

Incipient changes in ICU patients' clinical conditions – signs, nurses' assessment and the dialogue between nurses and physicians

A qualitative study

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LIST OF PAPERS

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ACRONYMS AND ABBREVIATIONS

ICU: Intensive care unit

ICN: Intensive care nurse

SUMMARY

Background: Providing safe care for patients in intensive care units (ICUs) requires both awareness and perception of the signs indicating changes in a patient's condition at an early stage. In addition, ensuring high-quality health care and patient safety in the ICU requires an effective exchange of patient information among health professionals. The overall aims of this study were to explore the phenomenon of becoming aware of incipient changes in the clinical conditions of ICU patients. Furthermore, the study evaluated the dialogue between nurses and physicians regarding the clinical status of patients and the prerequisites for an effective and accurate exchange of information.

Methods: This study was conducted at two different ICUs in two Norwegian university hospitals. The study was qualitative and was inspired by the hermeneutic phenomenological approach. The study involved close observations and in-depth interviews with eleven intensive care nurses. Additionally, three focus group discussions were conducted. Each focus group consisted of nurses and physicians and included five to six participants (a total of 14). The text was analyzed using two different qualitative approaches.

Findings: In Paper I the nurses formed images of individual patients composed of signs (of changes in a patient's condition) that were sensory, measurable, and manifested as the mood of the nurse. The signs may be viewed as distinct and opposite to one another. However, they are tightly interwoven and interact with one another. Care situations are powerful stimuli for the patient and it is important for nurses to notice critical signs in these situations. The nurses also noted that following the patient over time is important for becoming aware of signs. The results shown in Paper II indicated that the nurses understand each patient's unique situation and foresee clinical eventualities through a sensitive and attentive way of thinking and working. This process requires nurses to be present at the bedside with both their senses (sight, hearing, smell and touch) and emotions, and they must work in a concentrated and

systematic manner throughout the shift. Knowledge about the unique patient interacts with past experiences and medical knowledge, which are essential for nurses to understand the situation. Paper III demonstrated that nurses' ongoing clinical observations of patients are essential to the discussion of patient care. The prerequisites for an accurate and effective dialogue between nurses and physicians regarding the patient's clinical status and care options included the nurse's ability to speak up and present clinical changes, the establishment of a shared goal and clinical understanding, and an open dialogue and willingness to listen to each other.

Conclusion: Identifying the incipient changes in a patient's clinical condition requires understanding the ever-changing dynamics of the patient's condition and images composed of signs. Care situations and the following of patients through shifts are essential in enabling nurses to detect these signs. Nurses understand each patient's situation and foresee clinical eventualities through a sensitive and attentive way of thinking and working. The information for each unique patient interacts with past experiences and medical knowledge, which are essential for nurses to understand the situation. Nurses should be aware of their essential role in conducting ongoing clinical observations of patients and their right to be included in decision-making processes regarding patient treatment and care. Accurate and effective dialogue between nurses and physicians on shift requires leadership that is able to organize routine interdisciplinary meetings. Furthermore, this type of dialogue requires physician willingness to listen to and include the nurses' clinical observations and concerns regarding the patient in the decision-making process.

INTRODUCTION

1.1 My interest in the topic of the study

The genesis of this research project is primarily my own experience of working for several years as an intensive care nurse. Intensive care nursing was a meaningful job for me, and I have often thought that intensive nursing made a discernible difference to patients and their families. My working days in the intensive care unit (ICU) consisted of meetings with people who were in vulnerable, critical and life-threatening situations. These encounters involved uncertainty, grief, hope and joy in situations in which a patient might oscillate between a good condition and ever-worsening deterioration.

Early recognition and treatment of critically ill patients in the ICU requires an awareness of signs that can indicate changes in a patient's clinical condition. In encounters with patients, although I could sense that there was a change in the patient's clinical condition, it was difficult to understand or state what that change entailed. In such situations, I became worried and more alert and began to assess the patient very closely. In retrospect, I considered that this sense was perhaps related to small signs, such as the patient's face, eyes, body movements, breath, and response to contact.

These experiences made me curious, and I asked questions such as the following: "What signs underlie nurses' worry or concern with respect to changes in a critically ill patient's condition?", "What do nurses themselves say about recognizing deterioration in a patient's condition at an early stage?", and "What is involved in this recognition skill?".

Nurses in the ICU work side-by-side with physicians at patients' bedsides. However, in my experience, nurses frequently report that disagreements are not discussed adequately and that their input is not well received by physicians. I began to have questions concerning these nurse-physician interactions. In turn, this contemplation led to questions such as the

following: “What do nurses and physicians in the ICU understand to be nurses’ essential contribution to the exchange of patient information?” and “What is required for nurses to be heard and included in discussions regarding patient care?”.

These experiences and thoughts led to an interest in finding suitable research questions for this topic in the Norwegian ICU context by reviewing research not only on detecting and assessing changes in a patient’s condition but also on how nurses and physicians interact in the ICU. First, I will discuss the intensive care context.

1.2 Intensive care context

Intensive care patients have life-threatening conditions and require life-sustaining interventions and technological support for survival, which entails continuously monitoring their vital functions, dynamic interventions, and health-promoting activities (Valentin & Ferdinande, 2011). ICU patients’ clinical scenarios are complex, as they have unstable medical and surgical conditions characterized by high levels of ambiguity, uncertainty, and unpredictability (Klepstad, 2010; Valentin & Ferdinande, 2011). The condition of an intensive care patient can oscillate between good and worsening deterioration, and a patient can progress to liminal states in which they face life-or-death situations (Egerod et al., 2015).

In the new millennium, the context of intensive care has evolved toward a paradigm of lighter sedation (Egerod, Albarran, Ring, & Blackwood, 2013; Strom & Toft, 2014). Despite being more awake under this lighter sedation, intensive care patients are frequently unable to express themselves verbally due to the presence of a ventilator and because nurses have few communication techniques (or tools) that allow conscious patients to communicate their feelings and needs (Guttormson, Bremer, & Jones, 2015; Karlsson, Bergbom, & Forsberg, 2012).

Patients in the ICU are extremely vulnerable. They are thus completely dependent upon nurses' goodwill, knowledge, skills, and sensitivity to their condition and needs. Conscious patients can require more attention and greater presence from the nurse to be able to communicate their needs (Karlsson & Bergbom, 2015). In the ICU, patients can experience discomfort along with occasional panic or fear, loss of control, transformations of perception, and surreal experiences (Cutler, Hayter, & Ryan, 2013; Tsay, Mu, Lin, Wang, & Chen, 2013).

Caring for the families of critically ill patients in the ICU is an important part of nurses' daily work. Such families often find themselves in difficult and uncertain situations. The unexpected admission of a family member to the ICU in a life-threatening condition places heavy stress and anxiety on a family – in addition to the uncertainty and fear involved with potentially losing a family member (Al-Mutair, Plummer, O'Brien, & Clerehan, 2013; Wong, Liamputtong, Koch, & Rawson, 2015). The families of ICU survivors suffer myriad problems, including depression, anxiety and post-traumatic stress symptoms (Al-Mutair et al., 2013; van Beusekom, Bakhshi-Raiez, de Keizer, Dongelmans, & van der Schaaf, 2016). Because ICU nurses have more contact than anybody else with both patients and their families, they are uniquely positioned to provide support (Adams et al., 2014). Blom, Gustavsson, and Sundler (2013) found that support from health-care professionals, especially critical care nurses, is important to improve families' well-being and ability to contribute to patient care.

ICU nurses work in a technologically advanced environment and must be able to cope with stressful work conditions. Moreover, their work has a high level of unpredictability and requires the ability to accurately define and rapidly change their priorities (Benner, Hooper-Kyriakidis, & Stannard, 2011; Swinny, 2010).

Bringsvor, Bentsen, and Berland (2014) described the variety and complexity of ICU nurses' knowledge base. They found that nurses in the ICU routinely used research,

theoretical knowledge (including both medical knowledge and nursing theories), experiential knowledge of the workplace culture, and knowledge derived from interactions with others in their daily nursing practice. ICU nurses use multiple cognitive processes to analyze collected patient information. These cognitive processes include applying clinical judgment and decision making that reflects their mental work (Kelly & Vincent, 2011). This process is in line with Berkow, Virkstis, Stewart, Aronson, and Donohue (2011), who found that acute patient care requires that nurses have high-level skills in clinical judgment and advanced reasoning.

Picture I The intensive care context

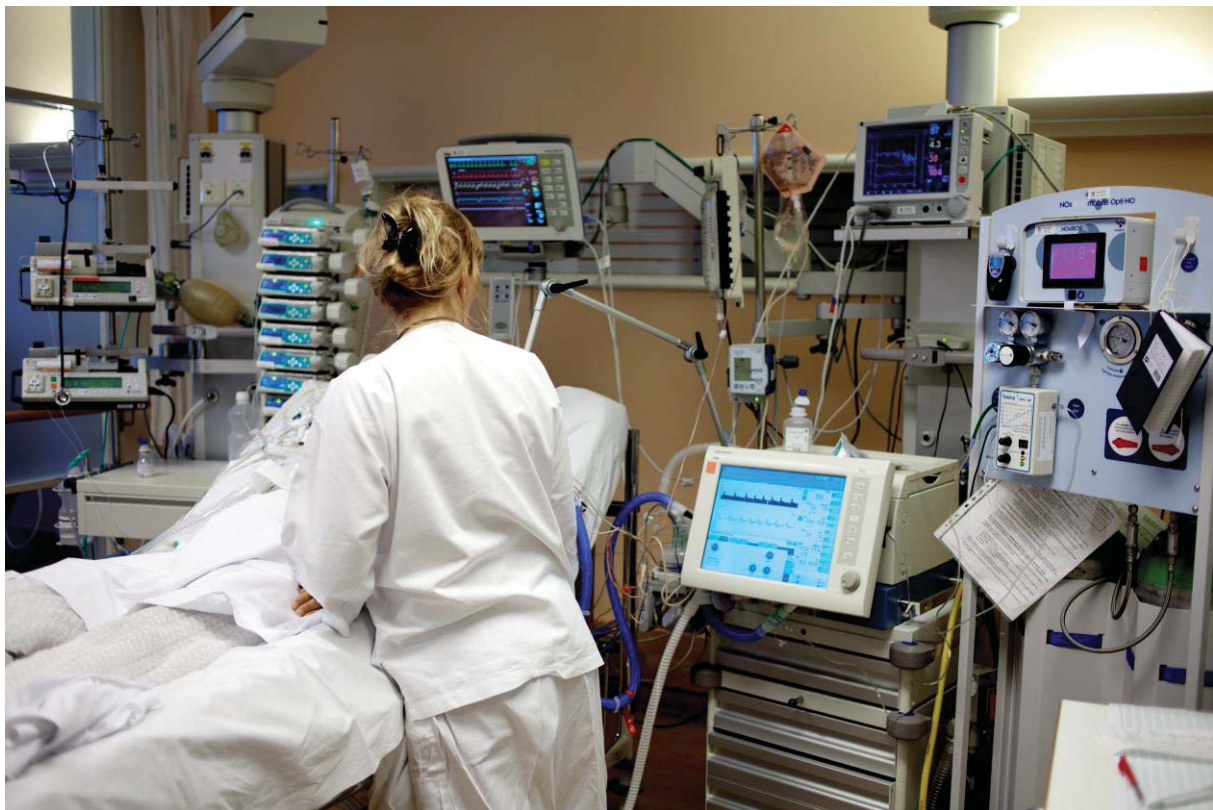


Photo: MARIUS KNUTSEN/VG

1.3 Literature review

The provision of safe care for ICU patients requires both awareness and the perception of signs that can indicate changes in such patients' condition (Benner et al., 2011; Henneman, Gawlinski, & Giuliano, 2012; Swinny, 2010).

Benner et al. (2011, p. 5) stated that expert practice is characterized by nurses who are able to recognize a change in the patient and family, to recognize the relevance of such changes, and to respond. Dykes, Rothschild, and Hurley (2010) reported that critical care nurses identify, intercept, and correct medical errors that otherwise can lead to serious and potentially lethal adverse events. Their study demonstrates the importance of critical care nurses in promoting patient safety. However, Randen, Lerdal, and Bjørk (2013) found that nurses often underestimate unpleasant symptoms such as pain, anxiety, and delirium in mechanically ventilated adult ICU patients. Thus, a deeper understanding of unpleasant symptoms and signs may help nurses recognize patient problems early and provide improved care in a timelier manner.

The deterioration of ward patients and the use of a rapid response system (RRS) team to improve patient outcomes are frequent subjects of study in the literature (Howell et al., 2012; Jäderling et al., 2011; Rothschild, Gandara, Woolf, Williams, & Bates, 2010). Early warning scores (EWSs) are used to activate RRS teams, and the criteria for summoning the team are typically based on the deterioration of a patient's vital signs (Rothschild et al., 2010). Clinical staff also use the clinical judgment-based "worried criterion" (intuition) to activate the RRS team, regardless of whether the patient's condition satisfies any formal criteria (Jäderling et al., 2011; Rothschild et al., 2010).

However, few studies have examined the actual process of becoming aware of incipient changes in a critically ill patient's condition from the perspective of intensive care nurses.

By conducting ongoing clinical examinations, the bedside nurse in the ICU plays a fundamental role in ensuring patient safety and in preventing patients' conditions from deteriorating (Henneman et al., 2010; Henneman et al., 2012; Kelly & Vincent, 2011; Livesay, 2016).

Surveillance is a systematic and ongoing process that includes assessing both the patient and the patient's environment (Henneman et al., 2010) and is a strategy that critical care nurses use to identify, interpret and correct medical errors. Kelly and Vincent (2011) found that nursing surveillance involves the purposeful and ongoing collection, interpretation and synthesis of data, including subtle changes in—and signs from—the patient.

Aitken, Marshall, Elliott, and McKinley (2009) found that the majority of attributes used by expert nurses when assessing and managing their patients' sedation requirements were related to the assessment aspects of care, such as facial grimaces, responses to stimuli, and anxiety and discomfort. Randen and Bjørk (2010) reported that when assessing sedation needs, intensive care nurses consider personal experience and intuition as more important than research-based knowledge. Sørensen, Frederiksen, Grøfte, and Lomborg (2013) identified eleven types of reasoning and actions by nurses that were essential components of non-invasive ventilation (NIV) care and management of patients with acute respiratory failure and chronic obstructive pulmonary disease, including the nurses' use of perceptual attention, embodied understanding, ongoing data evaluation and clinical imagination.

However, few studies have illuminated in depth the ways in which nurses think and work when identifying signs (whether negative or positive) in a patient's condition.

Effective collaboration between nurses and physicians is essential for ensuring high-quality health care and patient safety in the ICU (Dietz et al., 2014; Douglas et al., 2013; Hartog &

Benbenishty, 2015) and can improve patient outcomes (Martin, Ummenhofer, Manser, & Spirig, 2010).

Collaboration includes communication, and accurate and effective communication of patient information is an essential component of safe, efficient and patient-centered ICU care (Al-Qadheeb et al., 2013; Williams et al., 2010). However, the communication and information exchange that occurs between ICU caregivers is often complicated by the frequent handoffs involved in patient care, the fluctuating nature of critical illness, the complexity of the therapeutic interventions administered and the highly technical nature of the monitoring systems employed in the ICU (Collins, Bakken, Vawdrey, Coiera, & Currie, 2011).

Recent studies indicate that physicians and nurses have different perceptions of the quality of nurse-physician collaborations and communication. Nurses typically feel that it is difficult to speak up, that disagreements are not appropriately resolved and that their input is not received well by physicians (Al-Qadheeb et al., 2013; Hartog & Benbenishty, 2015; Nathanson et al., 2011). In a survey of both nurses and physicians in two medical ICUs, Al-Qadheeb et al. (2013) reported differences in the perceptions of communication between nurses and physicians regarding pain, agitation and delirium that occurred at night. The authors found that bedside nurses often believed that physicians did not appreciate the urgency or complexity of the clinical situation that the physician had been contacted to discuss.

There is a need to better understand the verbal communication of ICU nurses when conveying patient information to physicians from both the ICU nurses' and physicians' perspectives.

In conclusion, the questions I raised based on my own clinical experiences regarding the worries or concerns of ICU nurses, the recognition of changes in a patient's condition at an early stage and the exchange of patient information between nurses and physicians seemed relevant. In addition, the knowledge gap in clinical research provided the grounds for developing my research topic, as presented below.

1.4 Topic of the study and structure of the thesis

This thesis is a qualitative investigation of (1) the phenomenon of becoming aware of incipient changes in a patient's clinical condition from the perspective of experienced intensive care nurses, (2) the phenomenon of assessing changes in the conditions of critically ill patients in the ICU, and (3) dialogue between nurses and physicians regarding patients' clinical status and care options and the prerequisite that any such dialogue must involve the effective and accurate exchange of information.

The study involved close observations of bedside nursing and in-depth interviews with eleven ICU nurses after their shifts. In addition, three focus groups were formed, each consisting of four to six participants and including both nurses and physicians (a total of 14 individuals participated). This study was conducted at two ICUs in two Norwegian university hospitals, each with 8 to 10 active intensive care beds. The data were collected during a 10-month period spanning from December 2012 to September 2013.

In Chapter 2, current and relevant empirical research is described. Chapter 3 presents the theoretical perspectives, which are essential to the discussion of the main findings later in this thesis. The aims of the study are presented in Chapter 4, followed by the methodology and research process in Chapter 5. The empirical findings generated by the three articles comprising this thesis are individually summarized in Chapter 6 and further discussed in Chapter 7 in terms of both current research and theoretical perspectives. In Chapter 8,

methodological considerations and the strengths and limitations of this study are discussed.

On this basis, the clinical and research implications are discussed in Chapter 9.

2 LITERATURE REVIEW

This chapter reviews the current research. To conduct this literature review, the following MeSH terms were searched in the PubMed database: Assessment, nursing; Attending physicians, hospital; Critical care; Critical care nursing; Interprofessional relations; Intensive care units; Nurses; Nurses role; Patients; Signs and Symptoms; Vital signs (see Appendix I for the search strategy). Free-text searching was also performed in the CINAHL and PubMed databases.

2.1 Recognition of early changes in the conditions of ICU patients

Recognition of early changes in a patient's condition and the ability to foresee potential complications are understood as important for preventing complications and safeguarding the lives of critically ill patients (Benner et al., 2011; Henneman et al., 2012).

2.1.1 Signs of incipient changes

In the Symptom Management Model of Dodd et al. (2001), a symptom is defined as a subjective experience reflecting changes in an individual's biopsychosocial functioning, sensations, or cognition. In contrast to symptoms, a sign is defined as any abnormality indicating a disease that is detectable by the individual or by another individual. Patients in the ICU are frequently unable to express themselves verbally due to the presence of a ventilator and because nurses have few communication tools that allow conscious patients to communicate their symptoms (Guttormson et al., 2015; Karlsson et al., 2012). Based on the definition of symptoms and signs given in the symptom management model (Dodd et al., 2001), we interpret a patient's expressions observed by the nurses in our study more as signs that might indicate incipient changes in a patient's condition than as signs that might indicate disease.

ICU patients generate both qualitative and quantitative information, and bedside nurses continuously gather and interpret the information generated by patients and the environment. In addition to critical care nurses' assessment of the patient, physiological monitors, critical care scores and intermittent laboratory test results support timely nursing intervention and can improve patient outcomes (Trinier, Liske, & Nenadovic, 2016).

