

Clinical handover of patients between nurses in the emergency department and somatic wards – an explorative interview study

En eksplorativ studie om sykepleiernes erfaringer med pasientoverleveringer fra et akuttmottak til somatiske avdelinger



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Preface

Pursuing higher education is an endurance sport.

This thesis is dedicated to many people.

My family: Thanks for patience and understanding while Mom was working weekends and evenings pursuing a Master's Degree. You rightfully asked 'Why'? To gain a more methodical approach to understanding, add a dimension to work, and 'walk among peers' as encouraged by colleagues. My parents too! Who have always encouraged me to study.

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Abbreviations:

DIPS: Distribuert Informasjons og Pasientdatasystem i Sykehus. Electronic patient data system. (<https://www.dips.no/>)

ED: Emergency department

EPJ: Electronic Patient Journal

Abstract:

Background: Leading international health organizations have focused on improving the quality of clinical handovers. Research demonstrates areas for improvement where clinical handovers in healthcare are essential for quality, safety, and continuity of patient care. One hospital had received many incident reports about the quality of interdepartmental handovers between the Emergency Department and somatic wards, and wanted to improve them.

Aim: The aim of this study was to explore how clinical handovers are experienced between the ED and ward nurses, and gather suggestions for improvement.

Method: This study pursued a qualitative, inductive, explorative approach with 6 focus group interviews of nurses (N=19) on both ends of the ED-Ward handover (2 ED, 1 surgical, 3 medical). The interdepartmental handover is by telephone from ED to ward nurses. Graneheim and Lundman's (2004) content analysis method was used to analyze interview texts. Rasmussen's system approach and Dynamic Safety Model formed the theoretical basis for interpretation.

Results: Four bodies of data emerged from the interviews: Poor handovers and Successful handovers from ED or Wards' perspectives. Poor handovers occurred in a busy ED without handover structure where efficiency trumps quality causing consequences for nurses and patients on the wards. Nursing assessments and documentation lacked, and patients' status upon arrival on wards didn't always match the handover description. Successful handovers were described as bridging needs of patients and nurses.

Conclusion: The results provide evidence for improving the interdepartmental handover but will take organizational buy-in and collaboration over time to develop and implement evidence-based, locally suitable handover routines and protocols.

1.0 Introduction

In modern hospitals, patients are dependent on the coordinated efforts of multiple, specialized healthcare professionals to ensure care and treatment delivery over time. Patients and healthcare personnel should expect quality and safety to permeate the healthcare system. However, there is no guarantee that patient pathways will be smooth, incident-free, or reliable. Over the past decades, increasing awareness of insufficient quality and iatrogenic safety risks has generated government, system, research, and educational focus on improving care delivery in increasingly complex modern hospitals (Vincent, 2010).

Hospitals provide life-saving treatments and care, but they are also a source of risk (Vincent, 2010). A groundbreaking report from the US healthcare authorities (Institute of Medicine, 2000) estimated up to 98,000 avoidable deaths in hospitals annually. It recommended increased focus, research and standards of patient safety. A recent estimate placed medical error as the third leading cause of death in the US healthcare system, but pointed out that errors are not officially a cause of disease or death in the International Classification of Disease (Makary & Daniel, 2016). The Norwegian Knowledge Centre for Health Services performed a retrospective patient journal audit with the Global Trigger Tool in 2013 and found 7,6% of patients admitted to somatic hospital wards experienced an injury needing extended admission, or incurred serious iatrogenic complications (Kunnskapsenteret, 2016). Consequences of error in healthcare are tragic, and may include inconvenience, disability, complications, delays in treatment, prolonged hospital admissions, costs, and both detrimental effects to the involved healthcare personnel, the family, the institution, and the trust relationship between the public and the healthcare sector (Hjort, 2007; Institute of Medicine, 2000).

What leads to these errors? 'The Joint Commission' found that breakdown in communication was the leading root cause of sentinel events between 1995-2006 among reporting healthcare systems in the US (World Health Organisation, 2007). The Joint Commission and World Health Organization (WHO) set forth in 2007 to prioritize initiatives, "High 5s", to contribute to preventing avoidable catastrophic events. One of the five was: "prevention of handover error" (The Joint Commission, 2007, p. 23). These international guidelines, and national campaigns in the US, UK and Australia, have highlighted the need to promote and improve quality in clinical handovers to increase quality and safety in healthcare delivery (Australian Commission on Safety and Quality in Healthcare, 2010; British Medical Association, 2004; The Joint Commission, 2007). As the medical director for the UK National Patient Safety Agency said: "*Handover of care is one of the most perilous procedures in*

medicine, and when carried out improperly can be a major contributory factor to subsequent error and harm to patients.” (British Medical Association, 2004, p. 2).

Handovers by nature create discontinuity in care between individuals over time and space, with potential for errors (Australian Commission on Safety and Quality in Healthcare, 2005; Jeffcott, Evans, Cameron, Chin, & Ibrahim, 2009; Wong, Kwang, & Turner, 2008). A systems’ view of safety is found in handover research literature revealing the levels of interplay between individuals, technology, culture, and organizations (Australian Commission on Safety and Quality in Healthcare, 2005; Gonzalo et al., 2014; Jeffcott, Evans, et al., 2009; Johnson, Jefferies, & Nicholls, 2012). The handover process is referred to as variable, unstructured, and error prone (Manser & Foster, 2011). It can be both risk creating and minimizing (Eggins, Slade, & Geddes, 2016). In Australia there have been accreditation standards requiring healthcare services to monitor and evaluate their handover process (Australian Commission on Safety and Quality in Healthcare, 2005). The Norwegian national patient safety campaign, “*Pasientsikkerhetsprogrammet*”, has not had specific initiatives on clinical handovers, but agrees that handovers are an important area with potential for improvement. They consider effective communication central to the “Safe Surgery Checklists”, and deteriorating patients program (Pasientsikkerhetsprogrammet, 2017).

