hvordan er avdelingens prosedyrer ift oppdekking til akutt keisersnitt? (Standardisert? Bilde?)
- 9) Hvilke operasjoner på dette sykehuset finnes det standardiserte prosedyrer på oppdekking av assistansebordet?
- 10) Hvilke likheter og ulikheter er det mellom instrumentene som kirurgene bruker til et akutt keisersnitt?
- 11) (Når du jobbet med standardisert oppdekking...) I hvilken grad og hvordan føler du at standardiseringen blir overholdt?
- 12) Hvordan påvirker bruken av standardisering ditt arbeid?

KEISERSNITT

- 13) Hvis du husker tilbake til da du var ny i jobben som operasjonssykepleier, kan du huske første gang du var sterilt utøvende under et akutt keisersnitt?
- 14) Kan du forteller hvordan du opplevde organiseringen av utstyret før og underveis?

FORDELER OG ULEMPER:

- 15) Hva ser du på som ulemper ved å benytte standardisert oppdekking av instrumentbord ved akutt keisersnitt? (*Hvorfor? Utdype? Fortelle en episode som demonstrerer det?*)
- 16) Hva ser du på som fordeler ved å benytte standardisert oppdekking av instrumentbord ved akutt keisersnitt? (*Hvorfor? Utdype? Fortelle en episode som demonstrerer det?*)

Alternative områder fra teorien og utfyllende kommentarer omkring:

Pasientsikkerhet

Sortering av instrumenter med ulik renhetsgrad

Struktur for å skape oversikt

Samarbeid med kirurg og flyt i instrumenteringen

- 17) Kan du fortelle hvorfor du eventuelt foretrekker å jobbe med *standardisert* oppdekking til et akutt keisersnitt, eller hvorfor du foretrekker å jobbe med en *ikke- standardisert* oppdekking?
- 18) Kan du fortelle litt om hvordan du opplevde overgangen (*enten fra ikke-standard til standard eller motsatt?*)
- 19) Hvilket inntrykk har du av andres holdninger til standardisert oppdekking til keisersnitt?
- 20) Hvilket inntrykk har du av andres holdninger til standardisert oppdekking generelt?
- 21) Gjerne nevne de operasjonene hvor du ville hatt standardisert oppdekking, og utdyp hvorfor
- 22) Har du noe annet du vil få frem som vi ikke har fått snakket om?

Utfyllende spørsmål:

Kan du si noe mer om dette?

Har du flere eksempler på dette?

Hva tenkte du da?

Hvordan reagerte du?

Har jeg forstått deg riktig?

Er det noe du vil legge til?

Appendix 7: Consent form

Vil du delta i forskningsprosjektet: «Standardisert oppdekking av assistansebord ved akutt keisersnitt»?

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å synliggjøre og forbedre operasjonssykepleie ved oppdekking av assistansebord til akutt keisersnitt. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål

Vi ønsker å vite mer om erfaringer fra praksis om erfarne operasjonssykepleiere foretrekker en standardisering av assistansebordet til akutt keisersnitt. Vi ønsker å se på ulike erfaringer og synspunkt på hva fordelene og ulempene ved en slik standardisering kan være. Det å dele erfaringer kan gi økt kunnskap og pasientsikkerhet.

Problemstilling: Hva er fordeler og ulemper ved å bruke en standardisert oppdekking av assistansebordet under akutt keisersnitt?

Dette er en masteroppgave av tre masterstudenter i operasjonssykepleie. Vi håper å finne interessante data som kan komme praksisfeltet til gode og som igjen kan føre til vitenskapelig publisering.

Hvem er ansvarlig for forskningsprosjektet?

Universitetet i Agder, fakultetet for helse- og idrettsvitenskap er ansvarlig for prosjektet.

Bodil Ane Helland, Brynhildur Gudmundsdottir, Linn Terese Oa Ourom, masterstudenter i spesialsykepleie med fordypning i operasjon.

Linda Hansen, førstelektor Universitetet i Agder.

Judy Munday, Joint Senior Research Fellow, Queensland University of Technology.

Hvorfor får du spørsmål om å delta?

Du er utvalgt som en av operasjonssykepleierne vi ønsker å intervju på grunn av din utdanning som operasjonssykepleier, og fordi du har 2 års arbeidserfaring eller mer med å dekke opp assistansebord til akutt keisersnitt. Du har erfaring fra praksis med standardisert oppdekking eller en ikke-standardisert oppdekking av assistansebordet, eller begge deler. Vi tror at du kan ha gode innspill ut fra din erfaring til hva som kan være fordeler og ulemper med standardisert oppdekking.

Vi har kontaktet avdelingsleder som har satt oss i kontakt med aktuelle operasjonssykepleiere.

Hva innebærer det for deg å delta?

Vi vil utføre intervju for å samle data til dette prosjektet. Intervjuet vil foregå med en av oss tre som lager denne masteroppgaven. Intervjuet vil vare omtrent 60 min og du vil få åpne spørsmål som kan suppleres med tilleggsspørsmål. Det vil bli tatt notater underveis i tillegg til at vi bruker lydopptak. På grunn av Corona-situasjonen kan det være aktuelt å gjennomføre intervjuet via digitale verktøy som Zoom. Da vil vi kun bruke lydopptak og ikke bruke bilde eller video.

Det er frivillig å delta

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger

Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket.

- Både studenter og veiledere vil ha tilgang til opplysningene i aidentifisert form.
- Datamaterialet blir lagret sikkert på Universitetet i Agder sin passordbeskyttede server. Båndopptaker blir innelåst.
- Masterstudentene skal samle inn, bearbeide, lagre og transkribere data.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?