In a dimensional analysis of 34 papers, Lavoie, Pepin, and Alderson (2014) explored the variations between acute care nurses (ACU) and intensive care nurses' understanding of patient deterioration, according to their understanding of the term. They found that from ACU and ICU nurses' perspectives, patient deterioration can be defined as an evolving, predictable and symptomatic process of physiology worsening toward critical illness. However, perceptions of the validity of the criteria used to recognize patient deterioration vary between ACU and ICU nurses. Acute care nurses tend to use subjective and non-quantifiable signs to recognize deterioration; such signs often arise before objective signs. Conversely, ICU nurses emphasize objective (quantifiable) criteria, linking this characteristic to the appropriateness and acceptability of the criteria at a medical college.

In a systematic review, Douw et al. (2015) examined the signs and symptoms underlying nurses' worries or concerns in relation to the early recognition of deteriorating conditions in patients on general wards in acute care hospitals. These authors found 37 different signs and symptoms that can alert nurses that a patient may be rapidly deteriorating, such as increased respiratory rate, coldness and impaired perfusion, restlessness and changes in consciousness. Based on these "worry" signs, Douw, van Zanten, van der Hoeven, and Schoonhoven (2016) developed a clinical assessment tool, the Dutch Early Nurse Worry Indicator Score (DENWIS). In a single-center study, they further explored the value of nurses' "worry" and/or indicators underlying "worry" to predict unplanned intensive care admission and/or unexpected mortality among surgical patients. They found that the

DENWIS indicators were associated with unplanned ICU admission and/or unexpected mortality and improved RRS call criteria based on vital signs.

2.1.2 Intuition in nursing

Intuition can be defined as “this experience-based wisdom [that] creates perceptual awareness, which refers to a knowing without necessarily having a specific rationale ...” (Benner et al., 2011, p. 67). This is a skill developed by nurses over time and often enables nurses to anticipate a patient’s decline before any objective evidence of deterioration in a patient’s condition emerges (Benner, Tanner, & Chesla, 2009).

Benner et al. (2011) explain that the term intuition does not mean wild guesses or extrasensory perception but instead refers to pattern recognition, a sense of salience and increased attentiveness based on past experiences. This meaning is in line with Trinier et al. (2016), who describe “gut feelings” or “intuition” as pattern recognition that occurs as observed data are integrated with memory and past experiences. Additionally, Douw et al. (2015) reported that nurses’ subjective feelings of worry or concern are essential in recognizing any deterioration in a patient’s condition in general wards. Nurses frequently describe being worried or concerned before changes in vital signs occur, suggesting that this perception has potential relevance as an early indicator of patient deterioration.

2.2 Patient assessment in the ICU

The importance of observation and surveillance was noted as long ago as 1860 by Nightingale: “...it must never be lost sight of what observation is for. It is not for the sake of piling up miscellaneous information or curious facts, but for the sake of saving life and increasing health and comfort” (Nightingale, 1980, p. 103). This statement remains valid, particularly with regard to the observation and surveillance of critically ill patients in the ICU.

2.2.1 Nurse-to-patient ratio

Ensuring adequate nurse staffing in the ICU is essential to providing high-quality patient care (Kleinpell, 2014). In many ICUs, nurses observe patients continuously for 12-hour shifts in a 1:1, 1:2 or 2:1 nurse-to-patient ratio (Trinier et al., 2016). Such observational contexts help nurses to identify early warning signs (such as increased pallor, breathlessness or a change in vital signs) that indicate deteriorating conditions in a patient. The proximity of nurses with patients—both spatial and temporal proximity—enables them to observe adverse events and prevent and intercept errors, which in turn leads to improved safety and better outcomes for patients (Kleinpell, 2014; Trinier et al., 2016; West et al., 2014).

Thus, nurse staffing ratios are important system-level factors that improve the quality of care for patients (Kleinpell, 2014), and the nurse-patient staffing ratio must be responsive to patient acuity to ensure the required level of nursing care and surveillance (Kelly, Kutney-Lee, McHugh, Sloane, & Aiken, 2014).

2.2.2 ABCDE approach to patient assessment

To improve the safe initial management of a trauma patient, the Advanced Trauma Life Support (ATLS) approach was developed. ATLS is based on the Airway, Breathing, Circulation, Disability, Exposure (ABCDE) approach, which is a systematic approach for the initial assessment and treatment of critically ill and injured patients (American College of Surgeons Committee on Trauma 2012, 2012, pp. 271-273). The ABCDE systematics focus on patients' vital physiological functions in a priority-based order to identify pathophysiological signs. First, life-threatening airway problems are assessed and treated, followed by life-threatening breathing problems, circulation problems and the level of consciousness. Finally, a determination is made regarding whether there are any clues to explain the patient's condition (Jevron, 2010; Thim, Krarup, Grove, Rohde, & Løfgren, 2012). This approach is

applicable in all clinical emergencies, including ICUs (Thim, Krarup, Grove, & Løfgren, 2010). In complex clinical situations, the ABCDE approach can decompose the situation into parts that are more manageable for the health care professional. In addition, the ABCDE approach can serve as an assessment and treatment algorithm that improves both the pace and quality of treatment (Thim et al., 2012).

Vaughan and Parry (2016) explored the ABCDE approach to patient assessment in the context of sepsis. They found that using the ABCDE approach leads to a systematic assessment that can allow nurses to identify the symptoms of sepsis earlier than with the basic method that uses vital observations exclusively.

2.2.3 Assessment tools in the ICU

Various forms and tools have been developed for systematic observation to describe the symptoms and development of a patient's clinical condition. According to Barr et al. (2013), the development of valid and reliable bedside assessment tools that effectively measure pain, sedation, agitation and delirium in ICU patients has allowed clinicians not only to manage their patients better but also to evaluate outcomes associated with both nonpharmacological and pharmacological interventions.

In relation to pain assessment, Arbour and Gélinas (2010) examined the validity of vital signs for pain assessment in adult ICU patients. These authors found that vital signs do not seem to represent valid indicators for pain assessment in ICU patients. Nurses should rely on valid behavioral pain scales developed for critically ill adults when a patient no longer can verbally express pain. Rose, Haslam, Dale, Knechtel, and McGillion (2013) reported that implementation of the Critical-Care Pain Observation Tool increased the frequency of pain assessment and appeared to enhance the administration of analgesics in critically ill patients who were unable to self-report pain.

2.2.4 Nursing surveillance

Nursing surveillance has been described as a process that can lead to early recognition of and even prevent medical errors and adverse events (Henneman et al., 2012; Pfrimmer et al., 2017). The nursing intervention classification (NIC) (Butcher, Bulechek, Dochterman, & Wagner, 2013) defines surveillance as “the purposeful and ongoing acquisition, interpretation, and synthesis of patient data for clinical decision-making”.

In their descriptive explorative study, Pfrimmer et al. (2017) examined how critical care nurses express surveillance. They found that surveillance was expressed by means of nurses’ gathering cues, reflecting on past knowledge, asking questions, verifying, and gathering all the information together to find meaning. During change-of-shift handoffs, surveillance involved collaborative cognitive work to find meaning in the collected cues.

Bedside nurse surveillance involves real-time monitoring of patient status and surveillance for adverse events. For the patient to benefit from such surveillance, the nurse must be able to evaluate and act on the accumulated information. ICU patients’ conditions can change rapidly, and the nurse must have the knowledge, ability and available resources to intervene quickly and appropriately (Trinier et al., 2016).

2.3 Interprofessional collaboration in the ICU

Patient care is best delivered through collaboration among individuals of different professions (Paradis and Reeves 2013). World Health Organization (2010, p. 13) defined interprofessional collaboration as “when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, careers and communities to deliver the highest quality of care across settings”. In the ICU, effective interprofessional collaboration is essential and critical for ensuring the quality and safety of health care, given the severity of the patients’ conditions and the quick and often

unpredictable changes to those conditions that can be experienced in the ICU (Dietz et al., 2014; Reeves et al., 2015).

A multinational consensus within the European Society of Intensive Care Medicine provided guidelines and recommendations for ICUs stating that “Intensive care medicine is the result of close cooperation among doctors, nurses, and allied health professionals” (Valentin & Ferdinande, 2011, p. 1577). The guidelines for intensive care in Norway (Norsk Anestesiologisk Forening & Norsk sykepleierforbunds landsgruppe av intensivsykepleiere, 2014) stipulate that physicians provide medical management in the ICU and take charge of the multi-professional team. The Norwegian guidelines emphasize the importance of the multiprofessional team in ensuring optimal processes and patient outcomes. In other words, in clinical practice, the intensive care nurse and physician form a team with independent responsibilities, as described in the Health Personnel Act (1999), and together are responsible for coordinating the diagnosis, treatment and care of each individual patient (Norsk Anestesiologisk Forening & Norsk sykepleierforbunds landsgruppe av intensivsykepleiere, 2014).

Alexanian, Kitto, Rak, and Reeves (2015) observed the ways in which professionals interacted in the ICU and found that relational factors—including different professional cultures, hierarchies within and between professions, and medical dominance—influenced the ways in which work occurred in these specific settings. Costa, Barg, Asch, and Kahn (2014) explored clinicians’ perceptions of and the factors that facilitate interprofessional collaboration in the ICU. They found the following two distinct types of facilitators: specific structural facilitators of team communication in the ICU environment and cultural facilitators that strengthen teams’ shared goals and vision. Cultural facilitators were identified as accessibility, trust, value and leadership. Trust was strengthened by familiarity, in which staff members had long working—and occasionally personal—relationships with one another.

Value facilitated interprofessional collaboration through assignment to others' experience, skill, knowledge and perspectives. Kendall-Gallagher, Reeves, Alexanian, and Kitto (2016) found that nurses described the interprofessional team in the ICU in terms of three characteristics: the professional role, the level of trust and respect, and the willingness to help. Nurses related trust to clinicians' knowledge, experience and behavior, whereas respect tended to be hierarchical in nature. They also found that teamwork-related factors such as the level of nursing experience, professional power, and hierarchy influenced the quality and efficiency of interprofessional work.

In a yearlong comparative ethnographic study of interprofessional collaboration at four ICUs, Paradis, Leslie, and Gropper (2015) found that nurses' opportunities to present from their templates depended upon the individual preferences, mood, and time constraints of the attending physicians who controlled the pace and inclusivity of interprofessional rounds. Conversations about care during morning interprofessional rounds were held within the circle of physicians, and the rounds were defined as a medical rather than an interprofessional enterprise. The non-physicians in the study used strong metaphors to describe their efforts to join that inner circle, such as "elbow(ing) in" and "fighting to get in".

Kendall-Gallagher et al. (2016) reported that ICU nurses shifted gradually from being reporters of information to trusted and respected team members with clinical credibility. However, this transformation was highly dependent upon whether the nurses acquired knowledge, experience, and confidence in learning how to argue a clinical point persuasively.

In a scoping review of ethnographic studies of interprofessional care delivery in intensive care, Paradis et al. (2014) reported that the different standards and types of knowledge embodied by nurses and physicians and the divergent roles and authority of the two groups occasionally led to interprofessional misunderstandings and even conflict. Nurses' contributions were rare and frequently marginalized, and their knowledge was occasionally

devalued; however, some nurses found ways to alter the patterns of interaction in medical rounds to participate in care and treatment discussions. They also found that medical dominance acts as a serious hindrance to teamwork in the ICU.

The importance of close collaboration between nurses and physicians to ensure patient comfort during mechanical ventilation was also valued by Laerkner, Egerod, and Hansen (2015), who found that caring for more-awake mechanically ventilated patients was found to be both demanding and relatively unpredictable. This finding is in line with Karlsson and Bergbom (2015) who found that nurses wished for closer teamwork when they realized that they could not alleviate patient suffering.

3 THEORETICAL PERSPECTIVES

The main theoretical contributors to this thesis are the Danish theologian and phenomenologist Knud E. Løgstrup and the Norwegian nursing philosopher, Kari Martinsen. In addition, the findings led us to the French philosopher Maurice Merleau-Ponty and the German philosopher Hans-Georg Gadamer.

First, I will present Løgstrup's phenomenology of sensation, which is important to discussing the findings in Papers I and II. This information encompasses his understanding of the human sensuous presence in the world, senses as a sounding board and the interplay between sensation and understanding. Second, I will present the thinking of the Norwegian nurse and philosopher Kari Martinsen and the thinking of Løgstrup in a clinical nursing context. The third section focus on Merleau-Ponty's phenomenology of the body. In Paper III, we related our findings to Gadamer's work on understanding and the fusion of horizons, as presented in the fourth section.

3.1 K. E. Løgstrup: Phenomenology of sensation

The Danish theologian and phenomenologist K.E. Løgstrup (1905-1981) is one of the most referenced Danish thinkers of the 20th century. Although Løgstrup is widely recognized for his writings on ethics, I drew on Løgstrup's works on sensation as an important source for creating understanding and cognition. My reading of Løgstrup is coloured by my intention to use his insights regarding the phenomena of significance in the practice of intensive care nursing. I argue that the use of Løgstrup's phenomenology of sensation can add new dimensions to understanding the experiences of intensive care nurses regarding becoming aware of incipient changes in a patient's clinical condition and the ways in which nurses think and work when assessing changes in the conditions of critically ill patients in the ICU.

3.1.1 The human sensuous presence in the world

According to Løgstrup (Løgstrup, 1995a, 2013), “with our senses, we are emplaced in the universe”. Sensation connects us with others and the world and provides immediate access to the world surrounding us. Løgstrup stated that all thinking and all understanding is based on emotion and sensation. With sensation, we are without distance and are always out among things and events (Løgstrup, 1995b, 1995c): “... that what is sensed is outside our ubiquitous body, but not outside our omnipresent sensation” (Løgstrup, 1995a, p. 12). According to Løgstrup (Løgstrup, 1995a, pp. 14-15), distancelessness in sensation is not only reflected in omnipresence but also in the fact that in our sensation, no pre-modification takes place. These characteristics of sensation, omnipresence and the absence of pre-modification are founded in the same fact: that the universe is distancelessly present in sensation.

3.1.2 Senses as a sounding board

In its purest form, sensation comes entirely stripped of any interpretation or conscious understanding (Løgstrup, 1995b). Through sensation, something becomes alive within us, moves us bodily, and works on us. Løgstrup’s (Løgstrup, 1995b, 2013) phenomenology of sensation describes an impression as always being sense-based and tuned. The impression is carried by the mood. According to Løgstrup (Løgstrup, 1995a, p. 296), we can get an idea from an impression, and “one’s thoughts can be set in motion, associations can teem and breed...”. With the impression, we are opened to what impresses the feeling of the cognition upon us. Løgstrup (Løgstrup, 2013, p. 192) explains that our understanding of other humans is an understanding of impressions of them and not the characteristics of them. The impression give us access to them, and mimicry, gestures, tone and body posture play a crucial role.

As Løgstrup (Løgstrup, 1995a, 1995b) explained, the mind does not exist without being in tune with its surroundings. With sensation, the mind becomes tuned into its surroundings, and this receptivity must exist for anything to make an impression upon us. Løgstrup (1995b, p. 298) explained that the mind is a sounding board for everything that exists and occurs in the world and in nature, “in which the human beings with their senses, eyes and ears are embedded”. In sensation, we are tuned and moved by impressions towards expressing these tuned impressions (Løgstrup, 1995b, 1995c).

3.1.3 The interplay between sensation and understanding

According to Løgstrup (Løgstrup, 1995b, 1995c), all understanding is based on sensation. Sensation lacks distance. The seen and the heard are at a distance from our body but not at a distance from our sensation. Sensation and understanding are separate and opposed to each other: sensation is without distance, while understanding creates distance. However, sensation and understanding are not independent of each other but are tightly interwoven in our daily lives. Løgstrup (Løgstrup, 1995c, p. 119) uses an example with the sensation of hearing: “In my hearing, I am up by the airplane that is thousand metres above - not above my hearing but above my body”.

According to Løgstrup (1995b, p. 11), we sense impressions as though they are speech; these attuned impressions carry a prelinguistic meaning that will eventually be articulated. What has made an impression on us become in a way our conversation partner. As Løgstrup (2013) explains, without distance, we would be lost in sensation and unable to understand. Løgstrup (Løgstrup, 1995b, 1995c, 2013) stated that with language understanding creates distance between the sensed and the sensing and creates an open space in which to move and think. In this space, or what Løgstrup (Løgstrup, 1995b, 1995c) calls “the fictive space of understanding”, sensation reached into understanding and made it intuitive.

Løgstrup (2013) stresses that we must pursue a spontaneous flash of insight immediately when and where it occurs because that flash is a unique and a onetime constellation; otherwise, we may lose the insight. According to Løgstrup (1987), it is important to have a long, continuous and uninterrupted block of time, and concentration is the first prerequisite to be able to perceive an impression and to obtain clarity in a situation.

3.2 K. Martinsen - the thinking of Løgstrup in a clinical nursing context

The Norwegian nurse and philosopher Kari Martinsen has strongly influenced Norwegian nursing for many years. Martinsen is inspired by Løgstrup, and she has interpreted some of his thoughts into her development of a philosophy of care. In this thesis, Løgstrup's works on sensation are regarded as an important source of creating understanding and cognition.

Inspired by Løgstrup's view of human life as a life in interdependence, Martinsen argue that human being are interconnected and dependent to one another (Martinsen, 2006, 2008a). Martinsen (2012) explains that when nurses in a clinical context are sensitive and attentive, they are receptive, touched, and moved to respond to the patient's appeal and needs. Sensation involves the presence of and engagement with others, allowing nurses to listen to, look after and care for a patient. According to Martinsen (2008a), the mind is in sensation, always touched and moved by the situation, and to receive an impression is to be sensitively moved.

Martinsen (2012) refers to Løgstrup (1987, p. 14), who explain that this attunedness (stemthed) is the receptivity (modtagelighet) that must exist for anything at all to be able to make an impression on us. According to Martinsen (2008a) this means that nurse are in encounters with patients touched and moved through their senses, and attempt to understand the impression bearing an appeal to look after the person's life for whom he/she is caring

Martinsen (2012, pp. 14-15), explained the notion of clarification (*tydning*) as a way for nurses to be present in a situation. Clarification require nurses to be receptive, tuned, and attentive present in encounters with patients', and not to remain outside what should be clarified. Clarification involves being in the shifting interplay between sensation and understanding, searching for words that may help to clarify meanings in impressions.

Inspired by the works of Løgstrup, Martinsen (2012) describes the interactive motion between sensation and understanding as “the *fictional space*”, wherein the nurse can dwell on the impression that has moved him/her. As Martinsen (Martinsen, 2008a, 2008b) explain, sensation has an analog character that brings out variations and contexts of the situation, thereby allowing the situation to be considered from several perspectives. In interpreting the impression, knowledge regarding the unique patient exists in an interplay with memories and past experiences, which can allow a nurse to see new analogies, and have flashes of insight that make it possible to see new aspects of the patient (Martinsen, 2012).

In interpreting the impression, the nurse is open in the present situation to seeing several sides of the patient and obtaining a better overall impression (Martinsen, 2008a). Martinsen (2012) stated that thinking that creates a space for a flash of insight to occur is open, movable and enquiring.

Martinsen (2008a, pp. 114, 125) explains that we grasp something through our practical dealings with things, people, and nature. In relation to nursing practice, nurses obtain understanding through practical skills and a sensitive presence.