Inadequate handovers lead to medication errors (Manias, Gerdtz, Williams, & Dooley, 2014), duplication of work (Dean, 2012), undetected critical conditions (Sutcliffe, Lewton, & Rosenthal, 2004), and risks for adverse events (Pascoe, Gill, Hughes, & McCall-White, 2014; Payne, Stein, Leong, & Dressler, 2012). The interdepartmental handover has unique features (Hilligoss & Cohen, 2011, 2013). Handover timing is unpredictable due to changes in patients’ status, and the perception that patients need different care than the current unit can provide. There are more unknown variables in the organizational boundaries including: interaction among staff from different units, different specialties, crossing physical borders. Coordination challenges may arise when units are not aware of each other’ s environments, norms and current state, and responsibility for treatment must be transferred. Negotiation-like situations may occur complicated by a lack of shared mental models, face-to-face interactions, established relationships, and unequal power and differing professional priorities.

1.1 Norwegian legislative framework

Norwegian laws provide a framework for professional behavior that can be applied to handover situations. First, the purpose of specialist care is to ensure that healthcare services provide quality care, are personalized to the patients’ needs, and resources are efficiently managed (Spesialisthelsetjenesteloven, 1999 § 1-1). Second, healthcare personnel must cooperate and

coordinate care with other qualified staff (Helsepersonelloven, 1999 § 4). Third, patient care must meet medical and professional norms and standards. This means that specialist healthcare must be structured to enable personnel to fulfill their legal obligations ensuring that each patient receives coordinated and holistic care (Spesialisthelsetjenesteloven, 1999 § 2-2). Fourth, nursing care is legally defined as part of patient care (Helsepersonelloven, 1999 § 3).

All patient care must be documented in the patients' journals (Helsepersonelloven, 1999 § 39), including: the status of a patient's condition upon admission to specialist care; care plans to be followed-up; and what information is given to patients and their families (Forskrift om Pasientjournal, 2014 § 8-e/f/i; Pasient- og brukerrettighetsloven, 1999§ 3-2). Documentation is required of healthcare personnel and serves to secure continuity of care and treatment (Molven, 2015, p. 291). To summarize, clinical handovers have legal premises to encourage personnel to coordinate patient care, and provide a continuous record for patients and caregivers of information and status along the patient pathway.

National guidelines were published for professional and organizational management of emergency departments (Helsedirektorat, 2014). They pointed out the difficulties EDs had fulfilling legal requirements to investigate and prevent repetition of critical / near-miss events according to law (Spesialisthelsetjenesteloven §3-3), and complying with internal revision guidelines to systematically use incident reports to uncover and improve procedural non-compliance.

1.2 Adverse event reports

General: Government reports have been issued addressing high risk environments in Norway's emergency departments (Helsetilsynet, 2008; Krogstad, Lindahl, Saastad, & Hafstad, 2015). The 2008 report identified staff competence levels, and coordination and communication challenges between healthcare personnel as risk factors in EDs. The 2015 report confirmed continual risk-filled environments, and targeted the need for more continuity in care and improved communication in handovers to inpatient wards.

Incident reporting reflects the organizational culture, personnel attitudes, and clinical pressures (Aase, 2010, p. 81). Critical incident analyses are useful diagnostic and improvement processes with their own methods (Runciman, Edmonds, & Pradhan, 2002; Thomas, Schultz, Hannaford, & Runciman, 2013; Vincent, Taylor-Adams, & Stanhope, 1998). They are legally required of government services in Norway (Helsedirektoratet, 2017).

An audit of acute care setting incidents revealed 4 principal categories of failure types: (1) Actions/tasks not done/incomplete; (2) Omissions at handover; (3) Errors in handover (incorrect

information); (4) Transfers and discharge with absence of, or unacceptable handover (Thomas et al., 2013). Handovers and communication are central to success and fiasco in acute settings.

Study site: The study site hospital regularly received adverse event reports about clinical admissions between the ED and wards (see *Table 1*). The ED was interested in improving their practice. For background purposes for this Masters thesis, the author collaborated with a colleague, a nurse specialist with experience in hospital, education, and simulation as well as a fellow Master’s student, to categorize the adverse event reports from the wards to the ED in 2013 by failure type: “...describe what went wrong in the process of quality healthcare” (Thomas et al., 2013, p. 51), (see *Table 1*). We found that 48% of complaints directed to the ED concerned patient admissions to wards:

Table 1: Categorization of Adverse Event Reports from wards to ED, emphasis on admissions:

TOTAL # INCIDENTS REPORTED FROM WARDS 2013:	124
TOTAL # INVOLVING ADMISSION ED – WARD:	59 (48% of all adverse event reports)
CATEGORY: <i>(examples)</i>	
1. Assessment: inadequate – patient’s condition (<i>Unidentified/not reported contagious sickness – hygiene risk to others; reorganizing of patients on ward after arrival</i>)	
2. Care inadequate (<i>Patient arrives at ward hungry, long stay in ED without food offered; micturition urgency – large volume</i>)	
3. Documentation lacking (<i>Patient’s journal papers sent up with other patient; no patient id; family not registered</i>)	
4. Equipment omitted (<i>Tourniquet for peripheral vena-catheter placement left on arm</i>)	
5. Handover Content (<i>Inadequate awareness/assessment of patient’s functional-acuity-psychiatric status</i>)	
6. Medication errors (<i>Antibiotics given in incorrect concentration; patients arrive at ward in pain-inadequate anesthesia in ED</i>)	
7. Task/Procedure omissions (<i>EKG not taken – myocardial infarction not discovered in ED</i>)	
8. Ward: crowding / placement issues (<i>wards are saturated – more patients admitted from ED; placement coordinator/physicians/ward nurses don’t agree on placement of patients</i>)	

These analyses demonstrate that the admission handover between the ED and wards is a substantial area for improvement work. Along with the study supervisor and ED leads, a project agreement was made to do interviews with the involved partners to find out more about the handover situation and improvement suggestions from both parts (see Attachment 1).