Opplysningene anonymiseres når prosjektet avsluttes og oppgaven er godkjent i juni 2022.

Aidentifisert datamateriale vil kunne bli benyttet i en vitenskapelig publisering.

Hva gir oss rett til å behandle personopplysninger om deg?

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra fakultetet for helse- og idrettsvitenskap ved Universitetet i Agder har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Dine rettigheter

Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger

Hvis du har spørsmål til studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter, ta kontakt med:

Bodil Ane Helland, bodilah@student.uia.no mobil: 99441928

Brynhildur Gudmundsdottir, brynhg06@student.uia.no, mobil: 97574524

Linn Terese Oa Ourom, linnt04@student.uia.no, mobil: 97600779

Linda Hansen, linda.hansen@uia.no, mobil: 98090172

Judy Munday, judy.munday@qut.edu.au

Vårt personvernombud: Johanne Warberg Lavold, johanne.lavold@uia.no, mobil: 41212048

Hvis du har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

- NSD – Norsk senter for forskningsdata AS på epost (personverntjenester@nsd.no) eller på telefon: 55 58 21 17.

Med vennlig hilsen

Judy Munday

Linda Hansen

Bodil Ane Helland, Linn Terese Oa Ourom, Brynhildur
Gudmundsdottir

Prosjektansvarlig

(Forsker/veileder)

Eventuelt student

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet «*Standardisert oppdekking av assistansebord til akutt keisersnitt*», og har fått anledning til å stille spørsmål. Jeg samtykker til:

- å delta i individuelt forskningsintervju

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet

(Signert av prosjektdeltaker, dato)

Appendix 8: Research articles included in this Master thesis

Explanation of the Quality ranking:

Scimago Journal & Country Rank (SJR) is used validating the quality of the journals. They use Q1, Q2 og Q3 to rank the journals where Q1 has the highest quality on SJR. «Norsk Senter for Forskningsdata» (NSD) was used if the journal could not be found on SJR. Here «Nivå 1» and «Nivå 2» are used to rank publishing channels of science. «Nivå 2» has the highest international prestige.

SJR: <https://www.scimagojr.com/journalrank.php>

NSD: <https://kanalregister.hkdir.no/publiseringsskanaler/Forside>

Author, year of publication, journal, country	Title Peer Reviewed?	Purpose of the study	Method	Population	Findings/ Conclusion	Quality ranking	Recommended further research
Avansino, J. R., Goldin, A. B., Risley, R., Waldhausen, J. H. T. & Sawin, R. S. (2013) <i>J Pediatr Surg</i> <i>The New Zealand Medical Journal</i> <i>New Zealand</i>	Standard-ization of operative equipment reduces cost YES	We hypothesize that standardizing operative equipment, and reducing variability can safely achieve cost reduction.	Retrospectively measured supply costs, operative time, intra-operative complications, and length of stay. A survey assessing the perception of surgeons, nurses and scrub technologists of the impact of standardization on patient safety, patient care, OR efficiency, and cost was conducted.	145 patients at a children's hospital who underwent a laparoscopic appendectomy	Standardization of operative equipment can result in a significant cost reduction without impacting quality or delivery of care. Based on average case number per year, a total annual cost savings of N\$41,000 could be realized. Survey participants agree that standardization improves cost and patient safety, yet perceptions regarding the impact on efficiency and	Q3	Future directions should focus on more robust data collection systems that track OR supply utilization to enable continuous improvement and long-term compliance with the standardization effort.

					patient care varied by occupation		
Davis, P., Lay-Yee, R., Briant, R., Ali, W., Scott, A. & Schug, S. (2002). <i>The New Zealand Medical Journal</i> New Zealand	Adverse events in New Zealand public hospitals I: occurrence and impact.	Aim To assess the occurrence and impact of adverse events in New Zealand public hospitals	Two-stage retrospective review	6579 medical records, selected by systematic list sample from admissions for 1998 in 13 generalist hospitals providing acute care	The study provides representative base parameters that can contribute to the wider understanding, and potential improvement, of patient safety and the quality of care in New Zealand public hospitals.	Q3	Further methodological work in this area. More detailed analysis of the data from this study - and others - is required in order to provide insight into the detailed patterns of adverse event occurrence and determination, particularly in relation to preventability.
De Vries, E. N., Ramrattan, M. A., Smorenburg, S. M., Gouma, D. J., Boermeester, M. A. (2008) <i>BMJ Quality & Safety</i> The Netherlands	The incidence and nature of in-hospital adverse events: a systematic review YES	To performed a systematic review of the literature on in hospital adverse events.	A systematic review	Eight studies including a total of 74 485 patient records	Conclusions: Adverse events during hospital admission affect nearly one out of 10 patients. A substantial part of these events are preventable. Since a large proportion of the in-hospital events are operation- or drug-related, interventions aimed at preventing these events have the potential to make a substantial difference.	Nivå 2	There are a number of other interventions that seem promising but warrant further research to prove their value. This includes crew resource management and the use of checklists in the operating room
Ebbeke, P. (2007) Der Chirurg	Retained foreign bodies from the view of the OR nurse. YES	Mål: Undersøke praksis for tellekontroll blant kirurgisk personale. Mål å finne	A quantitative survey		A total of 64% of operating room nurses involved in a survey are reported as having been involved in a surgical procedure	Nivå 1	A recommendation can be provided for each surgical department in order to check