3.3 M. Merleau-Ponty's phenomenology of the body

Merleau-Ponty (1908-1961) described the phenomenology of the body. For Merleau-Ponty (1945/2009), the lived body takes on a central position, and we have access to the world

through our bodies. The body is not considered an object ordered by the mind; instead, he emphasizes the body's exposure to the world as a central experience.

Merleau-Ponty (1945/2009) explained that the lived body is both an object that we have and a subject that we are. There is no dividing line between body and self; both are intertwined. According to Merleau-Ponty, we can never turn away from the body as a subject-object in the same way that we can turn away from other subject (Merleau-Ponty, 1945/2009, p. 112). It is through my body that I am conscious of the world, and Merleau-Ponty (1945/2009, p. 94) stated that "The body is the vehicle of being in the world". It is integral to our perceptions and to any understanding of human experience. It is the "horizon latent in all our experience and itself ever-present and anterior to every determining thought" (Merleau-Ponty, 1945/2009, p. 106). In other words, the body can be regarded as a basic source of experience, and being a body subject entails being a subject that is always inhabiting its world.

Merleau-Ponty (1945/2009) explained that, we perceive the world from different point of view depending on the situation, and we perceive various perspectives accordingly to the perceptual field, which is a horizon, i.e., the place of possible experiences. Merleau-Ponty uses the example of a house that we can see from various angles and from different perspective of view. The horizon allows us to see these different perspectives; it provides openness, while we through our bodies are situated in the world. While the horizon constitutes a limitation, i.e., it is the limit of our visual field, it also provides an opportunity to cross over that limit (Merleau-Ponty, 1945/2009, pp. 77-83).

We are in the world through our lived bodies, and it is through our bodies that we have a living connection to others, a personal and subjective relationship with humans and the world. Merleau-Ponty (1945/2009) explain the notion of "being-in-the-world" as the intertwined relationship between humans and the world. In this being-in-the-world, humans

reach one another through their bodily existence, in what Merleau-Ponty refers to as intersubjectivity. Intersubjectivity is how we are and how we exist with others in the world in an understanding way.

Merleau-Ponty stated that one of our prime ways of understanding of other people is through language. “*In the experience of dialogue, there is constituted between the other person and myself a common ground: my thought and his are interwoven into a single fabric...(...)*” (Merleau-Ponty, 1945/2009, p. 413). Language is the most important means of communication with the other, and it is decisive when experiencing other people. Language extends our intersubjectivity in that we can share meanings and relate these meanings to our own situation as it unfolds. Merleau-Ponty notes that we can locate ourselves meaningfully in the ongoing interpersonal world through language and intersubjectivity.

According to Merleau-Ponty (1945/2009, p. 491), previous experiences are bodily and embodied and therefore always present. Previous experiences are intertwined with the body’s past and present life situation: “I belong to my past and, through the constant interlocking of retentions, I preserve my oldest experiences, which means not some duplicate or image of them, but the experiences themselves, exactly as they were”. The body, in other words, can recall previous experiences in the sense that these experiences acquire significance here and know.

For Merleau-Ponty (1945/2009), the lived body is central to being-in-the world. Consciousness always pertains to objects: It is intentional, aimed or directed at something. Merleau-Ponty (1945/2009, pp. 159-160) explains that the body is our general medium for having a world, and he stated that consciousness is “*being-towards-the-thing through the intermediary of the body*”.

3.4 H-G. Gadamer's work on understanding and the fusion of horizons

Gadamer (1900-2002) focuses on understanding and the fusion of horizons. According to Gadamer (1975/2004) a fusion occurs as a dialogical event in which one's own horizons are expanded through the conscious assimilation of the horizon of the other. Gadamer (1975/2004, p. 316) explain that "The concept of "horizon" suggests itself because it expresses the superior breadth of vision that the person who is trying to understand must have". Gadamer (1975/2004, p. 316) states that "To acquire a horizon means that one learns to look beyond what is close at hand – not in order to look away from it but to see it better".

Gadamer (1975/2004, p. 310) suggests that understanding begins "when something addresses us". Understanding occurs when our present understanding or horizon is moved to a new understanding or horizon by an encounter. Understanding is the fusion of our past and present horizon. Indeed, the present cannot be formed without the past. Past and present cannot exist without each other, and "understanding is always the fusion of these horizons supposedly existing by themselves. Thus, the process of understanding is a 'fusion of horizons': the old and the new horizon combining into something of living value. This event requires the suspension of our own prejudices, which are subsequently translated into the logical construction of a question. The essence of the question, said Gadamer (1975/2004, p. 310), is "to open up possibilities and keep them open".

Gadamer (1975/2004) explains that the development of a new understanding occurs through a dialogue of questions and answers in which we fully participate, conscious of our own preconceptions and history. As we enter an encounter, we already have pre-formed ideas. Essentially, we have a history and an understanding of the world before we begin to think about it. Gadamer (1975/2004, p. 283) calls these "prejudices", not in the familiar, negative sense but in the sense of "a judgement that is rendered before all elements that determine a situation have been finally examined". Gadamer states that we cannot stick blindly to our own

fore-meaning if we want to understand the meaning of another and goes on to state that that we remain open to the meaning of the other person.

(Gadamer, 1975/2004) stated that there is an important connection between language and understanding; “Not only is the special object of understanding, namely tradition, of verbal nature; understanding itself has a fundamental connection with language” (p. 414). Language is the medium for interpretation and understanding. The process of coming to understand a text or another person is a process of relationship through verbal interpretation; “There can be no speaking that does not bind the speaker and the person spoken to” (Gadamer, 1975/2004, p. 416).

4 AIMS OF THE STUDY

The overall aim of this thesis is to examine the experiences of intensive care nurses in identifying changes in a patient's condition at an early stage and the dialogue between nurses and physicians concerning the patient's clinical status and care options.

This thesis consists of three parts with the following specific aims:

- I. To explore the phenomenon of becoming aware of incipient changes in a patient's clinical condition from the perspective of experienced intensive care nurses.
- II. To explore the phenomenon of assessing changes in the conditions of critically ill patients in the ICU.
- III. To explore the dialogue between nurses and the physicians on shift regarding the clinical status of patients and the prerequisites to ensure that any such dialogue involves the effective and accurate exchange of information.

5 METHODOLOGY AND RESEARCH PROCESS

This chapter begins with a presentation of the multimethod design in chapter 5.1. In chapter 5.2, I will present the hermeneutic phenomenological approach as the overall approach, followed by the researcher preconceptions in chapter 5.3. In chapters 5.4, 5.5, 5.6 and 5.7, I conduct a detailed review of our practical approach throughout the research process leading to the findings in Paper I, II and III, which are presented in chapter 6.

5.1 Multimethod design

A multimethod design involves combining different methods, such as multiple quantitative methods, multiple qualitative methods, or a mixture of the two, within the same study (Hunter & Brewer, 2015). Complex and ambiguous phenomenon require sensitive choices of data-gathering methods. A combination of methods can be worthwhile (Dahlberg, Dahlberg, & Nyström, 2008, p. 176).

To explore the research questions, I asked what the best approach to addressing them would be. I determined that I required various methodological approaches and methods to gather different forms of experiential materials. To be as close as possible to the investigated phenomenon, I chose the overall approach of a hermeneutic phenomenological approach. This approach is further described in chapter 5.2. In Papers I and II, I focused on each subject's (nurse's) embodied knowledge, thoughts and feelings, and I considered a combination of close observation and in-depth interviews as suitable methods. In Paper III, I explored each subject's experience by allowing subjects (nurses and physicians) to speak together in focus groups, engaging in dialogue about their experiences.

Some might consider a phenomenological approach and focus groups to be incompatible. Webb and Kevern (2001) argue that a phenomenological approach requires an individual to describe his or her experiences in a relatively "uncontaminated" manner and that

a group method of data collection involving interaction among several participants is therefore incompatible with phenomenological research. Bradbury-Jones, Sambrook, and Irvine (2009) argue that a focus group can be congruent with phenomenological research and that an individual's lived experiences can be preserved in a focus group setting. This approach requires critical reflection on the part of the researcher and the need for the researcher to understand the philosophical underpinnings of his or her phenomenological study to justify and defend the choice of method. I believe that it is possible to combine phenomenological research with focus groups in which there is openness and each subject (nurse and physician) is given time to provide his or her own unique description of the phenomenon under study. This approach is further explained in chapter 5.5.2.

Table 1 Study design of Papers I, II and III

	Paper I	Paper II	Paper III
Design	Qualitative Hermeneutic-phenomenological	Qualitative Hermeneutic-phenomenological	Qualitative
Data gathering	Close observation (n=29) In-depth interview (n=24)	Close observation (n=29) In-depth interview (n=24)	Focus group (n=3)
Participants	ICU nurses (n=11)	ICU nurses (n=11)	ICU nurses (n=8) Physicians (n=6)
Data analysis	Reflective methods, including thematic and linguistic reflections (van Manen)	Reflective methods, including thematic and linguistic reflections (van Manen)	Doody, Slevin and Taggart's concept of analysis, based on Kruger and Casey's framework

5.2 Hermeneutic phenomenological approach

This study was qualitative in nature and inspired by the hermeneutic phenomenological approach (Van Manen, 2007, 2014). Because it considers how the phenomenon in question

appears, this approach is considered phenomenological (descriptive) and is hermeneutic (interpretive) because uninterpreted phenomena as such do not exist (Van Manen, 2007, p. 180).

Phenomenological research aims to establish contact with original experiences (Van Manen, 2007). If we seek to go “to things themselves”, we must meet them precisely where they are, where they come to themselves, and where they appear most immediately and originally (Schiermer, 2013).

The phenomenological idea of “going to the things” means that as a researcher, I should position myself in such a way that things can show themselves to me; thus, “the things” are understood as phenomena (Dahlberg et al., 2008). A phenomenon can be understood as an object, a matter, a part of the world as it presents itself to—or as it is experienced by—a subject (Dahlberg et al., 2008). A phenomenon can be understood as an object, a matter, a part of the world as it presents itself to—or as it is experienced by—a subject (Dahlberg et al., 2008)

Merleau-Ponty (1945/2009, p. vii), explained that “Phenomenology is the study of essence”. Phenomenological research involves gathering a description of the structure of the lived experiences of a specific phenomenon in which the structure of the lived experience is understood as a description of the essence, which refers to “that which makes some “thing” what it *is*—and without which it could not be what it is” (Van Manen, 2007, p. 10).

According to Van Manen (2007), phenomenological research can be understood as a dynamic interplay among six procedural activities: 1) “Turning to the nature of lived experiences”, which involves asking about the very nature of a phenomenon, formulating a phenomenological question and addressing the question of that “which makes a some-“thing” what it is” (p. 10); 2) ”Investigating experiences as we live them”, where the researcher is involved with methods that are useful to examine the lived experiences in question, such as

in-depth interviews and close observation—notably, this turning to lived experiences has been called a turning “to things themselves”; 3) “Reflecting on essential themes that characterize the phenomenon”, where the emphasis is on the analytical process and reflects on the themes identified from the data to capture the essential meaning or essence of the lived experience; 4) “The art of writing and rewriting”, where the aim of the reflective method of writing is to become open to possibilities and where constant questioning and reflection upon the emerging themes allows a deeper understanding of lived experiences; 5) “Maintaining a strong and oriented relationship to lived experience”, where the researcher strives to remain focused on the research question at hand—in this regard, van Manen states, “To establish a strong relation with a certain question, phenomenon, or notion, the researcher cannot offer to adopt an attitude of so-called scientific disinterestedness. To be oriented to an object means that we are animated by the object in a full and human sense” (p. 33); and 6) “Balancing the research context by considering parts and whole”, where the researcher is asked “to constantly measure the overall design of the study/text against the significance that the parts must play in the total textual structure” (p. 33). Although the activities are sequential, there is a back-and-forth movement between the activities throughout the entire research process.

In this study, we used various methods to explore the phenomenon as it presents itself to, or as it is experienced by, a subject (nurse or physician). This is consistent with the method of Dahlberg et al. (2008, p. 171), who explain that human science and lifeworld research require various methods, techniques and means to facilitate researchers’ gathering of rich data.

5.3 The researcher’s preconceptions

In all phases of the research process, different factors have influenced how I was thinking and what choices I made, i.e., theoretical knowledge, my clinical background as an ICU nurse and

the tradition and the culture of which I am a part. I have therefore aimed to be conscious of my pre-understanding and to be open to viewing the field of research with a critical eye. The principle of openness is central to the phenomenological and hermeneutic approach. In this search for meaning, the researcher's attitude of openness and sensitivity to the unpredicted and unexpected is important (Dahlberg, 2006; Dahlberg et al., 2008)

Self-reflection and self-awareness are important attitudes for the phenomenological researcher and are called for in all phases of the research process. Reflexivity can make the researcher sensitive to his or her own role and cultivate a pre-understanding of the phenomenon in the form of experiences, personal beliefs, and theories (Dahlberg, 2006; Dahlberg et al., 2008).

In all types of research, researchers must address their tradition and all its pre-understandings to be aware of how the pre-understanding affects the research process, such as choosing research topics, formulating research questions and choosing methodologies (Dahlberg et al., 2008, p. 135).

Gadamer (1975/2004) explains that our prejudices or pre-understandings are necessary conditions for our understanding of the present. This recognition stems from the fact that we never meet the world without prejudice but instead with preconceived expectations of it based on prior experience. Consequently, understanding takes place when a fusion of horizons of past and present occurs. All understanding reflects back on one's prejudice (i.e., the hoard of insights, experiences, and beliefs that one has at any given time) and is a prerequisite for being able to understand.

Gadamer (1975/2004) explains that we must understand the whole in terms of the detail and the detail in terms of the whole. This circle is the basis for all understanding and "describes understanding as the interplay of the movement of tradition and the movement of the interpreter" (p. 305). This movement is central to all understanding and is, according to

Dahlberg et al. (2008, p. 236), a process "... of which the researchers are aware and reflective about, and they try to be as open as possible to the involved movements of the work".

5.4 Setting and participants

5.4.1 Papers I and II

This study was conducted at two ICUs in two Norwegian university hospitals, each with 8-10 active intensive care beds. One ICU (Field I) treated pediatric and adult intensive care patients with medical and surgical conditions and trauma (general), whereas the other ICU (Field II) treated adult intensive care patients with neurosurgical conditions.

The inclusion criteria for nurses in the study included having a diploma in intensive care nursing (90 credits) and a minimum of 5 years of experience in an actual ICU. In addition, the nurses had to be on shifts caring for adult ICU patients who were mechanically ventilated and had an expected length of stay of several days. The head of each ICU (nurses) sent an email to nurses who met the inclusion criteria (14 nurses in all) with information on the study and an invitation to participate (Appendix 2). Those who agreed to participate returned their written consent in an envelope addressed to the researcher (MK) (Appendix 2). Eleven intensive care nurses, consisting of seven females and four males, participated in the study (Table 2). Their work experience ranged from 7 to 28 (mean 18) years in the same ICU.

5.4.2 Paper III

We formed three focus groups with ICU nurses and physicians at the same two ICUs, as in Papers I and II. Each focus group consisted of both nurses and physicians who worked at the same hospital and included four to six participants (14 overall), which is the ideal size for a focus group (Krueger & Casey, 2014). Nurses who were included in Papers I and II (11 nurses in all) were invited to participate in the focus group discussion. Eight nurses agreed to

participate (Table 3). The inclusion criterion for physicians was to be rotating on an ICU shift caring for adult patients.

The head of each ICU (physician) emailed detailed study information and an invitation to participate to selected physicians (6 in all) in the two ICUs (Appendix 4). Those who agreed to participate returned their written consent in a prepaid envelope addressed to the researcher (MK) (Appendix 4). Six physicians, including two females and four males, participated in the study (Table 3).

5.5 Data collection

5.5.1 Papers I and II

Data were collected by close observation of bedside nursing and in-depth interviews with nurses. I performed all of the observations and interviews over a 10-month period from December 2012 to September 2013.

In close observation, the researcher is present when intriguing incidents or episodes occur, giving the researcher first-hand knowledge of these episodes in addition to having second-hand experience of the settings and situations under study, as opposed to learning about them exclusively through the accounts and interpretations of the participants (Van Manen, 2007).

In-depth interviews serve the specific purpose of exploring and gathering experiential narrative material in the form of stories, anecdotes, and examples of experiences, which can serve as a resource for developing a richer and deeper understanding of the phenomenon under investigation (Van Manen, 2007). Follow-up interviews can clarify and explain data obtained from the data gathering of the think aloud and observation (Aitken, Marshall, Elliott, & McKinley, 2011). Nurses' body language can also reveal how situations were experienced

and can serve as the starting point for further questions (van der Meide, Leget, & Olthuis, 2013).

Close observation

Each nurse was observed for two or three shifts, resulting in 29 observational days. Most observations occurred during the day shift and on weekdays, but some observations were conducted during the evening shift, whereas others were conducted on weekends. During the observation, the researcher, as an experienced ICU nurse, assisted in nursing care, which enabled her to observe the nurses' everyday practice and interactions with their ICU patients more closely. The researcher took part in fora at which the patient's condition and treatment were discussed, i.e., nursing reports, pre-rounds, rounds, and interdisciplinary meetings. There was also informal dialogue with the nurses during the shift.

A semi-structured observation guide was available and was memorized in advance (Appendix 2), but I tried to remain as open as possible during the observations. The focus of the observations remained on the nurses' verbal and/ or physical interactions with or around patients anywhere within the ICU. Close observation enabled the researcher to focus on the meaning expressed by an individual nurse's entire body. Both articulated speech and non-articulated speech—body language—are considered valid ways of expressing meaning (van der Meide et al., 2013).

In this search for meaning, the researcher's basic attitude of openness and sensitivity to the unpredicted and unexpected is important (Dahlberg, 2006). In practice, this means that close observation involves a balancing act; that is, drawing as close as possible to a nurse's way of being and experiences, including the situations and settings in which he/she is involved while distancing or retaining a hermeneutic alertness as an ongoing process in which the researcher takes a step back and reflects on the meaning of various situations and episodes.

I carried a small notebook in my pocket, and brief field notes were written during the observations. I wanted to record special situations or spontaneous statements made by nurses. In addition, emotions and thoughts that were evoked by what I observed and heard in a situation were noted, which often led to meaningful insights. I withdrew to note some keywords and statements, and detailed descriptions of observations were recorded immediately after each shift.

In-depth interviews

At the end of the shift, before the change-of-shift report, nurses were interviewed regarding situations that occurred during the shift. Interviews sought to clarify the activities that were observed and to prompt nurses' recall of recently experienced situations by asking them to discuss excerpts from the field notes that were taken.

Nurses were interviewed in the ICU one to three times, with each interview lasting from 20 to 70 minutes, resulting in 24 interviews. The working day in the ICU is unpredictable, and patients' conditions can change quickly. Therefore, for some shifts, either it was not possible to conduct interviews or the interview had to be interrupted. For two of the nurses, one interview was conducted one week after the observation.