1.3 Concepts

Quality

Quality in healthcare systems is defined as safe, effective, efficient, accessible, patient-centered, and equitable (World Health Organisation, 2006). A *safe* system minimizes risk and harm to service users. A standard definition of patient safety is: “Efforts to reduce risk, to address and

reduce incidents and accidents that may negatively impact healthcare consumers.”

(Kunnskapscenteret, 2016). This definition is adopted into the Norwegian government’s definition of quality healthcare (St.meld. nr 10, 2012-2013, p. 11), with specific patient-centered focus mandated by law (Pasient- og brukerrettighetsloven, 1999). *Effective* healthcare is evidence-based and improves outcomes. *Efficient* healthcare maximizes resources and avoids waste. The study site hospital’s strategic plan values quality in processes and results, respect to patients, family members, and personnel, and assurance of care and accessibility (Helse NN Foretak HF, 2013). The stated goals include holistic treatment and effective use of resources.

Safety in a system and Human Factors

The modern view of patient safety analysis looks at the challenging interplay between healthcare personnel in technological, complex organizations (Vincent et al., 1998), and the resilient strategies that personnel use to try and achieve safety and quality (Hollnagel, Braithwaite, & Wears, 2013). Patient safety as a field of concern and study in healthcare, has evolved over the past 3 decades from a narrow, medico-legal, individual focus on harm, to a broader perspective on human errors in larger systems (Amalberti & Vincent, 2016). This evolution in healthcare safety focus was strongly influenced by other high-risk sectors’ initiatives to improve safety (Flin, O’Connor, & Crichton, 2008) where estimates attributed 80% of incidents to human factors. In healthcare the estimates are arguably similar (Hjort, 2007), reducible, but impossible to eliminate completely (Flin et al., 2008).

Human factors affecting quality of people’s work in systems include, but are not limited to: situational awareness, decision-making, communication, teamwork, leadership, managing stress and fatigue (Flin et al., 2008; Vincent et al., 1998). They can be defined as *“the cognitive, social and personal resource skills that complement technical skills, and contribute to safe and efficient task performance”* (Flin et al., 2008, p. 1). If up to 80% of errors can be attributed to human factors, with communication breakdown identified as 70% of the cause of unintentional errors (Aase, 2010), these issues should be an important area of research and improvement efforts to reduce errors and improve safety and quality of healthcare where possible.

Communication and Clinical Handover

Communication occurs when two or more people exchange ideas, plans or information, and is the cornerstone of teamwork (Flin et al., 2008). Addressing the challenges in communication within modern healthcare delivery systems, the Institute of Medicine specifically targeted clinical handovers for impeding safety, creating coverage voids and undermining health professionals ability to deliver quality care (Institute of Health, 2001, p. 1).

Communication in busy modern hospitals takes many forms, one being the clinical handover between individuals, shifts or teams of different people over time who care for patients. In a literature review report from the Australian government, clinical handover was defined:

“Clinical handover includes communication between the change of shift, communication between care providers about patient care, handoff, records and information tools to assist in communication between care providers about patient care.” (Australian Commission on Safety and Quality in Healthcare, 2005, p. 1).

The National Patient Safety Agency in the UK added that handovers are:

“...the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis” (British Medical Association, 2004, p. 7).

Although handovers are heterogenous in form, different classification factors include:

- 1) Setting: between institutions, services, wards (interdepartmental), or within wards at shift changes (intradepartmental);
- 2) Personnel involved: interprofessional (i.e. between prehospital and inhospital teams, or between physicians and nurses), intraprofessional (physician – physician);
- 3) Object of handover: handing over shifts, or individual patients;
- 4) Method of handover: face-to-face, verbal via telephone or recording, written (paper, electronically);
- 5) Standardization model (Robertson, Morgan, Bird, Catchpole, & McCulloch, 2014; Wong et al., 2008).

According to the Joint Commission (Friesen, White, & Byers, 2008), criteria for quality clinical handovers include:

- 1) Minimizing interruptions;
- 2) Providing opportunities for verification of received information and for the receiver to review relevant patient historical data;
- 3) Up-to-date information on patient’s status and anticipated problems;
- 4) Interactive (two-way) communication between the sender and receiver of information to allow for questioning.

Australian national standards on clinical handover (Pascoe et al., 2014) recommend:

- 1) Specific time and place for handover;
- 2) Structured and standardized handover documentation;
- 3) Develop and teach criteria for who and what to handover;
- 4) Set clear expectations;
- 5) Provide training throughout year;
- 6) Perform handover at bedside for unstable patients;

The clinical handover is taken seriously internationally as a potentially risky situation for patient care, with sound suggestions for optimizing performance published and recommended. There are no published standards for clinical handovers in Norway, but increasingly the ISBAR (Introduce – Situation-Background-Assessment-Recommendation) tool is being used when conferring with colleagues (De Meester, Verspuy, Monsieurs, & Van Bogaert, 2013; Pasientsikkerhetsprogrammet, 2017).