		evt. forskjeller mellom teori og praksis			in which the correct count prevented foreign bodies from being left in the patient.		their own counting methods for avoiding potential risks.
Ernst, J. & Jensen Schleiter, A. (2018). <i>Qualitative research in organizations and management</i> Denmark	Standardization for patient safety in a hospital department: killing butterflies with a musket? YES	The purpose of this paper is to look at the ways in which standardization for patient safety is approached from different positions in the field	Ethnographic fieldwork was conducted in a Danish hospital department. The study included observations, 15 individual interviews, two group interviews and documents studies.	Standard inventers, managers, nurses and doctors Various documents related to patient safety and standardization of care on the hospital intranet	The authors show how the standardization of work rests on the master narrative of patient safety management and how this narrative clashes with the nurses' practical perception of good care, which rests on the counter-narrative of the clinical judgment	Nivå 1	The longer-term consequences of the present quality agenda would be an interesting and important issue for future studies in hospital safety standardization.
Gillespie, B. M., Chaboyer, W. & Fairweather, N. (2012) <i>AORN Journal</i>	Interruptions and Miscommunications in Surgery: An Observational Study YES	To assess the relationship between interruptions, team familiarity, and miscommunications	Observational study: Descriptive analysis was used to quantify interruptions in respect to the source and type of miscommunication	a purposive sample of 160 surgical procedures in 10 specialties during a six-month period	Results revealed an inverse correlation between the length of time that teams had worked together and the number of miscommunications in surgery. There was a positive correlation between the number of intraoperative interruptions and the number of miscommunications.	Q2	Observational research of the aspects of their systems of work and the origin of interruptions and their potential effects. Interviews to probe more deeply into the effects of interruptions and the additional workloads.
Glaser, B., Schellenberg, T., Neumann, J., Hofer, M., Modemann, S., Dubach, P. & Neumuth, T.	Measuring and evaluating standardization of scrub nurse instrument table setups: a multi-center study	The goal of this study is to evaluate whether there is an existing standard within clinics for an	A multi center study: The study makes use of the <i>Nosco Trainer</i> , a scrub nurse training and	15 scrub nurses of the Otolaryngology departments at three clinics in Germany and Switzerland (They performed a table set-up for a	In contrast to the identified similarities of table setups within clinics with the collected data, only a third of the participants	Q2	Follow-up projects will extend the work to other intervention types and surgical domains and also transfer

<p>(2022)</p> <p><i>International Journal of Computer Assisted Radiology and Surgery</i></p> <p>Germany</p>		<p>instrument table setup. We also evaluate to which extent it is known to the personnel and whether it is accepted.</p>	<p>simulation system developed to analyze various aspects of the workplace of scrub nurses.</p> <p>The study is complemented with a questionnaire covering related aspects.</p>	<p>Functional Endoscopic Sinus Surgery intervention and completed the questionnaire)</p>	<p>confirmed in the questionnaire that there is an existing standard for Functional Endoscopic Sinus Surgery interventions in their facility, but almost three quarters would support a written standard and acknowledge its possible benefits for trainees and new entrants in the operating room.</p> <p>Conclusions The structured analysis of the surgical instrument table using a data-driven metric for comparison is a novel approach to gain deeper knowledge about intra-operative processes. The insights can contribute to patient safety by improving the workflow between surgeon and scrub nurse and also open the way for goal-oriented standardization.</p>	<p>the results into concepts for scrub nurse training programs.</p>
<p>Haynes, A. B. et al. (2009)</p>	<p>A Surgical Safety Checklist to Reduce Morbidity and Mortality in a</p>	<p>To check this hypothesis: A program to implement a 19-item</p>	<p>We conducted a prospective study of preintervention and</p>	<p>Patients 16 years of age or older who were undergoing noncardiac surgery.</p>	<p>Conclusion: Implementation of the checklist was associated with concomitant</p>	<p>Nivå Further study is needed to determine the precise mechanism and</p>

<i>New England Journal of Medicine</i>	Global Population	surgical safety checklist designed to improve team communication and consistency of care would reduce complications and deaths associated with surgery.	postintervention periods at the eight hospitals participating as pilot sites in the Safe Surgery Saves Lives program	eight hospitals in eight cities in different countries.	reductions in the rates of death and complications among patients at least 16 years of age who were undergoing noncardiac surgery in a diverse group of hospitals.		durability of the effect in specific settings.
Hjelen, W. & Sagbakken, M. (2018) <i>Sykepleien forskning</i> Norway	Surgical nurses lack the time and competence to work in an evidencebased manner. YES	To gain insight into surgical nurses' understanding of the concept of 'evidence-based practice' (EBP), as well as their experiences with evidencebased practice.	Four focus groups interviews – Quality research	Surgical nurses in three different parts of Norway	This study reveals a lack of competence among the surgical nurses and an organisational structure and culture that fail to underpin and support EBP, both in the surgical departments and in the educational institutions.	Nivå 1	
Ilggesund, U. (2016) <i>Sykepleien forskning</i> Norway	Studenters deltakelse i kunnskapsbasert fagutvikling YES	Synliggjøre hvordan studenter under videreutdanning i operasjonssykepleie kan utvikle funksjonsdyktighet i praksis gjennom deltakelse i fagutviklingsprosjekt hvor de arbeider kunnskapsbasert.	Studentevaluering, ved bruk av spørreskjema og studiedialog med studentene. Deskriptiv statistikk og tematisk analyse.	12 Operasjonssykepleiestudenter	Bruk av fagutviklingsprosjekter i utdanningen kan bidra til å utvikle viktig kompetanse, og konstruktivt samarbeid mellom utdanning og klinisk praksis. Dette vil kunne styrke kvaliteten og innfri krav og forventninger til begge institusjonene	Nivå 1	Oppfordrer til samarbeidsprosjekt mellom klinisk praksis og universitet/høgskole. Fagutviklingsprosjekter kan løftes opp på et ledernivå, slik at de inngår i et felles målrettet arbeid som kan utløse ressurser til gjennomføring.
Ilggesund, U., Rasmussen, G., Overvåg,	Kartlegging av prosedyrer for oppdekking av	Studiens hensikt var å oppnå beste	nettbasert spørreundersøkelse.	Kartleggingen ble gjort på 16 sykehus og dekket alle	Alle operasjonsavdelingene anvendte	Nivå 1	Vi anbefaler at det utarbeides kunnskapsbasert