Table 2 Close observation and in depth interviews with ICU nurses

ICU nurse	Field	Observational days	Interview	Duration of interview (minutes)
1	I	●●	●	36
2	I	●●	●●	75 (30 +45)
3	I	●●●	●●●	106 (44+32+30)
4	I	●●●	●●●	129 (49+32+48)
5	II	●●	●●	75 (51+24)
6	II	●●●	●●●	84 (32+21+31)
7	II	●●●	●●	64 (32+32)
8	II	●●●	●●●	94 (25+32+37)
9	I	●●●	●●	51 (29+22)
10	I	●●●	●●	56 (26+30)
11	I	●●	●	68
In all		29	24	838

To facilitate the nurses’ recall of emotions and thoughts, the interview was in narrative form and used the following opening question: “Could you please tell me what you looked at when assessing this patient at the beginning of and during the shift?” (Dahlberg et al., 2008; Van Manen, 2007). In narrative interviewing, the goal is to generate detailed descriptions and to avoid eliciting short answers or general statements. Details are important to facilitate a complete understanding of experiences in all their complexity and to include “specific incidents and turning points, not simply general evaluations” (Riessman, 2008, pp. 23-24).

I used what I had seen and heard of nurses’ verbal or physical interactions with or around patients to explicate meanings as nurses live them in their everyday existence (Van Manen, 2007, p. 11). The following are examples of other questions asked in the interview: “Can you tell me what made you think this patient’s condition was changing?”, “I heard you say ... can you tell me what happened?”, and “I saw that you ... can you tell me what happened?” Follow-up questions included the following: “Can you please explain about...?” and “Can you please describe...?” Follow-up questions were asked for clarification purposes and to avoid misunderstanding; thus, it was often not necessary to ask many questions.

In addition, although a semi-structured interview guide was available (Appendix 2), it was well memorized in advance and only used at the end of the interview to ensure that all relevant topics had been touched upon in the interview. I asked for permission to take notes during the interviews when there was a point to which I wanted to return. However, it was difficult to pay attention to both the nurse and my notebook, and it was not actually difficult to return to points that I wanted more details about.

Throughout the interview, I made an effort to practice openness by asking open-ended questions, asking follow-up questions, and pausing so that the nurse could communicate his/her experiences. Additionally, I refrained from interrupting the nurses during the interviews to allow the nurses to speak in their own words. Although it might appear to be a hindrance, patience and silence can help nurses remember events, enabling them to continue their story (Van Manen, 2007).

All interviews were audio recorded and transcribed verbatim by the same researcher (MK) to aid in recall and ensure the clarity of the transcription.

5.5.2 Paper III

We employed focus groups to obtain insight into the dialogue between nurses and physicians. One of the main advantages of focus group discussions is that the group interactions that occur can provide insight into a range of opinions, perceptions or feelings that individuals may have regarding a specific issue, practice or idea that would be less accessible in one-on-one interviews (Doody, Slevin, & Taggart, 2013a; Krueger & Casey, 2014). Furthermore, focus groups can identify the factors that influence opinions, behaviors or motivations in a collective context. Focus groups create a more natural environment because participants influence and are influenced by others as they are in real-life settings (Krueger & Casey, 2014). The group dynamics and interactions were expected to help the nurses and physicians

to clarify their perceptions of nurses' dialogue with physicians on shift with regard to patients' clinical status and the prerequisites for an effective and accurate exchange of information.

One moderator and one assistant moderator led the three focus group sessions in the spring of 2013 in a meeting room at the hospital that was convenient for study purposes. The participants were seated around a square table to indicate the equal importance of each participant's contributions. The focus groups lasted between 76 and 83 minutes, which is a common duration of focus group interviews (Krueger & Casey, 2014).

Table 3 Group discussion with ICU nurses and physicians

Group discussion	Field	Physician	ICU nurse	Duration (minutes)
1	I	●●	●●	83
2	II	●●	●●●●	76
3	I	●●	●●	80
In all		6	8	239

Nurses and physicians received an overview of the topics for the focus group discussion one week before the planned focus group (Appendix 4). The moderator opened the discussion by introducing the three topics of communication, collaboration and ICU nurses' contribution, encouraging the participants to speak freely about their experiences. Simple, open-ended and clear questions were emphasized (Krueger & Casey, 2014, p. 120). The opening question in each of the three focus groups was as follows: "Can you please tell me what patient information you perceive to be essential to share with one another?" This question was followed by a discussion of the three themes presented above. The same questioning routine was used in all of the focus groups.

The moderator directed the discussions to ensure that all of the participants had ample opportunity to express their own views and experiences. This is in line with Bradbury-Jones

et al. (2009), who stated that it is important in a phenomenological focus group for each individual participant to have time to provide his or her own, unique description of the phenomenon.

In addition, the moderator directed the discussion to ensure discussion of the appropriate themes. Examples of the prompts used to obtain additional information and clarify opinions included the following: “Could you give an example?”, “Please describe what you mean” and “Tell us more” (Krueger & Casey, 2014, p. 120). The participants were actively engaged in the discussions, and their thoughts were occasionally expressed in half-sentences that were completed or expanded upon by other participants. The atmosphere was positive and included both humor and laughter.

As recommended by Krueger and Casey (2014), the assistant moderator took field notes during the interviews to capture the themes and key points along with insightful quotes as completely as possible. In addition, the field notes were used to capture non-verbal behavior and to differentiate between speakers and tone within the group.

Near the end of the discussion, the assistant moderator provided a short summary of the key points raised during the discussion and invited the participants to include any additional comments by asking a final, open-ended question: “Is there anything else we should add?” This question is important because it can stimulate additional and important discussion points (Doody, Slevin, & Taggart, 2013b).

All interviews were audio recorded and transcribed verbatim by the same researcher (MK). Data were collected during a 2-month period from May 2013 to June 2013.

5.6 Analyses

The analysis started at an early stage, in parallel with the data gathering, the writing of field notes and listening to and transcribing the interviews. Dahlberg et al. (2008, pp. 236-237)

explain that the analysis has a tripartite structure and is described as a movement between “from the whole—to the part—to the whole”.

5.6.1 Analysis of Papers I and II

The analysis of the text in Paper I was primarily based on the in-depth interviews of nurses, but the field notes taken during shifts formed the basis for the interviews. The analysis of the text in Paper II was based on both field notes and in depth-interviews.

The data analysis was performed using the reflective methods of Van Manen (2007), including thematic and linguistic reflections. In our study, the purpose of phenomenological reflection was to identify and reflect on the various aspects and meanings both of the phenomenon of becoming aware of incipient changes and of the phenomenon of assessing changes in a patient’s clinical condition from the perspective of experienced intensive care nurses.

Thematic reflection refers to the process of recovering meaning structures that are embodied in nurses’ experiences, as represented in text. Grasping and formulating a thematic understanding is a complex and creative process; it is not a rule-bound process but is instead a free act of “seeing” meaning (Van Manen, 2007, 2014). Linguistic reflection involves attentiveness to the most common expressions that are associated with the phenomenon under investigation. In ordinary language, idiomatic phrases, sayings and poetic quotes create a large reservoir in which a vast array of participant experiences are deposited (Van Manen, 2007).

Combining interviews with close observation required selecting and interpreting myriad findings to determine which incidents, themes, or phrases were essential to the research question. Selecting and interpreting these findings took place both as they occurred and later when writing and re-writing descriptions of what the researcher had observed (Van

Manen, 2007). This ongoing writing process is at the heart of the phenomenological approach and is essential for discovering analytical points often only vaguely understood during the actual observation and interview. As van Manen explained, “Sometimes the best anecdotes are recollected as one tries to make sense of things that somehow seem interesting now, in hindsight” (Van Manen, 2007, p. 69).

First, the interview transcriptions and field notes were read several times to enable the researcher to obtain an overall impression. The text was then re-read, and a line-by-line reading of the text was employed for thematic exploration of experiential descriptions. We carefully read every single sentence or sentence cluster to obtain our initial understanding of what was said in or close to the nurses’ own words. The first phase resulted in a preliminary and open systematization of text that disclosed something about the nurses’ experiences of becoming aware of signs of incipient changes and assessing changes in patients’ clinical conditions. The next phase led to a more focused interpretation and was characterized by a dialogue with the text that shifted between the text itself and the different thematic meanings that began to emerge. We then asked, “What does this mean?” and “How is it said?” In this phase, emergent meanings that seemed linked to one another were clustered into a temporary pattern of meanings, followed by a process of reflection with the aim of synthesizing the clustered meaning units into a new whole.

Dahlberg et al. (2008, pp. 272-273) stated that the phenomenological analysis of empirical data is performed solely on data obtained in the same study and does not include external material in the analysis, for example, theories or other research publications. The findings in Papers I and II led us to the phenomenology of sensation developed by the Danish philosopher K.E. Løgstrup, the thinking of Norwegian nurse and philosopher K. Martinsen, and the thought of Løgstrup in a clinical nursing context. Their perspectives were used to reflect on the themes with the goal of interpreting the text as a whole and arriving at a

comprehensive understanding of the phenomena. In addition, in Paper II, we reflect on the themes by using the phenomenology of the body developed by French philosopher M. Merleau-Ponty (Merleau-Ponty, 1945/2009). For Merleau-Ponty, the lived body takes on a central position, and we access the world through our bodies.

Pre-understanding was challenged in discourses among members of the research team. We discussed the emerging understanding of the experience of signs of incipient changes and assessing changes in the patient's clinical condition and asked critical, reflective questions such as: "Is this the meaning or can this mean something else?"

5.6.2 Analysis Paper III

Krueger and Casey (2014) indicate that focus group analyses should consist of four distinct and critical characteristics: they should be systematic, completed in a sequential manner, have verifiable procedures and occur in a continual process (p. 161). Furthermore, qualitative analyses do not occur linearly, as one part of the process can overlap another.

The analysis was performed using Doody, Slevin, and Taggart (2013c) concept of analysis, which was based on Kruger and Casey's (2014) framework. This method consists of six steps: (1) *generating rich data*, in which the moderator skillfully facilitates the discussion and gathers rich data from the discussion; (2) *familiarizing oneself with the data*, in which all researchers read the transcripts and observations of the discussion in their entirety several times to immerse themselves in the data and to gain a sense of the text as a whole before dividing it into relevant parts; (3) *writing memos*, in which the researchers write short notes in the margins of the text to describe the ideas or concepts that emerged from the text (Doody et al., 2013c; Krueger & Casey, 2014); (4) *indexing*, in which the text is re-read in greater depth and the researchers begin organizing the data by highlighting and separating parts of the text that are related to the study aims; (5) *forming themes*, in which the researchers search for

recurring themes in the transcripts and notes that represent patterns and themes across groups and quotes that are similar in the original text are then rearranged under temporary corresponding themes using the following questions, i.e., “Is this text similar to something that has been said earlier?” and “Is it similar to or different from other themes?”; and (6) *mapping and interpretation*, in which the text is read again and the researchers together reflect on the themes with the goal of interpreting the text as a whole and attaining a comprehensive understanding (Doody et al., 2013c). In this phase, we drew on Gadamer (1975/2004) circle or spiral of understanding, the principle of the whole and the parts, along with the interactive process between pre-understanding and understanding. Based on this Gadamerian approach, our pre-understandings were essential for moving from the part to the whole and from the text to a new understanding.

In the discussion, we relate our findings both to relevant research and to Gadamer (1975/2004) work on understanding and the fusion of horizons.

5.7 Ethical research considerations

The study was approved by the Regional Committee for Medical and Health Research Ethics (REK) (Appendix 5), the Norwegian Social Science Data Services (NSD) (Appendix 5) and by the participating ICUs.

An information sheet was distributed to potential participants informing them of the aims and background of the study and that participants could withdraw their consent at any time during or after the interviews. They were also informed that the interviews would be digitally recorded and transcribed verbatim. Those who agreed to participate returned the written consent form in a prepaid envelope that had been addressed to the researcher (MK). All the intensive care nurses and physicians gave their written, voluntary, informed consent

and were promised anonymity in accordance with the basic principles for research given in the (World Medical Association, 2013).

This study thus consists of demographic data of ICU nurses who acted as respondents and sensitive material in the form of audio files, field notes and transcribed interviews. The study contains no links between names, audio files and the texts. Names are only found on the returned consent forms. Audio files from the individual interviews and group discussions and the consent forms were stored in a locked safe. The field notes, individual interviews and focus group sessions were coded with markings f or person, unit and profession.

5.7.1 Dispensation from the duty of confidentiality

For this study, application for dispensation from the duty of confidentiality under § 19 of the Health Research Act (2009) by the Regional Committee for Medical and Health Research Ethics (REK) was applied for because the study involved participant observation of intensive care nurses in ICUs; this requirement implied that patients became indirectly involved parties with no real right to refuse. REK approved the study with some comments that were addressed.

Based on the recommendations made by REK, the patients' families received written and oral information about the research project and their right to make requests on behalf of their relatives. Information was also posted on the wall in the units' corridors, making the researcher recognizable to other staff members (Appendix 3).

During the observations, I acted with special attention to the patients and their families and continuously focused on not violating personal integrity. Protecting the private space of patients and their families was my most prominent concern in terms of research ethics and was far more important than my presence in various situations.

To preserve participants' and patients' complete anonymity and confidentiality, related information captured within the field notes was anonymized.

6 FINDINGS

Three papers have been published based on the empirical data and analyses that the studies provided. These papers were the result of a qualitative investigation of the experiences of intensive care nurses that focused on the identification of changes in the conditions of critically ill patients in the ICU. Furthermore, how these changes were communicated to attending physicians from the perspectives of both ICU nurses and physicians was assessed.

6.1 Paper I

The purpose of this paper was to explore the phenomenon of becoming aware of incipient changes in a patient's clinical condition through a combination of close observation and in-depth interviews with experienced intensive care nurses.

Table 4 An overview of the main theme and subthemes:

Main theme	Subthemes
Living image takes form	Interwoven and interacting signs <ul style="list-style-type: none">- Signs that are sensory- Signs that are measurable- Signs that manifest as a mood in the intensive care nurse Awareness to signs <ul style="list-style-type: none">- Care situations- Shifts

One main finding was that ICU nurses foresee and are aware of early changes in patients' clinical conditions through living images or impressions that consist of signs that might be viewed as separate from and opposed to one another but that are in fact interdependent. In a nurse's daily practice, sensory signs are tightly interwoven and interact with signs that are measurable and with signs that manifest as mood in the nurse.

Using bodily senses (sight, hearing, smell, and touch), nurses sense signs of changes in a patient's condition such as wakefulness, response to contact, body movements, eye contact, facial expressions, and the smell and color of secretions. Whenever a nurse sees, hears, touches, or smells, he/she always acquires an impression of what he/she sees, hears, touches, or smells. The nurse may be touched and moved by something in his/her situational encounter; something may occur with the patient that makes an impression and attunes the nurse to a positive or negative mood. The nurses assess measurable parameters, such as intracranial pressure, temperature, heart rhythm, and respiration values, and considers these parameters in relation to sensory signs such as awakening, contact with the patient, skin color, and the patient's management of respiratory effort.

Care situations, such as body hygiene, skin care, mouth care, changing position in bed, and tracheal suction, are ascribed special meaning as signs of incipient changes in a patient's condition. Nurses form an impression of the patient by means of care situations and can sense signs such as response to stimuli, wakefulness, eye contact, body strength, and body movements. In addition, nurses also noted that following the patient over time is important for becoming aware of signs.

6.2 Paper II

The purpose of this paper was to explore the phenomenon of assessing changes in a patient's clinical condition through a combination of close observation and in-depth interviews with experienced intensive care nurses.

Table 5 An overview of the main theme and subthemes

Main theme	Subthemes
Sensitive situational attention	<ul style="list-style-type: none">- Being sensuous and emotionally present- Being systematic and concentrating- Being close to the bedside- Being trained and familiar with the routines

An additional finding was that nurses understand each patient's unique situation and foresee clinical eventualities based on sensitive and attentive ways of thinking and working. This approach requires nurses to be present at the bedside with both their senses (sight, hearing, smell and touch) and their emotions. Being sensitive and attentive to each unique patient gives nurses access to signs that may indicate changes in a patient's condition, such as feeling more tonus in a patient's hand, seeing an eyelid movement or a slight movement of the hand, and listening to breath sounds. Sensation in emotional openness creates a specific mode, which might be positive or negative, indicating that a patient is making progress or is deteriorating. We found that nurses' body language, including gestures, facial expressions and posture, changed with changes in a patient's condition. If a patient's condition became unstable or was unclear, nurses moved closer to the patient's bedside and were in continuous motion with their bodies directed toward the patient and the bedside monitors. The nurses were looking for what might potentially be the problem and were thinking aloud back and forth as they began to examine the patient through their senses and close monitoring.

Our findings also revealed that knowledge about the unique patient exists as the interplay between past experiences and medical knowledge, an interplay that is essential for nurses to understand the situation. However, patients are individuals, and their conditions can rapidly change and evolve in unexpected directions. A nurse's openness and her attunement to

the unique patient and to having her preconceptions changed are essential. One nurse used “inside the box” and “outside the box” as metaphors to explain how she thinks and acts in situations that are ambiguous, unexpected or that diverge from previous experiences.

The nurses highlighted the value of following up with sensory and measurable signs and with a patient’s response to stimulus within a shift or between shifts, such as, “He is more neurological than before” or “I have seen over time that what affects his heart rate is wakefulness”. This follow-up enables nurses to perceive signs indicating that a patient’s condition is changing at an early stage, to foresee a course of events and to take action to prevent complications in the patient’s condition.

6.3 Paper III

The purpose of this paper was to explore nurses’ dialogue with the physicians on shift regarding patients’ clinical status and the prerequisites for an effective and accurate exchange of information.

Table 6 An overview of the themes and subthemes

Theme	Subtheme
Nurses’ contribution to the dialogue	<ul style="list-style-type: none"> - Nurses’ ongoing clinical observations: an essential contribution
Prerequisites for an effective and accurate dialogue	<ul style="list-style-type: none"> - Nurses’ ability to speak up and present clinical changes - Establishment of a shared goal and clinical understanding - Open dialogue and willingness to listen to each other

A further finding was that both nurses and physicians perceived nurses’ communication of their clinical observations of the patient to be fundamental to the discussion of medical and nursing care. As they are typically by the patient’s bedside for

hours, nurses are able to follow patients' situations as they develop, identifying whether patients are declining or are stable and improving. We found that these observations were important in helping the physician develop an impression of the patient's clinical condition, thereby highlighting the need for nursing input in decision-making processes.

However, our findings revealed several prerequisites for an effective and accurate dialogue between nurses and physicians regarding the clinical status and care options of patients. Nurses' abilities and determination to speak up and present changes in a patient's condition was found to be essential. Nurses reported that enhancing inexperienced nurses' ability to present patient information to physicians had to be emphasized and that such nurses had to be encouraged to present opinions and any patient information that they considered relevant. Although nurses might be able to sense changes in a patient's clinical condition, they may also find it difficult to express clearly what those changes are; this perception that something might be wrong with a patient leads to the nurses' concerns.

Both nurses and physicians highlighted the need to establish a shared goal and clinical understanding regarding a patient's clinical conditions and treatment plan. The nurses highlighted that knowing the treatment plan and the rationale for the interventions helped them obtain a clinical understanding and to perform relevant observations of the patient. We found that physicians' willingness to include and value nursing input in the decision-making process depended upon whether they felt that the nurses had focused on the most important aspect of the patient's condition and had reported clinically relevant observations.