1.4 Emergency Departments – Inpatient Somatic Wards

The focus of this thesis is the clinical handover between the ED and wards. Emergency department activity has unique features that affect the way professionals work, and inadvertently invites hazardous situations (Croskerry, Cosby, Schenkel, & Wears, 2009; Eggins et al., 2016; Krogstad et al., 2015). Compared to inpatient wards, staff in the ED have limited time to determine the acuity level of patients, stabilize, and decide on disposition to discharge or admit – and to which level of treatment (Bemis, 2007; Calder et al., 2012; Crouch, Charters, Dawood, & Bennett, 2009; Curtis, Murphy, Hoy, & Lewis, 2009; Tighe, Woloshynowych, Brown, Wears, & Vincent, 2006). *“Time and safety are closely connected in emergency departments”* (Eggins et al., 2016, p. 71). Government regulations, like the UK 4-hour breach (Cronin & Wright, 2006), or hospital protocols, may impose maximum time limits on clinicians to process patients through the ED. Making time-pressed decisions with limited knowledge, invites risk and consequences for error (Krogerus & Tschappeler, 2011).

ED admissions are by nature unanticipated with unplanned flow, acuity, and wide range of clinical problems. These are distinct challenges in the ED. The workforce needs to be dynamic to meet unpredictable, unlimited flow and acuity levels of patients presenting with a wide range of conditions, often in environments with high noise levels and constant interruptions (Eggins et al., 2016). Hospitals in Norway are legally obligated to receive anyone whose clinical situation indicates a need for urgent help (Spesialisthelsetjenesteloven, 1999, § 3-1). Crowding, or large numbers of patients arriving at ED, and boarding patients, waiting for available in-hospital beds, create safety risks and pressure on limited staff, impairs quality of care, and creates dissatisfied patients (Powell et al., 2010).

Acute inpatient wards are specialized to narrow diagnosis profiles, employing physician and nurse specialists in these fields. They depend on the initial quality of patient care done in emergency departments and satisfactory handovers to secure interdepartmental continuity of care. In contrast to EDs, wards have arguably more time with the patients to provide information, plan and deliver treatments, monitor patient status over many shifts to determine treatment trajectories, review and order tests and plan discharge. Wards also experience boarding due to space constraints, increased

admissions, and delays in discharge to community care, which cause increased morbidity, mortality, delays in treatment, and illness in overburdened staff (Kunz, Mennicken, & Scholtes, 2014). The Norwegian Medical Association has warned about national hospitals having too few beds, with too many patients, causing boarding above safety levels (Den Norske Legeforeningen, 2015).

Based on the concepts of quality and safety, importance of human factors, communication and clinical handover, evidence from local incident reports, and challenging work environments in specialist hospitals, the study theme is of importance to improving quality and safety of the patient care experience when handed over between the ED and inpatient wards.

1.5 Study description

The clinical handover between healthcare personnel is necessary to optimize continuity of care for patients. It has been a focus of international improvement efforts. Locally, the interdepartmental clinical handover between nurses in the ED and wards has been a continual source of complaints.

Aim

The aim of this study is to explore how clinical handovers are experienced between ED and ward nurses, and gather suggestions for improvement. The results should contribute to quality improvement efforts at the hospital enabling nurses on both ends to optimize this important phase and facilitate patients' interdepartmental transitions.

Research questions

1. How do ED & Ward nurses experience handovers and why?
 - a. How do nurses experience poor handovers and why?
 - b. How do nurses experience successful handovers and why?
2. What do nurses suggest as improvements to clinical handovers and why?

2.0 Previous research

This chapter describes the search for research about the study theme. Due to the paucity of publications on the theme, an expanded search was done. The handover publications were categorized with a template method from the literature, and relevant articles were chosen and summarized.

2.1. Search description

An initial electronic literature search was performed in the Cinahl, Medline, SweMed+ and Oria databases through the University of Stavanger library. Search words were: “clinical handover”, “clinical handoff”, “handover”, “handoff”, “emergency department”, “nursing”, and “interdepartmental handoff”, in different combinations (see Attachment 2). Inclusion criteria were peer-reviewed empirical studies, published between 2006-2017 in english. The initial database search yielded no articles dedicated to interdepartmental nursing handover of individual adult, somatic patients from emergency to inpatient wards. Clinical exclusion criteria were: psychiatry, pediatrics, high-acuity (intensive care), and community health.

A broader secondary search was done based on reference lists from the primary search to learn more about handovers. Of interest were publications that could be relevant to the theme, excluding editorials and posters. This search revealed 65 publications (see Table 2 below). The empirical publications were first summarized by: Authors, Aim, Study Design, Handover descriptions and Conclusions, then categorized according to a proposed template of handover descriptions by: Setting (Institution/wards); Professions involved; Handover types (shift/individuals); Handover methods (verbal/written) (Robertson et al., 2014) (see Attachment 3). Publications were categorized into: Empirical research papers (categories 1 – 6, N=54), Literature reviews (cat. 7, N=6), and Government Directives (cat. 8, N=4) (see Attachment 3).

Further screening was done by reviewing the titles and abstracts of search results found relevant to clinical handovers either between nurses, or involving emergency departments, and following up on those which might provide insight into the study area. These categories are in green below. Article themes that were excluded due to the scope of this thesis included: ED – intensive care/operative wards; prehospital – ED handover; handovers between operative, intensive care units; intradepartmental physician / multiprofessional ED shift handovers. 24 empirical publications were thematically interesting as background literature including 6 literature reviews, and several qualitative, quantitative and mixed-method studies. Unfortunately, articles focusing on the study

theme, category 3A: “Interdepartmental nursing handover ED – ward”, were not found, although one author mentioned plans to study this category (R. Wilson, 2011).