G. & Rekvig, O. P. (2019) <i>Sykepleien forskning</i> Norway	instrumentbord ved kirurgiske inngrep. YES	praksis og unngå uheldige hendelser i forbindelse med oppdekking og organisering av instrumentbord		helseregioner og sykehusfunksjonsnivåer i Norge	prosedyre kort, brikkelister, telleprosedyrer og prosedyre for håndtering av stikkskader. Skriftlige prosedyrer som beskriver oppdekking av instrumentbordene, ble anvendt av fire sykehus. Sykehus med nasjonale og flerregionale tjenester støtter seg i størst grad til prosedyrer.		e retningslinjer og fagprosedyrer. Likeså anbefaler vi at kunnskapsgrunnlaget for oppdekking av instrumentbord undersøkes.
Igesund, U., Overvåg, G. & Rasmussen, G. (2021) <i>Sykepleien forskning</i> Norway	Trygg kirurgi-oppdekking og organisering av instrumentbord til operasjon: en scoping review YES	Studiens hensikt var å styrke utøvernes beslutningsgrunnlag. Det gjøres ved å samle, strukturere, oppsummere og presentere kunnskapsbaserte anbefalinger	En scoping review med utgangspunkt i Arksey og O'Malleys rammeverk og Aveyards tematiske analyse	Litteratur som beskriver fenomenet av interesse	Resultatet presenterer et bredt område av kunnskapsbaserte anbefalinger som kan støtte beslutninger om oppdekking og organisering av instrumentbord. Kun én retningslinje konkretiserer en praktisk og systematisk fremgangsmåte for oppdekking av instrumentbord.	Nivå 1	Vi anbefaler at det utarbeides norske kunnskapsbaserte retningslinjer, standarder og fagprosedyrer. Videre anbefaler vi at operasjonssykepleiernes erfaringer med oppdekking og organisering av instrumentbord undersøkes, og at litteraturstudier inkluderer retningslinjer fra land som ikke inngår i denne studien.
Ingvarsdottir, E. & Halldorsdottir, S. (2017)	Enhancing patient safety in the operating theatre: from the perspective of experienced	The aim of this study was to identify, from the perspective of experienced operating	phenomenological study, 14 individual interviews were conducted with a	Experienced operating theatre nurses. Work experience as an OTN spanned 10–40 years. Mean	Careful preparation, the use of protocols and checklists and taking measures to prevent complications and	Q2	Deeper analysis could be explored within OTs, which could include the analysis of unexpected

Scandinavian Journal of Caring Sciences Iceland	operating theatre nurses YES	theatre nurses (OTNs), how patient safety in the operating theatre (OT) can be enhanced.	purposive sample of 11 participants:	experience was 16 years	harm. Contributing to a culture of safety by improving work conditions in the OT. Both nontechnical and technical competencies are necessary.		incidents, documentation of those and their processing in order to enhance patient safety in the OT.
Kaldheim, H. K. A. & Slettebø, Å. (2016) <i>Nordisk Sygeplejeforskning</i> Norway	Respecting as a basic teamwork process in the operating theatre - A qualitative study of theatre nurses who work in interdisciplinary surgical teams of what they see as important factors in this collaboration. YES	The aim was to acquire knowledge about what theatre nurses perceive as important factors in collaboration with other team members to see what factors are needed to strengthen interdisciplinary cooperation	A qualitative approach with exploratory design - semi-structured, open questions, interviews	Eight female theatre nurses from four Norwegian operational units.	The study shows that the most important factor in the social process between theatre nurses co-operating with other team members, is respecting	Nivå 1	Further research could see how the disposition and architecture of the facilities can influence the activity system of surgery in a positive way, promoting useful social interaction.
Kang, E., Massey, D. & Gillespie, B. M. (2015) <i>Journal of Advanced Nursing</i> Australia	Factors that influence the non-technical skills performance of scrub nurses: a prospective study. YES	To identify and describe the factors that impact on the performance of scrub nurses' non-technical skills performance during the intra-operative phase of surgery	A prospective observational study	The sample: 182 surgical procedures across eight specialities at two hospital sites. Participants were purposively selected scrub nurses.	Patient acuity and team familiarity were the strongest predictors of scrub nurses' non-technical skills performance at hospital site A. There were no correlations between the predictors and the performance of scrub nurses at hospital site	Q1	The creation of education programs to develop scrub nurses' NTS skills further is recommended. Developing interventions based on the findings of this research to guide future instructional design with the aim of improving quality of care for patients