Nurses and physicians did not always agree on the next step in patient care, although physicians trusted and valued the nurse's clinical observations of the patients. Physicians indicated that they were solely entrusted to determine whether the nurses' observations of the patient had clinical significance. In addition, physicians stressed that they had to assess the patient themselves to reach their own clinical assessment and to devise a patient treatment

plan. Conversely, nurses indicated that it was important to be respectful and open to one another and to discuss different opinions regarding patient care.

7 DISCUSSION

This study has focused on ICU nurses' foresight and awareness of signs that indicate incipient changes in a patient's condition and on the dialogue between nurses and physicians regarding the patient's clinical status and care options. In this chapter, I will discuss findings based on the papers and data material as a whole. The main findings of all three papers are briefly outlined below and will be discussed in connection with current research and theoretical perspectives.

Main findings

ICU nurses develop foresight and awareness of incipient changes in a critically ill patient's condition through images that consist of signs that are sensory, measurable, and that manifest as the mood of the nurse. Care situations and following patients through shifts are essential components of a process that enables nurses to detect these signs.

Assessing changes in a patient's condition requires nurses to be sensitive and attentive to each patient's unique situation and to work in a concentrated and systematic manner.

Nurses stressed the importance of being present at the bedside with both their senses (sight, hearing, smell and touch) and their emotions when they were assessing changes in a patient's condition.

Physicians highlighted the value of nurses' ongoing clinical observation of patients to the discussion of patient care. Nurses must strengthen their ability to report their clinical observations and interpretations to physicians on shift. For nurses to be included, physicians must be willing to listen to and incorporate nurses' clinical observations and concerns about a patient in the decision-making process.

7.1 Why is detecting and assessing incipient changes so important?

To identify signs of changes in a patient's condition at an early stage, the ability to foresee potential complications is crucial to critically ill patient outcomes and to preventing adverse events and medical errors (Benner et al., 2011; Dykes et al., 2010; Trinier et al., 2016). This point is in line with Henneman et al. (2012), who reported that nurses' early detection of complications through ongoing collection and analysis of information about patients and their environment plays a pivotal role in ensuring patient safety and improving patient outcomes.

Papers I and II add to this point, demonstrating that nurses also consider signs of positive development in the patient's condition essential when assessing changes in the condition of critically ill patients and when evaluating patients' response to medical treatments. Nurses perceive signs to be positive when they feel that the patient's condition is improving or negative when they believe that something is not right or that the patient is at risk of a sudden decline in his/her condition. One nurse in Paper I uses the phrases "good sign" and "bad sign" when he/she is observing the movement of the patient's body, for example, "He is not marked by spasms. (...) it is a mixture of different movements and it is for me a good sign ..." Movements of the body that are pathological in nature are perceived as bad signs (Paper I). This is supported by nurse and philosopher Ingunn Elstad (2014), who stated that following up with a patient involves both an awareness of the signs of deterioration and support for incipient improvement in the patient's condition.

In the European Society of Intensive Care Medicine guidelines and recommendations for ICUs, intensive care medicine results from close collaboration among physicians, nurses, and other health care professionals (Valentin & Ferdinande, 2011). This position is in line with and further illuminated in Paper III, demonstrating that in the two ICUs, nurses' ongoing detection and assessment of signs of incipient changes such as facial mimicry, convulsions

and/or other body movements were essential both in helping the physician establish an impression of the patient's condition and in devising a treatment plan.

7.2 Signs of incipient changes

Patients in the ICU generate both qualitative and quantitative data in the form of physical assessment, continuously monitored physiological variables and intermittent laboratory values (Trinier et al., 2016). Douw et al. (2015) found that nurses' worry or concern and early recognition of deteriorating patients can be present with or without changes in vital signs, for example, increasing supplemental O₂ to maintain SaO₂, new pain and/or increasing pain, color and/or clamminess. Paper I adds to this, demonstrating that nurses develop foresight and awareness of incipient changes in a patient's condition by means of images or impressions that consist of signs. Sensorial signs occur in an intense interplay with signs that are measurable and manifest as the mood of the nurse. Nurses monitor measurable parameters, such as intracranial pressure, temperature, heart rhythm, and respiration values, and they consider these parameters in relation to sensory signs, such as awakening, contact with the patient, skin color and patient management of respiratory effort. Signs that are sensorial and signs that are measurable can be viewed as separate from and opposed to one another, but they are, in fact, dependent upon one another. We understood this phenomenon to mean what Løgstrup (2013) described as "united opposites", i.e., phenomena that are different, that cannot exist without one another, and that strengthen one another mutually in their diversity. This point is further emphasized in Paper II, demonstrating that nurses ascribe significance to both objective parameters (such as vital signs and values from bedside monitoring) and sensorial signs when assessing changes in a patient's condition and response to treatment.

7.2.1 Measurable signs are essential but not sufficient

Henneman et al. (2012) reported that although monitoring patients is essential, it is not the exclusive component of early detection of complications and is largely based on observing, measuring and recording physiological parameters such as vital signs and laboratory values. This point is in line with and illuminated in depth in Paper I, demonstrating that measurable signs are essential but not sufficient to enable nurses to follow up with patients and form an image of a patient's clinical condition. Nurses emphasize that their natural senses such as vision, hearing, smell, and touch allow the nurse to become aware of small signs such as the movement of an eyelid, finger, or shoulder that can indicate changes in a patient's condition at an early stage.

In ICUs, the ABCDE approach is used to identify pathophysiological signs in patients (Jevron, 2010; Vaughan & Parry, 2016) and enables nurses to break complex patient situations into more manageable parts (Thim et al., 2012). In addition, different assessment tools have been developed to measure symptoms and the development of a patient's conditions in the ICU (Barr et al., 2013). Paper III shows that physicians find it difficult to base their assessments of patients solely on measurable parameters and scales and highlights the need for nurses' clinical interpretations of the patient's condition. In the same paper, one of the physicians uses sedation level as an example: "We can try to quantify the depth of sedation, using different scales, but it is not enough to say -3 or -2 ...".

Benner et al. (2009) define intuition as judgment without rationale and posit that nurses develop skills that enable them to foresee a patient's decline before any objective evidence of deterioration is present. Paper I further illustrates this point and adds that nurses are aware of sensorial signs before changes in vital signs occur by means of basic monitoring of the patient. In the same paper, one nurse described a change within a shift in the appearance of a patient in whom sepsis was developing: "... her nose became slightly pointed and her cheeks

were sunken, and the cheekbones became very visible, bluish in skin color. I turned on more light to see if it was true; I thought it was a change in face shape...” This description is similar to that of *facies Hippocratica*: “a sharp nose, hollow eyes, collapsed temples; the ears cold, contracted, and their lobes turned out; the skin about the forehead being rough, distended, and parched; the color of the whole face being green, black, livid, or lead-colored” (Benton & World, 1952, p. 19).

ICU nurses’ concern may also be an important predictor of patient deterioration (Douw et al., 2015; Soar et al., 2015). Based on the results from Paper I, our study adds to this notion by showing that nurses ascribe significance to being moved by an impression. There is something about the patient and the situation that makes an impression and in some cases makes nurses more alert. Nurses can “get a sense” that there is a change in the situation and begin looking for what might potentially be the problem.

7.3 Nurses’ assessments of incipient changes in ICU patients’ condition

In this chapter, I will bring Løgstrup and Merleau-Ponty “to the same table”. These theoretical thinkers belong to the world of text; thus, it is only through my interpretation of their text that encounters between them can occur in any sense.

7.3.1 Bringing Løgstrup and Merleau-Ponty “to the same table”

Løgstrup’s philosophy of sensation (Løgstrup, 1995a, 2013) posits that “with our senses we are emplaced in the universe”. Sensation connects us with others and the environment and provides us immediate access to the world around us. In Paper I, we found that sensation is essential for ICU nurses to perceive changes in a patient’s condition at an early stage.

Sensation gives nurses immediate access to signs indicating positive or negative changes in a patient’s condition. Through bodily senses (vision, hearing, smell, and touch), nurses

apprehend signs of changes in patient condition, such as wakefulness, response to contact, body movements, eye contact, facial expression, and the smell and color of secretions.

In Merleau-Ponty's philosophy of the body (Merleau-Ponty, 1945/2009, p. 94), "the body is the vehicle of being in the world". It is through my body that I am conscious of the world, and the body can thus be considered a basic source of experiences.

The research method in Papers I and II (i.e., close observation of bedside nursing) was used to reveal how meaning was expressed through a combination of spoken and body language. We found that nurses have an intense presence and work close to the bedside with their body directed toward the patient for hours. This point is further emphasized in Paper I by nurses' description of being touched and moved by something in their situational encounters, i.e., nurses become attuned to something occurring with the patient that makes an impression and has the power to draw the nurse's attention to a positive or negative mood. According to Løgstrup (1995a), the mind does not exist without being in tune with its surroundings. The mind is a sounding board for everything that exists and occurs in the world and in nature, in which we—along with our senses, eyes and ears—are embedded. In relation to our study, this statement indicates that sensation tunes the nurse's mind, which resembles a sounding board for what the nurse senses in relation to the patient and the patient's environment. In a sensation, something about the patient makes an impression on the nurse, such as a smell, a body movement, or the sound of the room. Sensation in emotional openness creates a specific mode that might be positive or negative, indicating that a patient is making progress or is deteriorating (Paper I).

For Merleau-Ponty (1945/2009), the lived body plays a central part in being-to-the-world. The body is not considered an object ordered by the mind; instead, he emphasizes the body's exposure to the world as a central experience. In relation to our study, these ideas imply that a nurse's embodied position in the world is significant in experiencing and

interpreting what is at stake in the situation (Paper I & Paper II). Paper II adds to this notion, demonstrating that the nurses' body language, such as gestures, facial expressions and posture, changed as a patient's condition changed. If a patient's condition became unstable or more unclear, the nurses moved closer to the patient's bedside and were in continuous motion with their bodies directed toward the patient and the monitors. The nurses were looking for what might potentially be the problem, were thinking aloud back and forth, and were beginning to examine the patient through their senses and through monitoring (Paper II).

In its purest form, sensation comes entirely stripped of any interpretation or conscious understanding (Løgstrup, 1995b). Løgstrup's (Løgstrup, 1995b, 2013) phenomenology of sensation describes an impression as always sense-based and attuned. In relation to our study, the correlate is that whenever nurses see, hear, touch, or smell, they always acquire an impression of what they see, hear, touch, or smell. An impression moves and affects a nurse, and it leads to an attuned awareness directed toward the nurse's patients. Nurses ascribe significance to impressions and to being moved by following and recognizing early changes in a patient's condition (Paper I). This observation is similar to the findings of Douw et al. (2015), who demonstrated that nurses' subjective feeling of worry or concern is valuable to the process of recognizing deteriorating conditions in patients in general wards. This observation might also be congruent with the findings of Cioffi, Conway, Everist, Scott, and Senior (2010), in which acute care nurses tend to use subjective signs, described as subtle cues that arouse nurses' suspicion but that are difficult to quantify and are used when patient's conditions become worrisome.

Merleau-Ponty (1945/2009) explains that previous experiences are bodily and embodied and therefore always present. Previous experiences are intertwined with the body's past and the present situations. The body can recall previous experiences in that these experiences are essential here and now. Paper I demonstrates that through living images, the

nurse is reminded of something else that evokes something inside her/him based on the nurse's past experiences and knowledge. The nurse is suddenly able to envision new analogies, and he/she perceives likeness in the difference. This ability is further underscored in Paper II, in which nurses described how previous experiences with a similar patient care situation enabled them to foresee how a unique patient's condition might progress. There is something in the situation that reminds the nurse of something else and can awaken memories of past experiences. This observation is consistent with that of Løgstrup (1995b), who posited that there is something that is the same in the difference and that we can consider something else under the impression of one or the other.

The metaphors "inside the box" and "outside the box" were used by one nurse in Paper I to explain how he/she thinks and acts in situations that are ambiguous, unexpected or different from previous experiences. The nurse is open and sensitive in the present situation to perceiving several sides of the patient, and the sensitivity enables the nurse to act and focus on the most important factors in the specific situation. Merleau-Ponty (1945/2009) uses the example of a house that we see from different angles and from different perspectives. The horizon allows us to see these different perspectives; it provides openness, whereas through our bodies, we are situated in the world. Through his/her senses, the nurse can see what is in the foreground of the situation and thereby see the most important elements that derive from the overall situation (Papers I and II).

7.4 The intentional act in intensive care nursing

Merleau-Ponty (1945/2009) posited that we are in the world through our lived body. In Paper II, we found that nurses understand each patient's unique situation and foresee clinical eventualities by means of a sensitive and attentive way of thinking and working. If a patient's condition became unstable or unclear, the nurses moved closer to the patient's bedside and

were in continuous motion with their bodies directed toward the patient, toward medical treatment and toward the bedside monitors. This point is further underscored in Paper I, demonstrating that care situations such as body hygiene, skin care, mouth care, changing position in bed, and tracheal suction are ascribed special meaning as signs of incipient changes in a patient's condition. Through care situations, nurses form impressions of patients and can sense signs such as response to stimuli, wakefulness, eye contact, body strength, and body movements. This observation is consistent with that of Martinsen (2008a, pp. 114, 125), who stated that we grasp something through our practical dealings with things, people, and nature.

Nurses' continuous presence at the patient bedside and the nurse-patient staffing ratio in the ICU are both considered essential factors that enable nurses to identify early warning signs or changes in vital signs that indicate deterioration in a patient's condition (Kelly et al., 2014; Trinier et al., 2016; West et al., 2014). Papers I and II add to this point, demonstrating that the nurse-patient ratio and bedside nursing are not necessarily sufficient for nurses to perceive signs of incipient changes in a patient's clinical condition. These findings are supported by a prospective observational multicenter study, which reported that both nurses and physicians underestimated the patient's symptoms of breathlessness. There was no significant difference between nurses and physicians' underestimation of breathlessness. This finding was surprising because nurses have typically cared for the patient for hours, whereas physicians often observe the patient for shorter intervals (Haugdahl et al., 2015). Based on the finding in Papers I and II, nurses understand each patient's unique situation and foresee clinical eventualities through a sensitive and attentive way of thinking and working.

7.4.1 Pre-reflective intentional act

Paper I and Paper III show that nurses can sense that there is a difference in a patient's clinical conditions and that something is thus not right. In some cases, the nurse is attentive to signs of change in the patient's condition, whereas in other cases, he/she is unable to identify any such signs. However, he/she does not stop "searching" because he/she has been touched by the attuned impression, leading to both heightened attention toward the patient and bedside monitoring. Merleau-Ponty (1945/2009) stated that we are in the world through our body and uses the term "being-in-the-world" to indicate that humans and the world are tightly interwoven. In his understanding, the body is directed toward the world and through this intentional act therefore can make contact with the phenomena that emerge. Nurses' presence at the bedside with both their senses (sight, hearing, smell and touch) and their emotions when assessing changes in a patient's condition (Papers I and II) is a directed act of awareness, a pre-reflective intentional act in the sense that nurses are directed without having a reflective understanding of the object toward which the unspecific awareness is directed (Merleau-Ponty, 1945/2009).

Martinsen (2012) explains that when nurses in a clinical context are sensitive and attentive, they are receptive, touched, and moved to respond to the appeals and needs of their patients. In relation to our findings, this statement means that nurses are receptive to patients' bodily expressions such as eye contact, facial expression, body movement, wakefulness, and anxiety (Papers I and II).

7.4.2 Intensive care nursing—an interpretable practice

Based on the finding in Papers I and II, I consider intensive nursing as an interpretable practice. Nursing surveillance is essential for the early recognition and prevention of medical

errors and adverse events (Henneman et al., 2012) and is defined as the purposeful and ongoing acquisition, interpretation, and synthesis of patient information (Butcher et al., 2013).

Løgstrup (Løgstrup, 1995a, 1995c) explained that all understanding is based on sensation and emotions. We found that nurses' ongoing observations and interpretations of each sound, smell, sight, and touch is essential to the care that nurses provide to critically ill patients in the ICU (Paper I and Paper II).

Løgstrup (2013) explained that, without distance, we would be lost in sensation and unable to understand. As Paper I shows, a nurse enters into a dialogue with the situation and dwells on the impression that has moved him/her. In this space, or in what Løgstrup (1995c) calls "the fictional space of understanding", nurses are reminded of something in spontaneous, intuitive flashes of insight (Paper I).

One of the nurses in Paper II used the metaphor "to take a step back" to describe how he/she created distance and thus attempted to understand what was sensed in relation to the unique patient. Løgstrup (Løgstrup, 1995a, 1995c) explained that understanding creates both distance between the sensed and the sensing and an open space in which to move and think. Paper II demonstrated that in this space, a nurse is open and sensitive to the impression that moved him/her in relation to the patient and attempts to understand what has made an impression. In the same paper, nurses exhibited continuous movement between the parts and the whole of the situation when assessing changes in a patient's condition, such as that changes in the patient's heart rate, and cardiac arrhythmias were understood relative to the patient's increased wakefulness (Paper II). This observation is consistent with that of (Gadamer, 1975/2004), who argued that all understanding is a movement between the whole to the part and back to the whole and assumes the hermeneutical rule that you must understand the whole from the part and the part from the whole.

In interpreting impressions, knowledge about the unique patient exists in an intense interplay with past experiences and medical knowledge, which can make it possible for a nurse to see new analogies (Paper II) and, according to Martinsen (2008b), have flashes of insight that make it possible to see new aspects of a patient.

Martinsen (2008a) explains that sensation involves the presence of and engagement with others; in the present contest, sensation allows nurses to listen to, look after and care for a patient. In Paper II, one of the nurses used the metaphor “to go in step with the body” to describe how he/she is sensitive to the unique patient’s needs, such as the level of sedation and support from the ventilator. A meta-synthesis of Nordic studies of patient experiences in intensive care found that caring nursing, attuned caring, and close relatives all play important roles in assisting the unique patient in the transition back to health (Egerod et al., 2015). Our findings (Papers I and II) support and further illuminate this point, demonstrating the importance of nurses’ sensitivity in encounters with patients.

Løgstrup (2013) posited that it is important that we pursue a spontaneous flash of insight immediately when and where it occurs because it is a unique and onetime constellation; otherwise, we might lose it entirely. In Paper I, we revealed that this insight might arise from a brief moment of eye contact or the movement of an eyelid, finger, or shoulder. Paper II adds to this point, demonstrating that understanding the significance of a given situation requires nurses to work in a concentrated and systematic manner at bedside throughout their shifts.

7.5 Dialogue and knowledge used in clinical decision-making in the ICU

The findings in Paper III demonstrate that nurses and physicians use and value different types of knowledge and adopt different roles in clinical decision making in the ICU.

7.5.1 Medical knowledge and nursing knowledge

In ICUs, there is a great amount of patient information available and great complexity in that information; nurses must place all information into context and structure and synthesize it into knowledge that can be used to plan and provide patient care (Pfrimmer et al., 2017).

Paper III demonstrates that physicians' willingness to include and value nursing input in the decision-making process depended upon whether they felt that the nurses had focused on the most important aspects of the patient's condition and reported clinically relevant observations. However, this view can lead to the exclusion of important nursing perspectives from clinical decision-making processes and patient care plans. Paradis et al. (2014) found that ICU culture occasionally devalues nurses' knowledge, resulting in resistance from nurses and potential harm to patients. They also found that different types of knowledge associated with nurses and physicians and their different roles and authority occasionally led to misunderstandings or even conflict.