Table 2: Publications according to categories of handover descriptions:

Category	# articles reviewed	# articles used
Category 1: ED Intradepartmental		
Category 1A: Nurse – Nurse /Shift	4	4
Category 1B: Doctor – Doctor /Shift	8	0
Category 1C: Multiprofessional / Shift	3	0
Category 2: ED – ICU/High acuity units	5	0
Category 3: ED – Ward Interdepartmental		
Category 3A: ED -Nurse – Nurse	0	0
Category 3B: ED Doctor – Doctor	6	5
Category 3C: ED – ward: Mixed professions	2	2
Category 4: Prehospital – ED	6	0
Category 5: Mixed Setting including ED		
Category 5A: Nurse – Nurse (mix setting)	1	1
Category 5C: Mixed setting/professions	5	5
Category 6: Non-ED Hospital		
Category 6A: Nurse – Nurse	5	5
Category 6B: Doctor – Doctor	4	0
Category 6C: Mix/Specialized Units	6	0
Category 7: Systematic Reviews	6	6
Category 8: Government Directives	4	(4)
TOTAL	65	28

2.2 Summary of literature

2.2.1 Intradepartmental Nursing Handovers (cat. 1A, 5A, 6A)

The intradepartmental ED nursing handover for individual patients has been a popular subject of study by Australian authors. Wilson (2011) used mixed methods to develop, design, implement and audit a bedside handover tool for the ED nurses. The handover tool with 6 elements was modified to meet ED needs, and during the modification process, one nursing handover element was removed, “checking patients’ ambulatory abilities”, but this may have been included in the “presenting

information” element. There was general satisfaction among nurses with the new tool, and a general decline in complaints and critical incidents.

A research team published three articles about ED nursing handovers. The first article (Klim, Kelly, Kerr, Wood, & McCann, 2013) explored the ED nurses’ views of handover processes, and essential factors of effective shift handover. Although mostly satisfied, the nurses identified gaps including missing information about medications, nursing care needs, and vital signs. The interviews revealed five features nurses believed effective: efficient communication, available documentation, bedside environment, treatment situation and systematic approach. The information content desired was demographic, history, and medically/task oriented. The research team also interviewed ED patients about their experiences with bedside handovers (Kerr, McKay, Klim, Kelly, & McCann, 2013). Patients felt the individual care enhanced and valued the bedside handover. Patients felt reassured about the staff’s competence and care after hearing the handovers. It was important for patients that privacy be secured during the handover. In 2016 they evaluated the introduction of the handover model (Kerr, Klim, Kelly, & McCann, 2016) and found significant improvement in patient participation in bedside handover, adequate amounts of information and registration of vital signs. Both handover tools described above appear medically/task driven. The latter model has 8 sections, one is nursing needs and includes fluid balance, ambulant levels, pregnancy and incontinence check boxes.

Johnson, Jeffries and Nicholls (2011) created a minimum data set (MDS) for electronic support to verbal nursing handover. They then observed and recorded 195 intradepartmental handovers across 10 hospital units, including the ED, to test for the presence of the MDS items. 1 of 8 categories was for “care plan” including nursing items like social support, nursing levels, mobility, self-care, care. The MDS items were frequently used across all specialties, but the authors call for item flexibility regarding the clinical context. Due to the high turnover and time pressures in the ED, information was more concisely delivered with focus on vital signs, rather than care plans. An implication is that ED nurses require a data support system that updates quickly.

Six non-ED, hospital ward, intradepartmental nurse shift handovers were interesting background for this study because they look at what is important to nurses when giving and receiving responsibility and accountability for patients. A Canadian research group (Alvarado et al., 2006) developed and pilot-tested a bedside patient handover called “Transfer of Accountability” (TOA) guidelines. The pre-pilot period showed great variety in methods of handovers. The TOA guidelines process had three phases: (1) pre-handover: nurses prepare for the handover; (2) inter-shift handover verbally at bedside with a safety checklist; (3) post-handover where the oncoming nurse double-checks documentation. Nurses in the pilot study were not always comfortable with bedside

handover, completed the handover per TOA guidelines, needed education to enable face-to-face reporting, and modified the generic written tools to fit their context.

O'Connell and colleagues (O'Connell, MacDonald, & Kelly, 2008) surveyed inpatient ward nurses to learn about nurses' experience of handover, and the strengths and limits to them. Aspects of handovers deemed improvable included: increasing handover by nurses who have personally cared for the patients, reducing both subjectivity of content and time used to handover, and reducing redundancy of reporting written information. Positive handover aspects included getting sufficient information, being able to clarify content provided, and having a user-friendly flow. Open-ended comments included negative impact of interruptions and busyness of ward on handovers. The same research team later developed and validated a "Handover Evaluation Scale" to aid in quality assurance monitoring of nurse handovers (O'Connell, Ockerby, & Hawkins, 2013). The 14-item tool had three categories: efficiency, interaction and support, and quality of information. It was found reliable and easy to use.

Iranian researchers did field observations of nurse shift handovers and found a non-holistic content approach, with poor time, space, and task management (Sarvestani, Moattari, Nasrabadi, Momennasab, & Yektatalab, 2015). The content appeared non-patient centered, medically dominated, with low practical and ethical involvement by nurses.

A study interviewing ward nurses looked to identify barriers and facilitators to taped and written shift handovers, and suggestions for improvements (Welsh, Flanagan, & Ebright, 2010). Facilitators to quality handovers included: structured format; face-to-face handover allowing for questions, feedback, and building trust; pertinent content (to unit); and note-taking. Barriers mentioned were: interruptions; tape-recorder malfunctions; no availability of conversation with outgoing nurse; variation in quality; too much or too little information. This study's written handover traditions differ with most publications where staff appreciate and use verbal handovers.