							would be timely and useful
Kennedy, L. (2013) <i>AORN Journal</i>	Implementing AORN recommended practise for sterile technique YES	To enable the learner to take an active role in implementing recommended practices for sterile technique in his or her perioperative practice setting	Discussion on how to implement this.	The recently updated AORN "Recommended practices for sterile technique"1 is evidence based and represents best practices	Achieving excellence in the performance of sterile technique requires a dynamic team effort, a commitment to patient safety, and adherence to the AORN "Recommended practices for sterile technique."	Q2	
Koh, R. Y. I., Park, T. & Wickens, C. D. (2014) <i>International Journal of Nursing Studies</i> Singapore	An investigation of differing levels of experience and indices of task management in relation to scrub nurses' performance in the operating theatre YES	(1) To examine any difference on task management behaviours between differing levels of experience during surgeries. (2) To correlate indices of task management with levels of performance evaluated by subject matter experts.	Analysis of video-taped caesarean section surgeries	10 experienced and 10 novice scrub nurses were randomly selected from the Obstetrics and Gynaecology Department of a teaching hospital in Singapore.	Novice nurses showed lower resistance to interruptions during their tasks (58% more interruptions), especially to interruptions which were not triggered by the surgeon during their surgical counts (90% more interruptions). The novice nurses also displayed poorer/less ability to anticipate the surgeons' needs, taking longer time to handover instruments (39% longer) and making more mistakes (371% more errors). Subject matter experts rated the experienced nurses significantly higher	Q1	Further studies of the training of task management abilities in the operating theatre, which may be a crucial step to ensuring higher levels of patient safety in the operating theatre.

					in their cognitive non-technical skills performance than the novice nurses (32% higher).		
Leotsakos, A.et. al. (2014) <i>International Journal for Quality in Health Care</i> 2 Switzerland and more countries	Standardization in patient safety: the WHO High 5s project YES	The project seeks to answer two questions: (i) Is it feasible to implement standardized health care processes in individual hospitals, among multiple hospitals within individual countries and across country boundaries? (ii) If so, what is the impact of standardization on the safety problems that the project is targeting?	The use of process standardization both in hospitals within a country and in multiple participating countries, and its carefully designed multi-pronged approach to evaluation.	Multiple countries on these risk areas: 1. Managing concentrated injectable medicines 2. Assuring medication accuracy at transitions of care 3. Performance of the correct procedure at the correct body sites 4. Communication during patient care handovers. 5. Improved hand hygiene	Status: Three SOPs—correct surgery, medication reconciliation, concentrated injectable medicines—have been developed and are being implemented and evaluated in multiple hospitals in seven participating countries.	Nivå 1	Nearly 5 years into the implementation, it is clear that this is just the beginning of what can be seen as an exercise in behavior management, asking whether health care workers can adapt their behaviors and environments to standardize care processes in widely varying hospital settings.
Malterud, K. (2012) <i>Scandinavian Journal of Public Health</i> Norway	Systematic text condensation: A strategy for qualitative analysis YES	Aim: To present background, principles, and procedures for a strategy for qualitative analysis called STC and discuss this	Giorgi's psychological phenomenological analysis is the point of departure and inspiration for systematic text		STC is a strategy for analysis developed from traditions shared by most of the methods for analysis of qualitative data. The method offers the novice researcher a process of intersubjectivity,	Nivå 1	

		approach compared with related strategies.	condensation (STC)		reflexivity, and feasibility, while maintaining a responsible level of methodological rigour.		
Oksavik, W. S., Heen, C., & Heggdal, K. (2021) <i>Klinisk sygepleje</i> Norway	Faktorer som påvirker kommunikasjon og samspill i kirurgiske team med betydning for pasientsikkerhet – belyst fra operasjonssykepleierens ståsted YES	The purpose of this study was to gain understanding of factors that influence communication and interaction in surgical teams, from the perspective of the theatre nurse.	A qualitative approach was chosen for this study. Observations and in-depth interviews were conducted in three hospitals in Norway 2016/2017. Content analysis guided the analysis of data.	Twelve surgical teams were observed and one scrub nurse from each team were interviewed.	Three main themes were identified: The atmosphere in the room, Professional experience versus uncertainty, The room and the importance of sounds. Challenges in communication in multidisciplinary teams during surgical procedures were elicited. Patient safety can be threatened when communication fails. Communication and interaction were promoted by means of awareness, humour and the theatre nurse's diplomatic persistence. Preoperative and postoperative communication was elicited as important.	Nivå 1	
Peñataro-Pintado, E., Rodríguez, E., Castillo, J., Martín-Ferreres, M.	Perioperative nurses' experiences in relation to surgical patient safety: A	To explore the views and experiences of perioperative nurses	Qualitative study: five focus groups interviews	50 perioperative nurses recruited from four public hospitals in Spain.	Four main themes: personal qualities of the perioperative nurse, the surgical environment,	Nivå 1	One task for future research would be to examine the effectiveness of educational and

L., De Juan, M. Á. & Díaz Agea, J. L. (2020)	qualitative study. YES	regarding the factors that impact surgical patient safety.			safety culture, and perioperative nursing care plans. One of the main findings concerned barriers to the exercise of leadership by nurses, especially regarding completion of the Surgical Safety Checklist.		training initiatives aimed at promoting these skills among perioperative professionals.
<i>Nursing Inquiry</i> Spain							
Sandelin, A., Kalman, S. & Gustafsson, B. Å. (2019).	Prerequisites for safe intraoperative nursing care and teamwork — Operating theatre nurses' perspectives: A qualitative interview study. YES	To describe operating theatre nurses' experience of preconditions for safe intraoperative nursing care and teamwork	A qualitative descriptive design was chosen. Narrative interviews were carried out	16 experienced operating theatre nurses in four different hospitals in rural and urban areas in Sweden. T	From the operating theatre nurses' perspective, prerequisites for intraoperative safe nursing care and teamwork depend upon a preoperative dialogue between the members in the surgical team for collegial teamwork, obtaining a reliable preoperative overall picture based on adequate information transfer, and the support of a committed first-line manager.	Q1	Further studies are needed to explore what preoperative information is covered by computerised systems cover in relation to surgical interventions and whether this has significant potential to cause complications or consequences for the patients. Another question involves coordinators' and first-line managers' understandings of their roles as first-line managers, since OTNs claim that a supportive leadership may improve patient safety.
<i>Journal of Clinical Nursing</i> Sweden							
Storesund, A., Haugen,	Clinical Efficacy of Combined	To investigate the	In a stepped-wedge cluster	the SURPASS checklists were	In this nonrandomized	Q1	Further studies of how to