In Paper III, physicians highlighted that for the patient information conveyed by nurses to be included in their assessments, nurses and physicians must have the same objectives and understandings of the patient's clinical status and care options. Conversely, in the same paper, nurses stressed that it was important for physicians to share their medical knowledge and goals for treatment to help the nurses conduct relevant observations of the patient. Paper II adds to this point, demonstrating that medical knowledge is important for nurses to become aware of changes in a patient's condition at an early stage.

Gadamer (1975/2004) explained that fusion occurs as a dialogical event in which one's own horizons are expanded through the conscious assimilation of the horizon of the other. In relation to our study, understanding occurs when nurses and physicians adjust their current understanding or horizon to a new understanding or horizon based on an encounter. A "fusion of horizons" seemed to illustrate what occurred when nurses and physicians shared

different perspectives and patient information, which led to a new understanding or horizon (Paper III).

Alexanian et al. (2015) reported that the dominance of medicine and its hierarchical position in relation to other healthcare professionals influenced how work unfolded in the ICU, such as rounds and decision-making regarding patient care treatment plans. In addition, Paradis et al. (2015) reported that in morning interprofessional rounds in four ICUs, individual attending physicians controlled the pacing and inclusivity of rounds and defined these rounds as medical, not interprofessional enterprises. Care conversations were held in the circle of physicians and often sidelined other providers' contributions. With regard to this hierarchical relationship, nurses should be aware of their responsibility to speak up, present their clinical observations and interpretations and join in on discussions regarding patient care to ensure high-quality care and patient safety (Paper III). Benner et al. (2011) reported that excellent practices require the ability to identify subtle changes that might indicate transitions in a patient's condition and to effectively communicate these clinical findings to others.

In Paper III, both nurses and physicians indicated that experience could often make it easier for nurses to share their opinions regarding a patient's clinical status and response to treatment and to have them be heard by physicians. Paper II adds to this point, demonstrating that nurses being trained and familiar with the routine greatly affected the nurses' abilities to notice incipient changes in a patient's condition. This observation is similar to the findings of Kendall-Gallagher et al. (2016), who reported that increased knowledge, experience and confidence in arguing a clinical point resulted in that nurse's interactions with physicians shifting from acting in the role of a reporter of information to a trusted and respected team member with clinical credibility.

7.5.2 Knowledge from continuity of care

As Paper II demonstrates, continual presence at the bedside enables nurses to follow patients' situations as they develop, identifying whether patients are declining or are stable and improving. Paper I adds to this, demonstrating that a nurse forms an image of the patient at the beginning of the shift as a starting point, enabling him/her to become aware of changes in the patient's condition. This point is supported by the European Society of Intensive Care Medicine recommendations for ICUs (Valentin & Ferdinande, 2011, p. 1581), which recommended that patients in the ICU should be visualized at all times by "the patient's own nurse" both to facilitate the detection of status changes and to enhance the implementation of therapeutic actions.

In an integrative review, Zolnierek (2014) found that knowing the patient affected nurses' ability to provide safe care. Benner et al. (2011) stated that knowing both the particular patient's condition and the patient as a person enables nurses to foresee potential crises and vulnerabilities. Paper I support and further elucidate this point, demonstrating that following patients through shifts is essential to enabling nurses to perceive signs indicating that the patient's condition has changed at an early stage, to foresee a course of events and to take action to prevent complications in the specific situation. Nurses follow patients from one shift to another, and impressions from the previous shift are compared with those formed at the beginning of the next shift. Paper II provided examples of such observations: "He has more tonus in his hands and I saw a little movement of his hand" or "I have seen over time that what affects his heart rate is wakefulness".

7.5.3 Language of signs

It is difficult to convince physicians of physiological deterioration in patients when there are no changes in quantifiable parameters (Al-Qadheeb et al., 2013; Cioffi, Conway, Everist,

Scott, & Senior, 2009), and nurses do not always communicate relevant and necessary information (Donohue & Endacott, 2010). Lavoie et al. (2014) noted ICU nurses' emphasis on objective, quantifiable criteria for recognizing deterioration in a patient's condition and linked this emphasis to the appropriateness and acceptability of such criteria to medical colleagues.

In Paper III, we found that although nurses might be able to sense signs of changes in a patient's clinical condition, the patient might find it difficult to express clearly what those changes are; in turn, this perception that something might be wrong with a patient leads to the nurses' concerns. Paper I adds to this point, demonstrating that ICU nurses can sense that a patient's condition might be changing but can find it difficult to interpret the signs and express them in a manner that others (nurses and physicians) readily understand.

In paper III, we found that nurses and physicians did not always agree on the ensuing step in patient care, even when the physicians trusted and agreed with the nurses' clinical observations of the patient. Costa et al. (2014) found that trust was strengthened by familiarity when staff members had a long working relationship with one another. In Paper III, nurses expressed the importance of having mutual respect and an openness to asking questions and discussing different perspectives on the patient's care.

According to Gadamer (1975/2004), understanding begins when something "addresses" us. This event requires us to suspend our own prejudices, which then translates into the logical construction of a question. The purpose of the question is to open possibilities and keep them open (p. 310). Based on the findings in Paper III, our study supports this point by showing that the dialogue between nurses and physicians requires physicians to be open and willing to value and incorporate nurses' observation of incipient changes in a patient's condition and nurses' concerns into discussions about patient care. This point is supported by the findings of Benner et al. (2011), who highlight that communicating unconfirmed

judgments and early warnings requires trust, respect and willingness to listen. In Paper I, nurses ascribe significance to impressions and to being moved by following and recognizing early changes in a patient's condition; thus, a nurse might find it difficult to interpret or to state in words what the change entails. Martinsen (1996, p. 103) explains that the culture of medicine is dominated by abstract language in which words are embedded in different classifications. Based on the findings set forth in Papers I and II, I argue that there is a need for nurses to present their observations and interpretations of a patient's clinical condition in both everyday language and medical language. Martinsen (2008a), explains that understanding, sensation and language are tightly interwoven and work together in interpreting the meaning of an impression. This requires the use of everyday language; the breadth of words' meaning in everyday language creates the possibility of an intuitive flash of insight.

Gadamer (1975/2004) explained that the development of a new understanding occurs by means of a dialogue of questions and answers in which we fully participate, conscious of our own preconceptions and history. In Paper III, we found that if there is openness between nurses and physicians in the decisions made for the patient and a willingness to respect and include the other's input, nurses' and physicians' perspectives and information regarding a patient can complement one another and lead to a shared understanding of the treatment plan and care options (Paper III).

7.5.4 Fusion of horizon—is it possible?

Paradis et al. (2014) demonstrated both that nurses seldom contributed during rounds and that physicians occasionally devalued and denigrated their knowledge. This point is similar to the findings of Paradis et al. (2015), in which nurses' opportunity to present their templates depended upon the individual attending physician's preferences, mood and time constraints.

Paper III adds to this point, demonstrating that both nurses and physicians perceived nurses' ongoing clinical observations of the patient to be fundamental to the discussion of medical and nursing care. However, despite physicians' recognition of the importance of nurses' ongoing clinical observation of patients, they do not necessarily make use of these observations. In the same paper, physicians indicated that they were solely responsible for determining whether nurses' observations of the patient had clinical significance.

Merleau-Ponty stated that one of our prime means of understanding other people is language. "*In the experience of dialogue, there is constituted between the other person and myself a common ground: my thoughts and his are interwoven into a single fabric*" (Merleau-Ponty, 1945/2009, p. 413). Here, we see a dual being in which nurses and physicians collaborate in consummate reciprocity. Nurses and physicians' perspectives merge, coexisting through a common world. In the interactions between nurses and physicians described in Paper III, a common ground might not be achieved. Dialogue as described by Merleau-Ponty will not take place.

This observation led me to question whether it is possible for nurses and physicians to establish a shared understanding of patients' clinical condition and care options by achieving a fusion of horizons. I suggest that an improved fusion of the horizon between nurses and physicians can be achieved by raising awareness of both the value of nurses' knowledge and the prerequisite of a dialogue between nurses and physicians.

8 DISCUSSION OF METHOD

The purpose of this chapter is to present a critical review of the strengths and limitations of this study with respect to the quality of the research.

8.1 Close observation

Close observation enabled the researcher to focus on the meaning expressed by the nurses' entire body. Both articulated speech and non-articulated speech—body language—are ways of expressing meaning (van der Meide et al., 2013). Dahlberg et al. (2008, p. 211) stated that participative observation is a suitable research method that focuses on embodied, implicit or so-called tacit knowledge.

In Papers I and II, close observations were based on notes; however, it is difficult to obtain notes that are sufficiently detailed. For example, content can be lost regarding how a nurse's body language is understood. This possibility was specifically counterbalanced by the fact that I used what I had seen and heard during the observations as a starting point for the questions in the interviews with the nurses.

None of the observations occurred during night shifts or on weekends. Nurses' behaviors at these unobserved times might differ from those observed during day and evening shifts and on weekdays (Papers I and II).

In close observation of ICU nurses, I also encountered some dramatic human situations that affected me both as a researcher and as a human being. The fact that I was touched and moved by meetings with patients who were in critical and life-threatening situations and their families may have affected the observations and the interviews.

8.2 Combining interviews and close observations

It is essential to consider both the method of data collection in relation to the area of practice and the types of data that are likely to be identified. In addition, a combination of data-gathering methods can optimize the completeness of the data gathering (Aitken et al., 2011).

In combination, close observation and in-depth interviews in Papers I and II might provide more nuanced and complex insights into nurses' experiences of the phenomena we explored than are available from research limited to one of these approaches (Van Manen, 2007).

The strength of combining close observations and in-depth interviews was that nurses' descriptions were supplemented with close observations of nurses' verbal or physical interactions with or around patients anywhere within the ICU (Dahlberg et al., 2008).

8.3 Investigating clinical practice in one's own field

The limitations and opportunities involved in investigating clinical practice in one's own field must also be mentioned.

The fact that I am an experienced ICU nurse and that I know the field facilitates access to insights but might also limit my perspective during data gathering and analysis as a researcher. Pre-understanding was challenged in discourses among members of the research team. We discussed the emerging understanding of the experience of signs of incipient changes and assessing changes in a patient's clinical condition and asked critical, reflective questions. My supervisors and co-authors have participated in the study by reading, analyzing and interpreting texts. In addition, presenting and discussing findings (Papers I and II) with ICU nurses in clinical practice was helpful for validating our insights. As Van Manen (2007) explains, a good phenomenological description might be validated by the "phenomenological

nod”. This validation indicates that the nurses in clinical practice recognized our description as an experience that they have had or could have had.

The preconceptions of the moderator and assistant moderator influenced both the questions raised and the analysis. However, we aimed to maintain a balance between remaining close to the themes in the data—as an essential component of the generation of understanding—and striving for sensitivity about unavoidable preconceptions, which involved reflexivity (Dahlberg et al., 2008).

8.4 The use of pre-existing groups

In Paper III, the three focus groups each consisted of both ICU nurses and physicians from the same ICU. A limitation in this respect might be the inclusion of participants who previously knew one another. However, using pre-existing groups enables a researcher to observe some aspects of their interactions, which can approximate naturally occurring data, such as data collected through participant observation. An additional advantage of this approach is that nurses and physicians were able to relate one another's comments to actual incidents in their shared daily work lives. They could challenge one another regarding contradictions between what they said they believe and how they actually behave (Krueger & Casey, 2014).

The hierarchy between nurses and physicians could have influenced the discussion and participants' individual voices. This required the moderator to encourage the voices of “quiet” respondents while tactfully managing the “dominant” respondents (Krueger & Casey, 2014).

8.5 Why not combine close observation and focus groups?

I considered focus groups as a suitable method in Paper III on the premise that individual experiences can be preserved within a group context. In a focus group, participants can relate to each other's comments, share experiences and thus open up new perspectives In addition,

each focus group consisted of only four to six participants, ensuring that participants' individual voices were given time.

In the close observation of nurses, I also participated in fora in which patient conditions and treatment were discussed, i.e., pre-rounds, rounds, and interdisciplinary meetings. The focus remained on the nurses' verbal and/or physical interaction with or around patients, not on nurses' and physicians' interactions. In retrospect, I believe that close observation of nurses' and physicians' interactions within the ICU could have been another method used in Paper III. This method provides an internal perspective in which the researcher can see and come to understand phenomena in their natural settings (Dahlberg et al., 2008). Close observation of actual interaction between nurses and physicians in the moment could have provided access to information that might never have been revealed in focus groups. In addition, what I saw and heard of nurses' and physicians' verbal and physical interactions within the ICU could have formed the basis of themes and questions in the focus groups.

8.6 Additional strengths and limitations

Van Manen (2007, pp. 9,11, 66) explains that phenomenological research differs from other disciplines in that it attempts to provide insightful descriptions of how we experience the world pre-reflectively. Unlike ethnography, phenomenological research does not aim to study ways of doing and seeing things specific to particular or cultural groups. This study was inspired by the hermeneutic phenomenological approach and aims to gain a deeper understanding of the meaning of nurses' and physicians' everyday experiences of the phenomenon under study.

In Papers I and II, the nurses' length of critical care experience ranged from 7 to 28 (mean) years in the same ICU but was not considered in the analyses of either the field notes

or the interview texts. It is possible that the findings evaluated here might vary among such different subgroups.

Dahlberg et al. (2008, pp. 163-164), stated that in research, reflection is also relevant for the informant; openness works when the interviewee begins to reflect about something that is in focus. In Papers I and II, the number and duration of the interviews differed among the participants. These variations might have limited nurses' opportunity to reflect about their experiences and thus influenced the findings of Papers I and II.

I understand that the unique Norwegian context, with its 1:1 nurse-patient ratio, limits the transferability of our findings, but this study nonetheless serves to illustrate what is possible in clinical ICU practice.

8.7 Validity and transferability of the study

Although validity includes the obvious notions of the truth and credibility of findings, it can also include notions of the value or worth of the findings of a piece of qualitative research (Pope & Mays, 2008, p. 84).

Stages of interpretation are explained in relation to Papers I and II and separately in relation to Paper III (chapters 5.6.1 and 5.6.2), illuminating how the interpretation processes involved the researcher's role at different levels.

Experiences will always be more complex than can be expressed, and we might not have awareness of all of their implicit meaning. Even if the study participants were aware of certain meanings, they might not have been prepared to fully reveal feelings and understanding. In addition, the research material was dependent on the interaction between researchers and informants.

I argue that that the insights and knowledge acquired from this study can benefit both specialist nurses and general nurses in their clinical practice. Our study has revealed

fundamental knowledge of signs and nurses' assessment practices, and such knowledge is essential for all nursing practices.

8.8 Ethics

Given my own background as an ICU nurse, I could participate more directly in the nurses' daily work life during the observational study (Papers I and II). I chose to wear the same standard nurse uniform as the nurses in the two ICUs, which consists of white hospital trousers and a white hospital top. In addition, I had a nameplate on my uniform that had my first name, surname, and working title researcher/intensive care nurse. The nurses in the two ICUs quickly included me in their daily working life, almost as a colleague. Conversely, it was a balancing act between assisting in nursing care within the limits of my competence and what was ethical for me as a researcher to participate in, e.g., information meetings between families, physicians and nurses.

Because I wore the same uniform as the nurse responsible for the patient and my nameplate had intensive care nurse as one of my working titles, families of the patient might perceive me as a nurse rather than as a researcher. Families sometimes addressed me as a nurse with questions about the patient's condition, treatment plan and prognosis in the same manner that they addressed nurses in the two ICUs. I experienced that as an ethical problem and found it challenging to balance but not exceed my competence and simultaneously not dismiss their appeals for help.

As part of the ICU context, other healthcare persons (nurses and physicians) became indirectly involved parties during the 29 days of close observation of the participating nurses. I experienced that as an ethical problem because they had not provided written informed consent. Conversely, it would have been complicated to obtain consent from all involved as a result of the large number of healthcare personnel working in the two ICUs.

9 CONCLUSIONS AND FUTURE PERSPECTIVES

9.1 Conclusions

The findings of this thesis demonstrate that nurses foresee and are aware of early changes in patients' clinical conditions through living images that consist of signs that can be viewed as separate from and opposed to one another but that are nonetheless interdependent. Sensorial signs exist in an intense interplay with signs that are measurable and manifest as the nurse's mood. Thus, measurable signs are essential but not sufficient to enable nurses to follow up with patients and form an image of the patient's condition. Our findings also revealed that care situations such as bodily hygiene, mouth care, changing a patient's position in bed, tracheal suction, and following patients through shifts are essential for nurses to perceive these signs.

Nurses understand each patient's unique situation and foresee clinical eventualities by means of sensitive and attentive modes of thinking and working. This requires nurses to be present at the bedside with both their senses and emotions and to work in a concentrated and systematic manner throughout the shift. Thus, the nurse-patient ratio and bedside nursing are not necessarily sufficient for nurses to perceive signs of incipient changes in a patient's clinical condition.

Nurses should be aware of their essential role in conducting ongoing clinical observations of patients and their right to be included in decision-making processes regarding patients' course of treatment and care. Accurate and effective dialogue between nurses and physicians on shift requires leadership that is able to organize routine interdisciplinary meetings. Furthermore, this type of dialogue necessitates a willingness on the part of physicians to listen to and incorporate nurses' clinical observations and concerns about patients in the decision-making process. Our findings also revealed a need to present

observations and interpretations of a patient's clinical condition in both everyday language and medical language.

9.2 Clinical implications

Coming to the end of this thesis, I believe that the insights and knowledge gained from this research have shed light on important and previously unexplored phenomena in ICU nurses' practice related to incipient changes in a critically ill patient's condition and the dialogue between nurses and physicians in the ICU. We argue that the insights and knowledge acquired from this study can benefit nursing practice, education and future research.

First, ICU nurses form images of individual patients that consist of signs (of incipient changes in a patient's condition) that are sensory and measurable and that manifest as nurses' mood. These signs can aid nurses in the incipient recognition of changes in a critically ill patient's conditions and in providing improved care.

Second, insights from Paper I demonstrate that care situations are powerful stimuli for the patient and are of great importance for nurses in enabling them to develop an impression of the patient. In addition, working routines that enable nurses to follow up with patients through shifts are essential in enabling nurses to detect incipient changes in a patient's condition.

Third, our findings highlight that providing safe and high-quality care requires nurses to be sensitive and attentive to each patient's unique situation. Therefore, I suggest that nurses must be close to the bedside of their patients to provide high-quality observations and must work in a concentrated and systematic manner.

Fourth, nurses should be aware of their essential role in conducting ongoing clinical observations of patients and of their right to be included in decision-making processes regarding ongoing patient treatment and care.

Fifth, insights from Paper III underscore the need to strengthen nurses' ability to report their clinical observations and interpretations to physicians on shift, which requires an increased emphasis in the education system and in nursing practice on how to present potential patient changes and concerns. Furthermore, this change would necessitate willingness on the part of physicians to listen to and incorporate nurses' clinical observations and concerns about patients in the decision-making process.

Sixth, accurate and effective dialogue between nurses and physicians on shift requires leadership that can organize routine interdisciplinary meetings.

9.3 Research implications

Awareness of incipient changes in a patient's condition and the ability to foresee potential complications are considered important elements in preventing complications and in safeguarding the lives of critically ill patients. However, few studies have examined the actual process of becoming aware of incipient changes in a patient's condition from the perspective of intensive care nurses. In addition, effective interprofessional collaboration is essential and critical for ensuring the quality and safety of health care, given the severity of patients' situations and the rapid and frequently unpredictable changes in patients' conditions.