Researchers employed mixed-methods to study the relationship between nurse handover strategies, from high-reliability organizations (HROs), and post-handover errors in patient care (Drach-Zahavy & Hadid, 2015). They found errors involving medication inaccuracies, late care orders, and missing documentation. The handover strategies varied compared to HROs. Factors that reduced post-handover error significantly were: pre-handover written summaries; initiation of topics by both outgoing and incoming teams including the latter's view of care plans; updates from other staff in addition to outgoing staff, and verbal face-to-face handovers allowing questioning.

2.2.2 ED – WARD, Doctor- Doctor (cat. 3B)

There are several publications investigating the interdepartmental patient handover between physicians in the ED and inpatient wards. Common to these articles is the responsibility and accountability divide between the physicians: patients need to be accepted by the ward physicians upon referral from the ED physicians. This is unlike admission processes to low-acuity wards at the study site, but like admission processes to high-acuity wards.

A questionnaire was developed and used to identify factors contributing to difficulties experienced by ED doctors in referring patients to wards from the ED (Reid, Moorthy, & Forshaw, 2005). At least 56% affirmed having difficulties with referrals to the wards. Contributing factors included: personality clash with receiving doctor, own subject knowledge, lack of clear referral protocols, trust in individual receiving referral, time pressures, specialty referred to, communication difficulties, and feeling inferior to the specialists. Horowitz and colleagues (Horowitz et al., 2009) surveyed physicians in different settings in a hospital to learn about adverse events resulting from handovers from ED to inpatient wards. 29% of participants had experienced adverse events post-handover including: errors in treatment, diagnosis and disposition including immediate needs for transfer to higher acuity units after handover to wards. Analysis of data revealed several contributory factors to errors including: high workload; ED patient flow; ambiguous follow-up responsibility; incomplete and inaccurate information; data access problems; and professional and cultural conflicts.

The ED – ward interface is described as a “Gray Zone” by authors who interviewed emergency physicians and hospitalists (Apker, Mallak, & Gibson, 2007). Two themes emerged upon analysis (1) poor communication causing boarding and consequential safety threats, and (2) information ambiguity due to poor communication practice and conflicting expectations. Information was often incomplete, incorrect, and inadequate. A follow-up study (Apker et al., 2010) developed a handoff assessment tool to evaluate content and language in ED physician – hospitalist handovers. They found that ED physicians talked most, focusing on patient presentation, assessment, and work environment. The conversation flow was predominantly unidirectional and non-critical with 90,7% of utterances information-giving from the ED, and less than 10% questioning from hospitalists.

Brian Hilligoss wrote a concept article (Hilligoss & Cohen, 2013), an organizational framework view of handovers (Hilligoss & Cohen, 2011), and analyzed doctors’ sense-making of handovers in a two year ethnographic study (Hilligoss, 2014). The study fieldwork revealed four interpretive frames from organizational and social structures that influenced their handovers: collaboration, expectation matching, competition and persuasion. Hilligoss emphasized that, more than information transfer,

handovers are complex, socially interactive processes. These articles, although from a different professional responsibility context than the study site, address the paradox that although emergency physicians have medically founded reasons to admit patients, there is still a non-linear process with contextual factors influencing how well and safe the handovers go.

2.2.3 ED – Ward multiprofessionals (cat. 3C)

A social network analysis of communication patterns involved in the handover of patients from EDs to wards revealed “...*the overlapping use of synchronous and asynchronous communication methods (verbally via phone or in person; or written via paper charts and/or electronic records). No particular professional group dominated or coordinated information flow*” (Benham-Hutchins & Effken, 2010, p. 252). The physical proximity of physicians and nurses in the ED was an advantage to communication, unlike nurses on inpatient wards who had difficulties getting contact with physicians that were not physically present. Providers preferred verbal communication, and experienced challenges in timing the patient transfers. More ED staff were satisfied with handover communication than unit staff.

Another study investigated medication safety, from staff and patients’ views, between emergency departments and medical wards (Manias et al., 2014). The interviews identified treatment and safety issues in medication between the wards. Four themes emerged: (1) environment of care in ED, with patient flow prioritized and time pressures affecting quality; (2) different focus on responsibility of care, with the ED being more reactive and focusing on stabilizing and progression, and the wards more proactive in addressing medication issues; (3) awareness of everyone’s responsibility for safety, but challenges in information gathering, and the need for good involvement of patients and family; (4) interdisciplinary communication between staff affected safe medications, both methods and professions thinking in silos.

2.2.4 Mixed settings, including ED (cat. 5C)

In a study aimed at discovering what factors predict quality in handover, researchers developed and tested a rating tool to be used in various clinical settings including ambulance, emergency, anesthesia, and inpatient wards (Manser, Foster, & Gisin, 2010). The tool reflected evidence that handovers involve teamwork, not just information transfer, and was found feasible. Three factors were identified as has predictive of handover quality: information transfer, both transmission and organization; establishing shared understanding including risks; working atmosphere, respecting clinicians and patients.

Danish researchers interviewed 47 individuals across several specialties at a university hospital to explore attitudes and experiences with critical handover episodes (Siemsen et al., 2012). Handovers

were confirmed as complex situations. Eight influencing factors were found: culture; team awareness; unclear responsibility; professionalism; infrastructure, especially electronic database issues; organization with lack of structure, high workload and production pressures; information, and communication. ED discharge handovers were mentioned as giving incorrect expectations, or lack of communication with patients about admission. ED patients experienced discharge delays due to uncertainty about ward destinations. The study hospital did not have handover on its safety agenda, something the authors interpret as having an immature safety culture.

Research on both the content and verbal behaviors during handovers across emergency settings revealed little focus on patients' psychosocial needs (Sujan et al., 2015). Audio recordings of over 200 handovers revealed descriptive, unidirectional communication from ambulance into the emergency department, but more collaborative talk with ED admission referrals to wards. The authors acknowledge the need for training and standardization of handovers, but suggest ensuring explicit instruction about collaborative, dynamic handover needs, and not simple transfer of information.