<p>A. S., Flaatten, H., Nortvedt, M. W., Eide, G. E., Boermeester, M. A., Sevdalis, N., Tveiten, Ø., Mahesparan, R., Hjallen, B. M., Fevang, J. M., Størksen, C. H., Thornhill, H. F., Sjøen, G. H., Kolseth, S. M., Haaverstad, R., Sandli, O. K. & Søfteland, E.</p> <p>(2020)</p> <p><i>Jama Surgery</i></p> <p>Norway</p>	<p>Surgical Patient Safety System and the World Health Organization's Checklists in Surgery: A Nonrandomized Clinical Trial</p> <p>YES</p>	<p>association of combined use of the preoperative and postoperative SURPASS and the WHO SSC in perioperative care with morbidity, mortality, and length of hospital stay.</p>	<p>nonrandomized clinical trial.</p>	<p>implemented in 3 surgical departments in a Norwegian tertiary hospital, serving as their own controls. Three surgical units offered additional parallel controls.</p>	<p>clinical trial, adding preoperative and postoperative SURPASS to the WHO SSC was associated with a reduction in the rate of complications, reoperations, and readmissions</p>	<p>improve fidelity in delivering clinically effective checklists in surgical pathways are warranted.</p>
<p>Wiegmann, D. A., ElBardissi, A. W., Dearani, J. A., Daly, R. C., & Sundt, T. M.</p> <p>(2007)</p> <p><i>Surgery</i></p> <p>USA</p>	<p>Disruptions in surgical flow and their relationship to surgical errors: An exploratory investigation</p> <p>YES</p>	<p>The goal of this project was to study surgical errors and their relationship to surgical flow disruptions in cardiovascular surgery prospectively to understand better the effect of these disruptions on surgical errors</p>	<p>An exploratory investigation – observational study</p>	<p>31 cardiac surgery operations over a 3-week period</p>	<p>Flow disruptions consisted of teamwork/communication failures, equipment and technology problems, extraneous interruptions, training-related distractions, and issues in resource accessibility. Surgical errors increased significantly with increases in flow disruptions.</p>	<p>Nivå 2</p> <p>Additional research is needed before general interventions can be developed for other surgical specialties or institutions.</p>

	and ultimately patient safety			Teamwork/comm unication failures were the strongest predictor of surgical errors.		
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Appendix 9: Analysis example from meaning units to condensate

Codegroup: From beginner to experienced
Subgroup: Student training and New employees
Result category: Developing expertise
Subcategory: Lacking experience

Meaning units:

«Men til å begynne med som ny så ville du jo ha det enklest mulig. «

«Det er vel sånn det er å være ny. Det var liksom instrumenter det var kompresser – som jeg ikke hadde kontroll på, neida men det er klart det er en del av det å være ny. Da er en mer opptatt av instrumentene og det er mange ting som tar fokus. Nå er det jo mere sånn når en blir rutinert så vet du hvor du har tingene dine og du slapper av i forhold til det og er med i inngrepet.»

«Det er ikke så lett å vite når man er ny. Det er en novisefase på en måte og vanskelig å vite helt hva du skal legge frem og det å ta avgjørelser. Du må jo bare stole på det veilederen din har lært deg og følge det. Og så kommer det litt mer etter hvert, den kunnskapen om hva som er greit å ha fremme og ikke.»

«Ja og så videre på fordeler. Jeg har jo vært inne på det, men det må jo være når en er litt ny så kan det være greit å følge en oppskrift. Du trenger ikke å bruke fokuset ditt på det om du skal gjøre det sånn eller sånn .»

«Og så regner jeg med at jeg la frem det oppsettet med en gang, ja, fordi det sitter veldig godt. Og det sier jeg til studentene mine, for det er et godt hjelpemiddel å huske på. For det er de tingene som trengs først for at barnet skal være ute i løpet av 3 minutter.»

«Jeg tenker at det går mye lettere med opplæringen for de nyansatte for eksempel. Når du kommer ut og skal jobbe så får du de prosedyrene og bildet og hva antallet er i silene og hvordan det skal

dekkes opp. Så da vet du liksom alltid at okey når jeg skal på sectio så har du liksom i hodet det bildet av den oppdekkinga. «

«Det er mye enklere å komme inn i rutinene når ting står skriftlig.»

«Men pluss at, vi alle etter hvert som vi får erfaring, man vet jo hva som går i hver operasjon. Men jeg tenker at hvis du plutselig skal stå i en annen seksjon, hvis du skal rullere eller det er noen som er syke på kar thorax og du til vanlig er på uro, så er det kjekt at okey det er sånn det blir dekket her på kar-thorax. Da legger jeg instrumentene slik som er standard på kar-thorax selv om jeg er vant til urologi. Ikke sant. Så jeg ser absolutt det positive med det her, hvis en kommer dit»

«...og da er det sånn at hvis du da finner et bilde av et..., hvordan de ønsker seg opplegg med bordet gjør det jo mye enklere, for da vet du litt hva som er forventet. «

«Men når du har vikarer og innleide fra andre land så er det superviktig at ikke det er ikke er store misforståelser når ting haster. Da ser jeg fordelen med å ha standardisert assistansebord.»