First, to ensure high quality and safe care of patients in the ICU, future research should explore the "nursing concern" and "worried criterion" used by nurses when they are

concerned about a patient who does not show changes in physiological parameters as outlined in set objective criteria.

Second, research should explore the significance of working routines that enable nurses to follow up with patients through shifts.

Third, research should explore nurses' educational needs and strategies to enhance their ability to recognize incipient changes in patient conditions.

Fourth, it appears important to explore strategies to enhance inexperienced nurses' ability to present patient information to physicians. This exploration should include both the educational system and clinical practice.

Fifth, the conduct of interprofessional rounds with a particular focus on ICU nurse-physician relationships during rounds should be investigated.

Sixth, research should examine various types of information used in clinical decision making from both nurses' and physicians' perspectives.

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APPENDICES

Appendix 1: Search strategy

Appendix 2: Information to participants, interview and observational guide (Paper I and Paper II)

Appendix 3: Information to families (Paper I and Paper II)

Appendix 4: Information to participants, themes focus discussion (Paper III)

Appendix 5: REK/NSD (Paper I, II and III)

Appendix 1. Search strategy

Search strategy in PubMed to identify articles relevant to this thesis: “Incipient changes in ICU patients’ clinical conditions – signs, nurses’ assessment and the dialogue between nurses and physicians”.

Inclusion criteria were peer-reviewed publications in English, Danish, Swedish or Norwegian in 2011-2017.

A final search was performed 12.1.2017.

Table 1

Concepts	Mesh terms	Other terms	Hits
Intensive care nurses			
1	Nurses		10614
2	Critical care nursing		926
3		Intensive care nursing	18
4		Intensive care nurse	4
5		Intensive care nurses	8
6 (1 OR 2 OR 3 OR 4 OR 5)			11472
Early recognition			
7	Signs and Symptoms		284454
8	Vital signs		41149
9		Deterioration	308
10		Intuition in nursing practice	2
11		Patient condition	2
12 (7 OR 8 OR 9 OR 10 OR 11)			318623
Patient in the ICU			
13	Patients		11330
14		ICU patients	9
15		ICU patient	4
16 (13 OR 14 OR 15)			11343
Patient assessment			
17	Assessment, nursing		1927
18		Monitoring	9772
19		Surveillance	5040
20 (18 OR 19 OR 20)			16500
Nurse – physician collaboration			
21	Interprofessional relations		12126
22	Attending physicians, hospital		2923

23	Nurses role		6468
24		Communication	86379
25 (21 OR 22 OR 23 OR 24)			99285
Intensive care context			
26	Intensive care units		16511
27	Critical care		8898
28		ICU	873
29 (26 OR 27 OR 28)			23544

Table 2 Overview of articles identified in PubMed concerning “Incipient changes in ICU patients’ clinical conditions – signs, nurses’ assessment and the dialogue between nurses and physicians”. A final search was performed 12.1.2017.

Main group	Concept (hits)	Total article
	#12 Early recognition (318623) AND #16 Patient in the ICU (11343) #29 Intensive care context (23544)	277
ICU nurses assessment of patients clinical condition	#6 Intensive care nurses (11472) AND #12 Early recognition (318623) #20 Patient assessment (16500)	43
Nurses role and the communication between nurses and physicians	#6 Intensive care nurses (11472) AND #25 Nurse – physician collaboration (99285) AND #29 Intensive care context (23544)	159

refers to search history in Table 1

Appendix 2 Information to participants, interview guide and observational guide (Paper I and Paper II)

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Avdelingsleder XX
Intensivavdelingen
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Tromsø 6.6.2012

Søknad om tilgang til intensivavdelingen XX

Undertegnede er intensivsykepleier og stipendiat ved Institutt for helse- og omsorgsfag (IHO), Det helsevitenskapelige fakultet, Universitetet i Tromsø (UIT). En del av doktorgraden min i helsevitenskap er gjennomføring av et prosjekt med tittel: "Tidlige tegn på endringer i tilstand - En studie av intensivsykepleiers kliniske kompetanse". Det er Institutt for helse og omsorgsfag (IHO) ved Universitetet i Tromsø (UIT) som er ansvarlig for prosjektet, og hovedveileder / prosjektleder er førsteamanuensis Sissel Lisa Storli. Jeg søker herved om tillatelse til å gjennomføre deler av datainnsamlingen i intensivavdelingen ved deres klinikk.

Forskningsprosjektet har til hensikt å oppnå økt kunnskap om intensivsykepleierens kliniske kompetanse spesielt knyttet til evnen til å registrere tidlige tegn på endringer i pasientens tilstand, hvordan denne kompetansen uttrykkes / utvikles og hvordan intensivsykepleieren med sin kliniske kompetanse inngår / kan inngå i behandlingsteamets samlede kompetanse rundt intensivpatienten.

Prosjektet har tre hovedproblemstillinger:

- Hva inngår i intensivsykepleierens kliniske kompetanse spesielt knyttet til evnen til å registrere tidlige tegn på endringer i pasientens tilstand?
- Hvordan uttrykkes og utvikles denne kliniske kompetansen i praksis?
- Hvordan intensivsykepleieren med sin kliniske kompetanse inngår / kan inngå i behandlingsteamets samlede kompetanse rundt intensivpatienten?

Prosjektet søkes gjennomført på to ulike generelle intensivavdelinger med avansert intensivmedisinsk tilbud.

Jeg søker om tillatelse og hjelp til å inkludere 8 intensivsykepleiere i intensivavdelingen i forskningsprosjektet. Inklusjonskriteriet vil være at de har arbeidet som intensivsykepleier i minst 5 år ved samme avdeling. Utvalget er tilfeldig med hensyn til kjønn. De situasjoner som observeres i feltstudiet må være knyttet til intensivpatienter som respirator behandles og som har en forventet liggetid på flere døgn (beskrivende for kompleksitet).

Datamaterialet vil bli samlet inn via deltakende observasjon, individuelle intervju og fokusgruppeintervju.

Jeg vil følge hver enkelt intensivsykepleier i pleie- og behandlingssituasjoner de inngår i gjennom 2-3 vakter. Deltakende observasjon innebærer at jeg vil være en god del tilstede i avdelingen, og ønsker mulighet til å bli inkludert i intensivsykepleierens arbeid. Dette betyr ikke at jeg skal gjøre det samme som intensivsykepleierne, men kan sammen med dem evt hjelpe til i enkelte gjøremål, som stell og sning av intensivpasienten. Dette kan forventes i det jeg har lang klinisk erfaring som intensivsykepleier, men erfaringen ligger en tid tilbake. Tilstanden til intensivpasienten kan være kritisk og brått endre seg, og vil også bestemme grad av deltakelse fra meg. Det er også nødvendig at jeg får delta på pre visitt, visitt, rapporter og diskusjoner for å få innblikk i hva som diskuteres og vektlegges i felles fora for intensivsykepleierne og intensivleger knyttet til observasjonssituasjonene. På slutten av dagen, før vaktskiftet og rapport intervjues intensivsykepleierne om situasjoner som har vært den aktuelle vekten.

I tillegg er det planlagt fokusgruppeintervju med intensivsykepleiere og intensivleger ved de samme intensivavdelinger. Jeg ber også om tillatelse og hjelp til å rekruttere 2-4 leger ved avdelingen til deltakelse i disse intervjuene. Det vil være 4- 6 deltakere i fokusgruppeintervjuene.

Det er gitt konsesjon fra Norsk samfunnsvitenskapelige datatjeneste (NSD) og dispensasjon fra taushetsplikt (tilstedeværelse i feltet) fra Regional komité for medisinsk og helsefaglig forskningsetikk (REK) for gjennomføring av prosjektet.

Ved spørsmål kan undertegnede kontaktes på mobil 92683038 eller e-mail monica.kvande@uit.no

Med vennlig hilsen

Monica Kvande
Stipendiat i helsevitenskap

Vedlegg:

Prosjektbeskrivelse

Tillatelse fra Norsk samfunnsvitenskapelige datatjeneste (NSD)

Tilråding fra Regional komité for medisinsk og helsefaglig forskningsetikk (REK)

Kopi:

Sissel Lisa Storli

Institutt for helse og omsorgsfag

Det helsevitenskapelige fakultet

Universitetet i Tromsø

Forespørsel om deltakelse i forskningsprosjektet (intensivsykepleiere)

”Tidlige tegn på endringer i tilstand - En studie av intensivsykepleiers kliniske kompetanse”

Bakgrunn og hensikt

Dette er et spørsmål til deg om å delta i et forskningsprosjekt som har til hensikt å undersøke intensivsykepleierens kliniske kompetanse spesielt knyttet til evnen til å registrere tidlige tegn på endringer i pasientens tilstand, hvordan denne kompetansen uttrykkes og utvikles og hvordan intensivsykepleieren med sin kliniske kompetanse inngår / kan inngå i behandlingsteamets samlede kompetanse rundt intensivpatienten. Forespørselen rettes til deg fordi du er intensivsykepleier og har arbeidet ved denne intensivavdelingen i minst 5 år. Det er Institutt for Helse- og Omsorgsfag (IHO) ved Universitetet i Tromsø (UIT) som er ansvarlig for prosjektet.

Hva innebærer studien?

8 intensivsykepleiere og 3-4 intensivleger tilknyttet intensivavdelingen vil bli forespurt om å delta i forskningsprosjektet. Datamaterialet vil bli samlet inn via deltakende observasjon, individuelle intervju og fokusgruppeintervju.

Deltakende observasjon innebærer at jeg vil være en god del tilstede i avdelingen, og ønsker mulighet til å bli inkludert i intensivsykepleierens arbeid. Dette betyr ikke at jeg skal gjøre det samme som dere, men kan sammen med dere evt hjelpe til i enkelte gjøremål, som stell og sning av intensivpatienten. Dette kan forventes i det jeg har lang klinisk erfaring som intensivsykepleier, men erfaringen ligger en tid tilbake. Tilstanden til intensivpatienten kan være kritisk og brått endre seg, og vil også bestemme grad av deltakelse fra meg.

Jeg vil følge hver enkelt av dere i pleie- og behandlingssituasjoner dere inngår i gjennom 2-3 vakter. Det er også nødvendig at jeg får delta på pre visitt, visitt, rapporter og diskusjoner for å få innblikk i hva som diskuteres og vektlegges i felles fora for intensivsykepleierne og intensivleger knyttet til observasjonssituasjonene. På slutten av dagen, før vaktskiftet og rapport intervjues dere om situasjoner som har vært den aktuelle vekten. Intervjuene vil vare en time, tas opp på minidisk for så å bli nedskrevet anonymt. I tillegg vil jeg ha uformelle samtaler med dere og stille spørsmål underveis på vakta.

Deltakelse i prosjektet innebærer også at du må sette av 1-2 timer til deltakelse i fokusgruppeintervju sammen med intensivleger fra intensivavdelingen dere arbeider ved. Det vil være 4- 6 deltakere i fokusgruppeintervjuet. Tema for fokusgruppeintervju vil være samarbeid og kommunikasjon mellom dere som intensivsykepleiere og intensivlegene i avdelingen. Intervjuet tas opp på minidisk for så å bli nedskrevet anonymt.

Mulige fordeler og ulemper

Deltakelse i prosjektet innebærer at forsker vil følge deg 2-3 fortløpende vakter i ditt arbeid og samhandling med intensivpatienten du har ansvar for den vekten. Forskerens tilstedeværelse vil kunne oppleves som mer eller mindre belastende for deg avhengig av intensivpatientens tilstand, medisinsk behandling og pasientens pårørende. Deltakelse

innebærer også at du må sette av tid til intervju på slutten av de 2-3 vaktene og tid til fokusgruppeintervju sammen med intensivlegene.

Hva skjer med informasjonen om deg?

Informasjonen som registreres om deg skal kun brukes slik som beskrevet i hensikten med studien. Alle opplysninger og resultater aidentifiseres. Lydfiler oppbevares på PC tilknyttet institusjonsnettverk med passord og utskrifter oppbevares innelåst i prosjektperioden. Personidentifiserbare opplysninger som navnelister og skriftlig informert samtykke oppbevares innelåst adskilt fra resten av datamaterialet. Data aidentifiseres innen prosjektslutt 2.5.2016. Ingen pasientopplysninger som kan føre til gjenkjennelse av enkeltpasienter vil bli benyttet i forskningen. Feltnotater og de transkriberte intervjuene vil bli oppbevart i 5 år i aidentifisert form etter at prosjektet er avsluttet. Dette vil gi mulighet for å bruke datamaterialet i videre forskning og publisering.

Frivillig deltakelse

Det er frivillig å delta i studien. Du kan når som helst og uten å oppgi noen grunn trekke ditt samtykke til å delta i studien. Dersom du ønsker å delta, undertegner du samtykkeerklæringen og sender denne i vedlagte svarkonvolutt til stipendiat Monica Kvande. Dersom du senere ønsker å trekke deg eller har spørsmål til studien, kan du kontakte prosjektleder Sissel Lisa Storli, telefon 77 66 07 61.

Med vennlig hilsen

Monica Kvande
Stipendiat i helsevitenskap

Vedlegg 1: Samtykkeerklæring med frankert returkonvolutt

Samtykke til deltakelse i studien

Jeg har mottatt skriftlig informasjon om prosjektet: "Tidlige tegn på endringer i tilstand - En studie av intensivsykepleiers kliniske kompetanse", og er villig til å delta i studien.

(Signert av prosjektdeltaker, dato)

Sendes tilbake i vedlagt ferdig frankert svarconvolutt

Observasjonsguide: Deltakende observasjon intensivsykepleiere

Hovedpunkter	Underpunkter
Situasjonsbeskrivelse	Hva handler situasjonen om? Beskrivelse av situasjonen uten gjenkjennende opplysninger
Intensivsykepleierens ivaretagelse av intensivpatienten	Å ta over ansvaret for pasienten ved vaktskiftet Rapport Hva vektlegger intensivsykepleierne i rapport til neste vakt Å skaffe seg oversikt Hvordan skaffer intensivsykepleieren seg oversikt i situasjonen? Å planlegge arbeidsdagen Hva vektlegger intensivsykepleieren i planleggingen? Å prioritere mellom ulike handlinger Å følge utviklingen i pasientens tilstand og respons på behandling Å være oppmerksom på symptomer og kliniske tegn som uttrykk for endringer i pasientens tilstand Tidlige advarselstegn Årvåkenhet Objektive målbare parameter Symptomer og kliniske tegn Faglig skjønn Å håndtere skiftende situasjoner, uforutsette situasjoner, skifte av fokus Hurtig oppfattelse av problemet Å identifisere og håndtere kritiske situasjoner Å forholde seg til ulike sykepleiefaglige behov hos pasienten Pleie og stell Samhandling og kommunikasjon med intensivpatienten Informasjon Å håndtere avansert medisinsk - teknisk utstyr. Tekniske prosedyrer Å være trygg og beherske bruk og kontroll av utstyr Å kunne utføre prosedyrer
Betydningen av pårørende	Ressurs for intensivsykepleieren

Samarbeid og kommunikasjon mellom intensivsykepleieren og intensivlegen(e)

Behandlingsteamet rundt intensivpasienten
Hvem inngår i behandlingsteamet rundt intensivpasienten?

Hva er intensivsykepleierens rolle og hvordan blir intensivsykepleieren involvert i behandlingsteamet rundt intensivpasienten?

Ulike arena for samarbeid
Hvilke felles fora for intensivleger og intensivsykepleiere eksisterer på avdelingen?

Hvor foregår diskusjoner om og formidling av observasjoner og vurderinger av intensivpasientens tilstand og respons på medisinsk behandling?

Intensivsykepleierens formidling av observasjoner og vurderinger av pasientens tilstand og respons på medisinsk behandling

Hva vektlegger intensivsykepleieren i kommunikasjon med intensivlegen(e) om pasientens tilstand og utvikling?

Hvordan formidler intensivsykepleierne observasjoner og vurderinger av intensivpasientens tilstand og utvikling?

Hvordan formidler intensivsykepleierne eventuelt tidlige tegn på endringer i pasientens tilstand og respons på medisinsk behandling?

Hva synes å bli mest vektlagt i kommunikasjon og samarbeid mellom intensivsykepleierne og intensivlegene om pasientens respons på sykdom og behandling?

Intervjuguide: Individuelle intervju intensivsykepleiere

Intervju med intensivsykepleierne vil ha som utgangspunkt i deltakende observasjon og de situasjonene som har vært den aktuelle vakten(e).

Hovedpunkter	Underpunkter	Forslag til spørsmålsformuleringer
Intensivsykepleierens bakgrunn	Tid og sted for utdanning	Kan jeg få høre om din bakgrunn som intensivsykepleier?
	Arbeidserfaring	Hvor lenge har du arbeidet ved denne intensivavdelingen?
	Kompetanse og erfaring innen intensivsykepleie	Kan du fortelle om hvilken kompetanse/erfaring du har innen intensivsykepleie?
Observert(e) situasjon(er) fra feltstudie	Generelt om observert(e) situasjon(er)	Kan du fortelle om...? Er det noe du vil trekke frem som gikk spesielt bra i situasjonen(e)? Er det noe du vil trekke frem som gikk mindre bra og som du opplevde spesielt utfordrende?
	Oversikt i situasjonen og prioritering	Kan du fortelle hvordan du gikk frem for å skaffe deg oversikt i denne situasjonen; ved starten på vakta og underveis? Hva vil du trekke frem som viktig i planlegging av arbeidsdagen? Hvordan synes du planlegging og prioritering av oppgaver og handlinger gikk i denne situasjonen?
	Klinisk forståelse og klinisk undersøkelse av pasienten	Kan du fortelle hvordan du går frem for å identifisere pasientproblem? Kan du fortelle hvordan du går frem for å undersøke nærmere endringer i symptomer og kliniske tegn hos pasienten?
	Å forutse problemer og tenke fremover	Hvilke tanker har du om intensivsykepleierens evne til å forutse mulige hendelser? I litteraturen kalt "Early warnings" – "tidlige advarselstegn". Hvordan vil du eventuelt beskrive denne evnen? Hvilke tanker har du om dette i forhold til denne situasjonen?