2.2.5 Literature reviews about clinical handovers (cat. 7)

A government commissioned systematic literature review of 777 handover publications revealed the need for more research on what constitutes effective and evidence-based handovers (Australian Commission on Safety and Quality in Healthcare, 2005). 3 domains affecting clinical handover quality were identified: system, organizational culture, individuals. The need for a system of training, supportive processes and handover protocols was evident. Organizational culture affected personal behavior which influences the cooperative process of communication. Organizations must consider their work cultures and ensure they support effective communication in general to succeed in efficient handovers. Variables in the individual domain include their knowledge, skills, attitudes and ability to communicate pertinent information to colleagues. Absence and omissions of essential information and incomplete documentation impacted patient care.

In 2008 another commissioned review on the 'Effectiveness of Improvement Interventions in Clinical Handover' confirmed that "*clinical handover is a high risk scenario for patient safety with dangers of discontinuity of care, adverse events and legal claims of malpractice*" (Wong et al., 2008, p. 3). Three themes emerged: (1) high risk scenarios in clinical handover; (2) interventions, critical success factors and effectiveness; (3) evidence gaps in clinical handover. This review foresaw the increase in publications of the following decade. An ED related article was presented where they found inter-departmental and professional gaps in expectations yielding risk to patient safety (Apker et al., 2007).

In a chapter on nursing handoffs, the authors presented an overview of handover literature and suggestions for quality improvements (Friesen et al., 2008). They presented 3 publications about intradepartmental ED handovers noting specific characteristics of handoffs in this setting inviting adverse events, but where handovers also provided staff opportunities to re-assess patients to reduce risks. Missing information, confidentiality issues and distractions were also noted as concerns in the ED handover.

Manser and Foster (2011) reviewed handover publications to identify key themes and areas for future research. They found “*Measures of handover quality can generally be grouped into those that assess the content, the process or the outcomes of handovers*” (p. 183). Content referred to the information transmitted. Process factors affecting handovers were grouped into behavioral or environmental aspects. Outcome measures ranged from satisfaction to patient care consequences. The authors call for expanding the view of handover from a unidirectional information transfer, to teamwork. A teamwork approach to handovers would encourage shared mental models of the patients’ needs, and a resilient interprofessional auditing opportunity. Six categories of research methodologies were identified. They encouraged researchers to improve research designs with systematic approaches to measuring handover quality and safety, and finding effects, best practice and effective interventions for handover improvement.

Investigating theoretical foundations and methods to evaluate handover tools and their achievement of standardization goals was the focus of another systematic review (Abraham, Kannapmallil, & Patel, 2014). Of 36 publications, most of the studies evaluated handover standardization aspects affecting patient safety and continuity of care, 95% of publications researched intradepartmental handovers, and 64% evaluated electronic handover tools. There was a high degree of theoretical and methodological heterogeneity in handover tool evaluation studies making comparisons and generalizability difficult.

Robertson and colleagues (Robertson et al., 2014) reviewed publications to evaluate effectiveness of intrahospital handover improvement interventions. They found difficulties comparing publications due to design heterogeneity and terminological inconsistencies. 29 studies were included with data subsets of study duration, environments, improvement strategies, and outcome measures. Information transfer was the improvement most demonstrated. The authors recommend a template for describing handover taxonomy.

These reviews reflect the maturing field of clinical handover research which is well-intended but very heterogenous in design. Many publications reveal differences in expectations between sender and receiver of handovers, and pressures in the work environment that affect quality. The literature

provides little knowledge about interdepartmental nurse handovers between the emergency department and somatic wards.

3.0 Theory

Theories are important to qualitative research because they provide a conceptual understanding of the complex ways that people interact, or theoretical “glasses” to illuminate phenomena (Reeves, Albert, Kuper, & Hodges, 2008). Given the inductive nature of this research, the results needed to be analyzed before the choice fell on Rasmussen’s Dynamic Safety Model (1997; 2005), and Hollnagel’s derivative principle of Efficiency – Thoroughness Tradeoffs (ETTO)(Hollnagel, 2009, 2012). The data reflected a need to present the ED ward’s underlying nursing assessment theory, Virginia Henderson’s Basic Principles of Nursing Care (Henderson, 1998), and the Nursing Process (Stubberud, Grønseth, & Almås, 2016). The following chapter therefore includes: a short overview of how safety thinking has evolved contrasting the old and new views; Rasmussen’s socio-technical work system; implications from the system model: blunt and sharp end contexts; Rasmussen’s Dynamic Safety Model; Hollnagel’s ETTO principle; the Nursing Process and Henderson’s holistic Nursing areas.

3.1 Evolution of views on errors and performance: Old View vs New View

Over the past century, production and safety theories have evolved from what some safety researchers call an ‘Old View’ to a ‘New View’ (Dekker, 2014; Woods, Dekker, Cook, Johannesen, & Sarter, 2010). The old view had its roots in early 20th century industrial production and military operational safety where efforts to increase production and profits, and reduce operational and fatal errors, focused on individual operators’ performance. If errors were deemed man-made, one looked for the ‘Bad Apples’, or error-prone, unreliable individuals whose behavior didn’t meet expectations, and either fixed or removed them to achieve improved and safer production (Dekker, 2014).