«Nei det er jo fordi at det er ikke det jeg gjør hver dag, så jeg må alltid tenke når jeg legger opp, selv om det ikke er så mye utstyr, så er det noe med å bare ha sånn og sånn gjør du, ferdig med deg. «

«Keisersnitt vil jeg si at er en ganske grei standard, det er ikke den helst største, så det er ganske greit og du lærer deg fort.»

«du treng ikke å ha noen som peker og forklarer deg hele tiden. Og at du kan legg det opp veldig sånn trygt med en gang, de ter ikke noe å lure på. Instrumentene er veldig forutsigbare. Ligger rett i kontaineren i utgangspunktet. Jeg fikk bare beskjed om at se på bildet og legg opp i henhold til det. Og det gjør det, sammenlignet med andre ting da hvis du lurte på hva som blir brukt først og hva som blir brukt sist så var det ikke noe problem.»

«Det var oversiktlig, og overkommelig. Når du står der så er det ikke noen fra utsiden som kommer og sier nei, du bør legge den der. Det er ingen som korrigerer deg. Står jeg utenfor å ser på neon andre så kan jeg si at vi kanskje kan velge noen andre løsninger, men det er allikevel innføre.....?? Det som er overkommelig, som sagt om du snur en kocker opp ned el hva du gjør, det er egentlig helt greit. Det er ingen som retter på deg. Selvfølgelig hvis en gjør noen feil, men her er det så liten sjanse

for å gjøre noe annet enn det som står da. De fleste respekterer det oppsettet. Det er en god begrunnelse for det, og da , da blir det veldig forutsigbart.»

«Fordi da at hvis alarmen går så kan ikke jeg står å peke og si hvordan de skal dekke opp, da må de vite det. Det er veldig greit for da kan jeg konsentrere meg om å få pasienten inn på bordet.»

Condensate:

I guess that it is how it is like being new. It is a novice stage where it is difficult to make decisions and really know what you should put on your Mayo stand. You must trust what your supervisor teaches you and follow her/his way of doing it, and then little by little you achieve the knowledge of what you need to put where. When I was new, I was so interested/obsessed with the instruments. It was difficult to control the instruments and the compresses while I had to focus on other things. When you gain experience, you know where you have the instruments and don't have to stress about that and focus on the intervention instead. When you are new it can be nice to have a recipe on how to set-up the Mayo stand to get it as simple as possible. Then you don't have to spend your focus figuring out whether you should do it like this or like that. It makes the job a little easier when you don't have to think that much.

When you get experienced, you know which instruments are needed at each phase of the surgery/procedure. But if you are going to work on another section, whether it is because you must replace someone or you are hired as a substitute, then it is good to know how they do it here, if they have a standard.

I believe it would be so much easier to train new employees. It is easier to get to know the routines when you have it in writing. You can look at the procedure and the picture and then you know what is expected. You don't need anyone to point and explain all the time because you have this picture on the wall. No one needs to correct you because most respect the set-up on the standard because there is a good reason for it. You do not have to wonder what they will use first and last. You can safely set up the Mayo stand the right way.

If the emergency alarm goes off, then the experienced surgical nurse cannot use time explaining to the more inexperienced surgical nurse how to set-up the Mayo stand. Here a standard is very useful, because the more experienced surgical nurse can concentrate on the patient and other tasks.

I think Cesarean section is a pretty straightforward standard. It is not so big, so it is quite alright, and you learn it fast. You really don't need that many instruments to get the baby out within three minutes. This I tell my students because it is a good thing to remember.

Codegroup: In control

Subgroup: When adrenalin kicks in

Result category: In control

Subcategory: When adrenalin kicks in

Meaning units:

«Nå er jeg så erfaren at den kjenner jeg ikke på lenger, men i begynnelsen så gjorde en det. For da trenger du mengdetrening. Og både få det inn når det er planlagt og du har god tid, men og å kjenne på den adrenalinen som kommer når det er et haste-sectio.»

«Det var en ting mindre å stresse med når du visste hvor du bare la ting.»

«Men jeg kan huske følelsen. For du er ganske full av adrenalin og stressa. Og da når du er stressa og ny så klarer en ikke å konsentrere seg om alle ting.»

«Så jeg tenker jo at har du en standardisert måte å gjøre det på der og, så sparer du deg det stresset i hvert fall. For da vet du hvor du skal legge alt henne. «

«Jeg vil tro det at det stresser deg litt. Men jeg vil og tro at når vi hadde det så innarbeidet da i begynnelsen med det assistansebordet at det var en hjelp.»

«Nei, men jeg regner med at jeg var ganske stressa. Men du vet vi blir jo opplært til å holde hodet kaldt og fokusere på det som er viktig. Og så, ja jeg var sikkert det, som mange andre nyutdannede.

Men litt sånn personlig så var jeg kjent i avdelingen som en som kunne holde hodet kaldt og ikke stresse, men ja selvfølgelig det var det helt sikkert. Men jeg kan ikke huske det.