	<p>Å identifisere og håndtere kritiske pasientsituasjoner</p>	<p>Var det tidspunkt i løpet av vakta hvor du vurderte at pasientens situasjon utviklet seg i en kritisk retning? Hva vil du trekke frem som viktig i håndtering av kritiske pasientsituasjoner generelt og spesielt i denne situasjonen?</p>
	<p>Å forholde seg til sykepleiefaglige behov hos pasienten</p>	<p>Kan du fortelle om hvordan du opplevde samhandling med intensivpasienten i denne situasjonen? Er det noe du vil trekke frem som gikk spesielt bra i situasjonen? Er det noe du vil trekke frem som gikk mindre bra og som du opplevde spesielt utfordrende?</p> <p>Hvilke tanker har du om bruk av avansert medisinsk – teknisk utstyr, protokoller?</p>
	<p>Å håndtere medisinsk - teknisk utstyr</p>	<p>Hva skal til for at du kan håndtere medisinsk - teknisk utstyr forsvarlig i pasientsituasjoner?</p>
	<p>Forebygge farer i et høyteknologisk miljø</p>	<p>Hva vil du trekke frem som viktig i bruk og kontroll av medisinsk – teknisk utstyr i forhold til pasientsikkerheten?</p>
	<p>Betydningen av pårørende</p>	<p>Hvilke tanker har du om betydningen av pårørendes tilstedeværelse i denne situasjonen?</p>
Samarbeid og kommunikasjon med intensivlegene	<p>Intensivsykepleiernes rolle i behandlingsteamet</p>	<p>Hvilke tanker har du om din egen rolle i behandlingsteamet rundt intensivpasienten? I hvilke situasjoner og på hvordan måte opplever du å bli involvert i behandlingsteamet rundt intensivpasienten?</p>
	<p>Samarbeid</p>	<p>Hvordan opplevde du samarbeidet med intensivlegen(e) i denne situasjonen? Hva fungerte bra? Hva fungerte mindre bra?</p>
	<p>Kommunikasjon med intensivlegen(e)</p>	<p>Hva vektlegger du i kommunikasjon med intensivlegen(e)? Hvordan opplevde du at formidling av observasjoner og vurderinger gikk i</p>

		<p>denne situasjonen? Hvordan opplever du som intensivsykepleier å bli hørt i diskusjoner om pasientens tilstand og respons på medisinsk behandling?</p>
Intensivsykepleiernes kliniske kompetanse	Innhold i intensivsykepleierens kliniske kompetanse	<p>Hva vil du trekke frem som viktig i intensivsykepleiernes kliniske kompetanse? Hvilke ulike former for kunnskap brukte du i denne situasjonen? Hvilke tanker har du om erfaring som intensivsykepleier og det å være i et faglig skjønn? Hva opplever du som mest utfordrende i din daglige praksis ved intensivavdelingen? Hva tenker du skal til for å fremme utviklingen av intensivsykepleiernes kliniske kompetanse i praksis?</p>
	Å utvikle klinisk kompetanse i praksis	<p>Hvilke tanker har du om hvordan intensivsykepleierne eventuelt kan utvikle evne til å registrere tidlige symptomer og kliniske tegn på endringer i pasientens tilstand? Hvilke tanker har du om hvordan intensivsykepleierne kan utvikle etisk kompetanse?</p>

Appendix 3 Information to families

Informasjon til pårørende

Monica Kvande gjennomfører deler av sitt PhD – prosjekt i helsevitenskap ved intensivavdelingen, XX i tidsrommet XX. Monica Kvande er intensivsykepleier og stipendiat ved Institutt for helse- og omsorgsfag, Det helsevitenskapelige fakultet, Universitetet i Tromsø.

PhD – prosjektet skal bidra til å få økt kunnskap om intensivsykepleiernes kliniske kompetanse og intensivsykepleiernes samarbeid med intensivlegene om intensivpasientene. Intensivsykepleierne og intensivlegene deltar i forskningen gjennom å bli observert i sitt daglige arbeid og intervjuet om det.

Ingen pasienter er direkte involvert i forskningen, men siden stipendiat Monica Kvande observerer avdelingens intensivsykepleiere og intensivleger, vil hun få innsyn i pasientsituasjoner.

Stipendiat Monica Kvande har taushetsplikt. Ingen pasientopplysninger som kan føre til gjenkjenning av enkeltpasienter vil bli benyttet i forskningen. All informasjon som tilføres gjennom de som deltar i prosjektet vil bli aidentifisert og alle opplysninger behandles konfidensielt.

Som pårørende kan du reservere deg mot at det gjøres observasjoner av intensivsykepleiere og intensivleger i tilknytning til en av dine nærmeste. Gi da beskjed til den intensivsykepleieren som har ansvar for han/hun du er pårørende for.

Tromsø 17.10.2012

Monica Kvande

Stipendiat i helsevitenskap

Appendix 4 Information to participants, interview guide focus discussion (Paper III)

Monica Kvande
Det helsevitenskapelige fakultet
Institutt for helse og omsorgsfag
9037 Tromsø

Avdelingsleder XX
Intensivavdelingen
XX Universitetssykehus

Tromsø 6.6.2012

Søknad om tilgang til intensivavdelingen XX

Undertegnede er intensivsykepleier og stipendiat ved Institutt for helse- og omsorgsfag (IHO), Det helsevitenskapelige fakultet, Universitetet i Tromsø (UIT). En del av doktorgraden min i helsevitenskap er gjennomføring av et prosjekt med tittel: "Tidlige tegn på endringer i tilstand - En studie av intensivsykepleiers kliniske kompetanse". Det er Institutt for helse og omsorgsfag (IHO) ved Universitetet i Tromsø (UIT) som er ansvarlig for prosjektet, og hovedveileder / prosjektleder er førsteamanuensis Sissel Lisa Storli. Jeg søker herved om tillatelse til å gjennomføre deler av datainnsamlingen i intensivavdelingen ved deres klinikk.

Forskningsprosjektet har til hensikt å oppnå økt kunnskap om intensivsykepleierens kliniske kompetanse spesielt knyttet til evnen til å registrere tidlige tegn på endringer i pasientens tilstand, hvordan denne kompetansen uttrykkes / utvikles og hvordan intensivsykepleieren med sin kliniske kompetanse inngår / kan inngå i behandlingsteamets samlede kompetanse rundt intensivpasienten.

Prosjektet har tre hovedproblemstillinger:

- Hva inngår i intensivsykepleierens kliniske kompetanse spesielt knyttet til evnen til å registrere tidlige tegn på endringer i pasientens tilstand?
- Hvordan uttrykkes og utvikles denne kliniske kompetansen i praksis?
- Hvordan intensivsykepleieren med sin kliniske kompetanse inngår / kan inngå i behandlingsteamets samlede kompetanse rundt intensivpasienten?

Prosjektet søkes gjennomført på to ulike generelle intensivavdelinger med avansert intensivmedisinsk tilbud.

Jeg søker om tillatelse og hjelp til å inkludere 8 intensivsykepleiere i intensivavdelingen i forskningsprosjektet. Inklusjonskriteriet vil være at de har arbeidet som intensivsykepleier i minst 5 år ved samme avdeling. Utvalget er tilfeldig med hensyn til kjønn. De situasjoner som observeres i feltstudiet må være knyttet til intensivpasienter som respirator behandles og som har en forventet liggetid på flere døgn (beskrivende for kompleksitet).

Datamaterialet vil bli samlet inn via deltakende observasjon, individuelle intervju og fokusgruppeintervju.

Jeg vil følge hver enkelt intensivsykepleier i pleie- og behandlingssituasjoner de inngår i gjennom 2-3 vakter. Deltakende observasjon innebærer at jeg vil være en god del tilstede i avdelingen, og ønsker mulighet til å bli inkludert i intensivsykepleierens arbeid. Dette betyr ikke at jeg skal gjøre det samme som intensivsykepleierne, men kan sammen med dem evt hjelpe til i enkelte gjøremål, som stell og snuing av intensivpasienten. Dette kan forventes i det jeg har lang klinisk erfaring som intensivsykepleier, men erfaringen ligger en tid tilbake. Tilstanden til intensivpasienten kan være kritisk og brått endre seg, og vil også bestemme grad av deltakelse fra meg. Det er også nødvendig at jeg får delta på pre visitt, visitt, rapporter og diskusjoner for å få innblikk i hva som diskuteres og vektlegges i felles fora for intensivsykepleierne og intensivleger knyttet til observasjonssituasjonene. På slutten av dagen, før vaktskiftet og rapport intervjues intensivsykepleierne om situasjoner som har vært den aktuelle vakten.

I tillegg er det planlagt fokusgruppeintervju med intensivsykepleiere og intensivleger ved de samme intensivavdelinger. Jeg ber også om tillatelse og hjelp til å rekruttere 2-4 leger ved avdelingen til deltakelse i disse intervjuene. Det vil være 4- 6 deltakere i fokusgruppeintervjuene.

Det er gitt konsesjon fra Norsk samfunnsvitenskapelige datatjeneste (NSD) og dispensasjon fra taushetsplikt (tilstedeværelse i feltet) fra Regional komité for medisinsk og helsefaglig forskningsetikk (REK) for gjennomføring av prosjektet.

Ved spørsmål kan undertegnede kontaktes på mobil 92683038 eller e-mail monica.kvande@uit.no

Med vennlig hilsen

Monica Kvande
Stipendiat i helsevitenskap

Vedlegg:

Prosjektbeskrivelse

Tillatelse fra Norsk samfunnsvitenskapelige datatjeneste (NSD)

Tilrådning fra Regional komité for medisinsk og helsefaglig forskningsetikk (REK)

Kopi:

Sissel Lisa Storli

Institutt for helse og omsorgsfag

Det helsevitenskapelige fakultet

Universitetet i Tromsø

Forespørsel om deltakelse i forskningsprosjektet (intensivleger)

”Tidlige tegn på endringer i tilstand - En studie av intensivsykepleiers kliniske kompetanse”

Bakgrunn og hensikt

Dette er et spørsmål til deg om å delta i et forskningsprosjekt som har til hensikt å undersøke intensivsykepleierens kliniske kompetanse spesielt knyttet til evnen til å registrere tidlige tegn på endringer i pasientens tilstand, hvordan denne kompetansen uttrykkes og utvikles og hvordan intensivsykepleieren med sin kliniske kompetanse inngår / kan inngå i behandlingsteamets samlede kompetanse rundt intensivpatienten. Forespørselen rettes til deg fordi du er intensivlege. Det er Institutt for Helse- og Omsorgsfag (IHO) ved Universitetet i Tromsø (UIT) som er ansvarlig for prosjektet.

Hva innebærer studien?

8 intensivsykepleiere og 3-4 intensivleger tilknyttet intensivavdelingen vil bli forespurt om å delta i forskningsprosjektet. Datamaterialet vil bli samlet inn via feltarbeid, individuelle intervju og fokusgruppeintervju.

Deltakelse i prosjektet innebærer at du må sette av 1-2 timer til deltakelse i fokusgruppeintervju sammen med intensivsykepleierne ved samme intensivavdeling. Det vil være 4- 6 deltakere i fokusgruppeintervjuet. Tema for fokusgruppeintervju vil være samarbeid og kommunikasjon mellom dere som intensivleger og intensivsykepleierne i avdelingen. Intervjuet tas opp på minidisk for så å bli nedskrevet anonymt.

Mulige fordeler og ulemper

Deltakelse i prosjektet innebærer at du må sette av tid til fokusgruppeintervju sammen med intensivsykepleierne. Dette vil kunne oppleves som mer eller mindre belastende for deg avhengig av arbeidsbelastningen og situasjonen i intensivavdelingen.

Hva skjer med informasjonen om deg?

Informasjonen som registreres om deg skal kun brukes slik som beskrevet i hensikten med studien. Alle opplysninger og resultater aidentifiseres. Lydfiler oppbevares på PC tilknyttet institusjonsnettverk med passord og utskrifter oppbevares innelåst i prosjektperioden. Personidentifiserbare opplysninger som navnelister og skriftlig informert samtykke oppbevares innelåst adskilt fra resten av datamaterialet. Data aidentifiseres innen prosjektslutt 2.5.2016. Ingen pasientopplysninger som kan føre til gjenkjennelse av enkeltpasienter vil bli benyttet i forskningen. Feltnotater og de transkriberte intervjuene vil bli oppbevart i 5 år i aidentifisert form etter at prosjektet er avsluttet. Dette vil gi mulighet for å bruke datamaterialet i videre forskning og publisering.

Frivillig deltakelse

Det er frivillig å delta i studien. Du kan når som helst og uten å oppgi noen grunn trekke ditt samtykke til å delta i studien. Dersom du ønsker å delta, undertegner du samtykkeerklæringen og sender denne i vedlagte svarconvolutt til stipendiat Monica Kvande. Dersom du senere ønsker å trekke deg eller har spørsmål til studien, kan du kontakte prosjektleder Sissel Lisa Storli, telefon 77 66 07 61.

Med vennlig hilsen

Monica Kvande
Stipendiat i helsevitenskap

Vedlegg 1: Samtykkeerklæring med frankert returkonvolutt

Samtykke til deltakelse i studien

Jeg har mottatt skriftlig informasjon om prosjektet: "Tidlige tegn på endringer i tilstand - En studie av intensivsykepleiers kliniske kompetanse", og er villig til å delta i studien.

.....
(Signert av prosjektdeltaker, dato)

Sendes tilbake i vedlagt ferdig frankert svarkonvolutt

.....

Tema til fokusgruppeintervju med intensivsykepleierne og intensivlegene

Kommunikasjon

- Hvilke faglige temaer vil dere trekke frem som viktig å kommunisere rundt?
- Hvilke tanker har dere om ulike måter å kommunisere på?
- Kan dere fortelle om en situasjon hvor kommunikasjon mellom intensivleger og intensivsykepleierne fungerte bra? Hva fungerte bra?
- Kan dere fortelle om en situasjon hvor kommunikasjon mellom intensivleger og intensivsykepleierne fungerte mindre bra eller var utfordrende? Hva fungerte mindre bra?

Samarbeid

- Hvilke tanker har dere om hverandres roller i behandlingsteamet rundt intensivpatienten?
- Hva vil dere trekke frem som viktig i et teamarbeid rundt intensivpatienten?
- Kan dere fortelle om en situasjon hvor samarbeidet mellom intensivleger og intensivsykepleierne fungerte bra? Hva fungerte bra?
- Kan dere fortelle om en situasjon hvor samarbeidet mellom intensivleger og intensivsykepleierne fungerte mindre bra eller var utfordrende? Hva fungerte mindre bra

Intensivsykepleiernes særegne bidrag

- Hvilke tanker har dere om intensivsykepleiernes særegne bidrag i behandlingsteamet rundt intensivpatienten?



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Org.nr 985 321 884

Monica Kvande
Institutt for helse- og omsorgsfag
Universitetet i Tromsø
MH-bygget
9037 TROMSØ

Vår dato: 03.04.2012

Vår ref:30044 / 3 / LMR

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 01.03.2012. Meldingen gjelder prosjektet:

30044 *Intensivsykepleiers kliniske kompetanse*
Behandlingsansvarlig *Universitetet i Tromsø, ved institusjonens øverste leder*
Daglig ansvarlig *Monica Kvande*

Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstiller kravene i personopplysningsloven.

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/forsk_stud/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsd.uib.no/personvern/prosjektoversikt.jsp>.

Personvernombudet vil ved prosjektets avslutning, 02.05.2016, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen


Vigdis Namtvedt Kvalheim


Linn-Merethe Rød

Linn-Merethe Rød tlf: 55 58 89 11

Vedlegg: Prosjektvurdering



Utvalget består av 16 intensivsykepleiere og 6-8 intensivleger i klinisk virksomhet i intensivavdeling. Data samles inn via personlig og gruppeintervju, samt via observasjon knyttet til intensivpasienter som respiratorbehandles.

Søknad om dispensasjon fra taushetsplikten vedrørende observasjon, er sendt til REK. Ombudet ber om at svaret fra REK, ettersendes.

Ombudet forstår videre prosjektopplegget slik at det ikke skal registreres personidentifiserende opplysninger om pasientene.

Førstegangskontakt foretas via leder ved intensivavdelingen, som formidler informasjonsskriv om prosjektet til aktuelle sykepleiere og leger. Pårørende orienteres også om prosjektet, og gis reservasjonsmulighet vedrørende observasjon av pasient. Personvernombudet finner informasjonsskrivene vedlagt meldeskjemaet tilfredsstillende, forutsatt at følgende endringer gjøres:

- Det må tilføyes at data anonymiseres innen prosjektslutt 2.5.2016
- Det må presiseres at det ikke registreres personidentifiserende opplysninger om pasienter

I henhold til prosjektmelding, skal innsamlede opplysninger anonymiseres innen prosjektslutt 2.5.2016. Ombudet minner om at anonymisering innebærer at direkte personidentifiserende opplysninger som navn/navneliste slettes, og at indirekte personidentifiserende opplysninger (sammenstilling av bakgrunnsopplysninger som f. eks. sted, yrke, alder, kjønn) fjernes eller endres.

Region:	Saksbehandler:	Telefon:	Vår dato:	Vår referanse:
REK nord			15.05.2012	2012/622/REK nord
			Deres dato:	Deres referanse:
			27.03.2012	

Vår referanse må oppgis ved alle henvendelser

Sissel Lisa Storli
Institutt for helse og omsorgsfag
Universitetet i Tromsø

2012/622 Intensivsykepleiers kliniske kompetanse

Vi viser til søknad om dispensasjon fra taushetsplikt, datert 27.03.2012 vedrørende Intensivsykepleiers kliniske kompetanse. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk i møtet 26.04.2012.

Forskningsansvarlig institusjon: Universitetet i Tromsø
Prosjektleder: Sissel Lisa Storli

Komiteens merknader

Sissel Lisa Storli var inhabil og fratradte møte under behandlingen av saken

Dispensasjon fra taushetsplikt etter helsepersonelloven § 29 første ledd og forvaltningsloven § 13 første ledd.

Av helsepersonelloven § 29 fremgår det at” Departementet kan bestemme at opplysninger kan eller skal gis til bruk i forskning, og at det kan skje uten hinder av taushetsplikt etter § 21. Til slikt vedtak kan knyttes vilkår. Reglene om taushetsplikt etter denne lov gjelder tilsvarende for den som mottar opplysningene. “ I dette prosjektet er det ikke den enkelte pasient som er i fokus, men formålet er å se hvordan en intensivsykepleier arbeider for å identifisere og skjønne pasienttilstanden som så vil gi grunnlag for informasjonsflyt og handling i behandlingsteamet. Data som registreres vil bare være knyttet opp mot dette, og det vil ikke bli registrert medisinske opplysninger fra pasient journal. Videre så er det tatt høyde for at pårørende skal kunne reservere seg vet at det henges opp plakat på oppslagstavle ved inngang, som gir informasjon om studien og mulighet for reservasjon. Pasientgruppen er for syk til at dette kan meddeles den enkelte. Komiteen legger også til grunn at prosjektleder vil søke å gi muntlig informasjon til pårørende så langt det er mulig.

På denne bakgrunn finner komiteen at vilkårene for dispensasjonen er oppfylt.

Vedtak

Med hjemmel i forskrift av 02.07.09 nr. 989, der REK er delegert myndighet til å gi dispensasjon fra taushetsplikt etter helsepersonelloven § 29 første ledd og forvaltningsloven § 13 første ledd gis det dispensasjon fra taushetsplikt for aktuelle tilstand slik den beskrives av sykepleier som utfordring. Dispensasjonen gjelder for Monica Kvande og Sissel Lisa Storli.

Klageadgang

Du kan klage på komiteens vedtak, jf. helseforskningslovens § 10 tredje ledd og forvaltningslovens § 28 flg. Klagen sendes til REK nord. Klagefristen er tre uker fra du mottar dette e-brevet. Dersom vedtaket opprettholdes av REK nord, sender REK nord klagen videre til Den nasjonale forskningsetiske komité for medisin og helsefag for endelig vurdering.

Vi ber om at eventuelle tilbakemeldinger til komiteen sendes inn på skjema via vår saksportal: <http://helseforskning.etikkom.no>. Øvrige henvendelser sendes på e-post til post@helseforskning.etikkom.no.

Med vennlig hilsen

May Britt Rossvoll
sekretariatsleder

Monika Rydland Gaare
seniorkonsulent

Kopi til: postmottak@iho.uit.no