“Men jeg kan si det at fortsatt kan det hende at for eksempel, det går en grad 1 sectio da og så vet jeg det er min tur for eksempel, eller jeg er den første som kommer inn på stua – og den som kommer først på stua skal kle seg sterilt. Fordi da skal man ikke gå og gjøre en kirurgisk håndvask, man skal bare ta på seg frakk og hansker og så ta på assistansebordet og legge frem instrumentene. Så man kjenner jo det adrenalinrushet, ja,ja! Stresset er jo der, men det er bare det at når man har gjort det så mange ganger så ...så man roer seg ned etter hvert. Men det er fint at adrenalinet er litt på topp, da betyr det at man er bevar og mer våken. Spesielt på en nattevakt er det bra. «

«Ja fordi det er noe du må mentalt forberede deg på. Det spiller ingen rolle om det er akutt eller planlagt, det har ikke så mye å si. Du må være like på og ha lik kontroll uansett. Fordi det skal i utgangspunktet gå like fort. Men man er litt shaky.»

«Ut fra erfaringen jeg kan jo bare si at det påvirker det er veldig positivt for de gir mye ro og fred i akutte situasjoner. Å si, hvis jeg har noen år erfaring med sånne situasjoner er det jo sånn at du kan senke skuldrene enda mer, ja, er det mye lettere.»

«Men jeg husker første gang jeg var ferdig, da var det meg og en medstudent. Så var det sånn: Jøss er det ingen som passer på oss, men det gikk jo veldig fint. Men da var vi så innarbeidet i det. For jeg husker min første nattevakt, så tenkte jeg: Å tenk hvis det kommer en sectio i natt, og det gjorde det jo selvfølgelig. Og da ser man jo at det går greit. Fordi man er så innøvd i det. Det er veldig viktig med.... mengdetrening, er jo veldig viktig. Hvis du bare vet hva du skal gjøre. Jeg hadde jo terpet på det i hodet hele tiden, det jeg skulle gjøre, og hvis jeg måtte stå alene, det kan man jo risikere og det har vi gjort.»

«Nei jeg må si men det er et av de inngrepene som gir deg gåsehud fordi det gjelder ikke bare 1 liv, det gjelder minst 2. Og så vet du at det kan så fort snu, fra at allting er greit til at det haster.»

«Det eneste jeg tenker på at fokuset er mest følelsen, også ærefrykten for liv som kommer så tett på. Mye annet vi gjør går jo mer på å fikse en skade som de kommer med, så reiser de ut og har fikset det. Her så er det liv og død det gjelder. Det er så stort på et vis. En stor hendelse i folks liv. Det er

spesielt for alle involverte. Særlig for foreldrene, mor og barn, far. Så er det så hyggelig når det går bra og desto verre når det ikke går bra. «

«Jo mer erfaring du får, jo mindre stress vil kanskje akkurat det assistansebordet være. At du er kommet videre, at det ikke stresser deg sånn. Men i startfasen er det en stressfaktor.»

«En stresssituasjon, uansett hvor hyggelige folk er så kan det godt komme skarpt ut. At, har du ikke det? Eller har du ikke det? Sånn unødvendig i en stresssituasjon. Det har noe med tryggheten og stemningen på hele operasjonen. Det skal så lite for å bikke med ene veien eller den andre sånn at det er en hyggeligopplevelse, eller det er jo stort sett en hyggelig opplevelse og folk blir stresset når ting haster så det er ikke alltid ting kommer ut på en pen måte. Og jeg tenker at jeg yter bedre når ting føles hyggelig og er bra, så gjør jeg en bedre jobb og det gjør de fleste. Så hvis du slipper å få hevede øyenbryn, fordi at liksom du er en orto sykepleier, kan du dette? Ja det tror jeg skal gå helt fint. Selv om det ikke er den store utfordringen så får du et spørsmål om det så gjør det noe med følelsen da.»

«Vi yter bedre når vi føler oss vel og dette kan jeg, utrolig hva det gjør. Vi mennesker er rare sånn. Liksom føler du deg så liten og der nede så kan du streve med de enkleste ting. Så bare det kan være et argument. Da føler alle seg bra og ting er på plass og ting er stødig og greit. Bordet ser ut som det skal. Det er en trygghet for alle, det kan være en god følelse for alle, når du vet at ting er sånn linet opp. «

«Men så har du det her følelsesaspektet da, på keisersnitt, som jeg tenker kan gjøre at du kan vippe av pinnen eller ikke. Akkurat som store ulykker, traumer og det blør og haster, sånn hvor det den akutte biten som kan være utfordrende å takle. Kanskje ikke særlig inngrepets art, for det er ganske greit. Så mer den akutte biten da at ting plutselig endrer seg. Det blør masse og du må gjøre tiltak for å stoppe blødningen. Så det er det som er spenningsdelen med keisersnitt. At ikke det, eller at det plutselig skjer endringer.»

Condensate:

I can remember the feeling (my first time as a sterile surgical nurse). Because you are quite stressed and full of adrenaline. But it's nice that the adrenaline kicks in, it makes you more alert and awake.

Especially on a night shift, it's good. When you are stressed and new, you cannot concentrate on everything at once.

When you know how to organize the instruments, there is one less thing to worry about. If you have a standardized way of doing it, you will at least save yourself that stress. After a few years of experience with such situations, you can lower your shoulders more, it becomes easier. The more experience you get, the less you stress about organizing the Mayo stand. But in the beginning, it is a stress factor.

During an emergency Cesarean section, that emotional aspect can throw you off your game. Just like major accidents or traumas, it bleeds and it's urgent. The acute bit can be challenging to deal with. Not necessarily the nature of the procedure, because the procedure itself is quite OK. More the acute part, that things suddenly change. It can bleed a lot and you may need to take steps to stop the bleeding. This is the tension part with a Caesarean section, especially when it is acute.