In the late 20th century, investigations into industrial and aviation accidents began to acknowledge their multifaceted nature, and complexities of the systems people operate in as contributing factors to errors (Rosness, Guttormsen, Steiro, Tinmannsvik, & Herrera, 2004). Safety theories evolved seeing accidents as linear chains of events, energy to be contained by barriers, and normal events given complex, highly dependent systems. Understanding safety progressed from holding people accountable for poor performance in an otherwise safe system, to humans doing their best to keep dynamic, complex systems safe. Enter the ‘New View’ on safety:

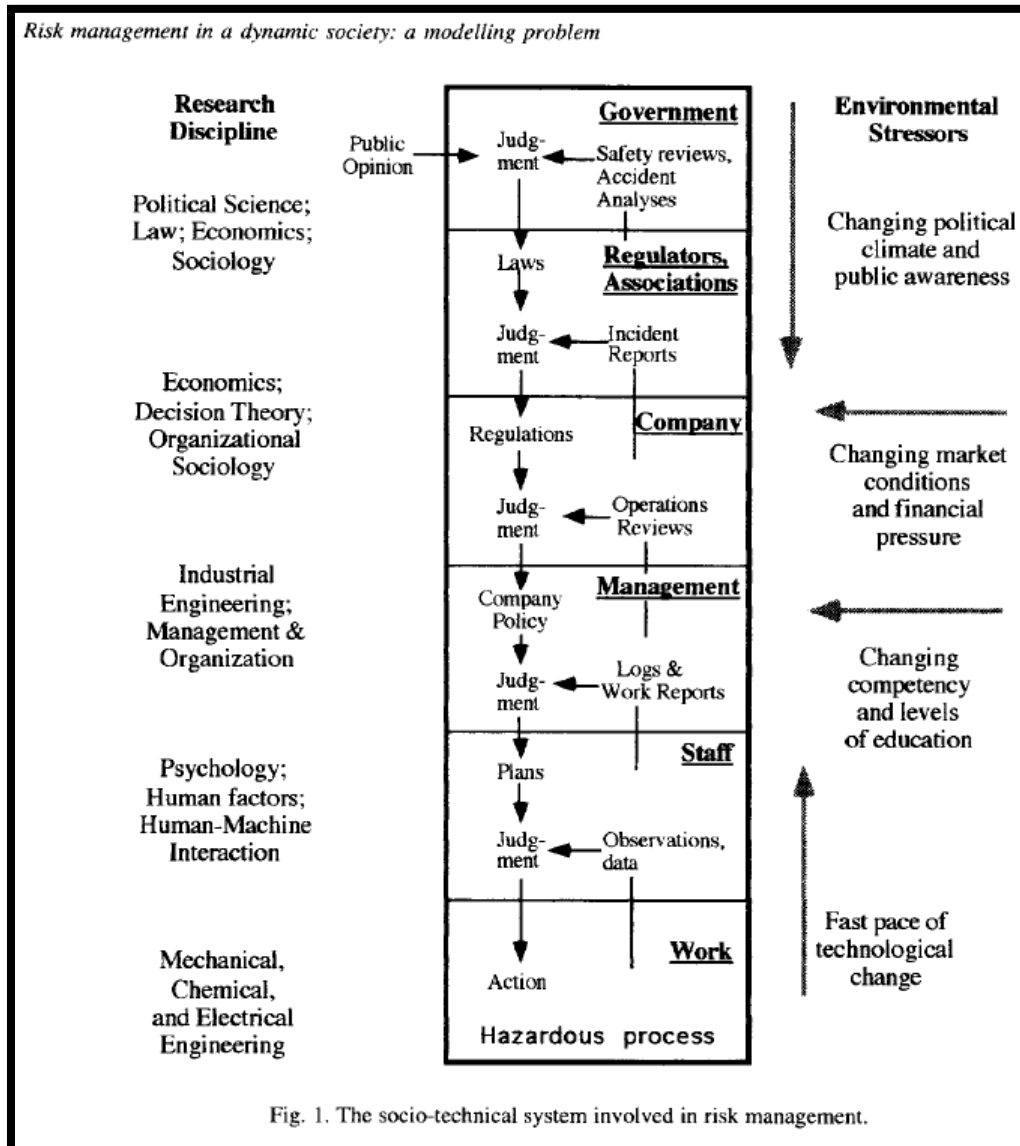
“When you go behind the label ‘human error’, you see people and organizations trying to cope with complexity, continually adapting, evolving along with the changing nature of risk in their operations...as practitioners confront different evolving situations, they navigate and negotiate the messy details of their practice to bridge gaps...creating success as a balance between the multiple conflicting goals and pressures imposed by their organizations.” (Woods et al., 2010, p. xix)

This view assumed that people go to work to do a good job. One must consider the socio-technical complex systems people work in to understand outcomes. The challenging details of individuals' work situations - their life-world - and how they struggle and succeed given conflicting objectives are essential to understanding performance (Dekker, 2014). Inadequate performance is a symptom of good people trying to cope in complex, even hazardous environments. A new view on safety does not absolve the individual of accountability, but encourages a broader look at situations and the authority or options individuals have: *"You cannot fairly ask somebody to be responsible for something he or she had no control over"* (Dekker, 2014, p. 15).

3.2 Jens Rasmussen's Socio-Technical Work System

A pioneering researcher from the 'New View' is Jens Rasmussen (1926 -), who comes from the field of cognitive engineering (Le Coze, 2015). Cognitive engineering is described as practically-oriented, applied psychology with the goal of understanding and improving domain-specific human-machine-work processes, the choices and tradeoffs entailed, and the effects parts of systems have on each other (K. M. Wilson, Helton, & Wiggins, 2013). These parts, or levels, create a Socio-Technical system involved in risk management. Rasmussen compiled such a system model (Figure 1):

Figure 1: Rasmussen's socio-technical system involved in risk management (1997, p.185):



Rasmussen's system model incorporates scientific research disciplines, environmental stressors, and information feedback loops through levels of actors in an integrated socio-technical system influencing work. It focuses on the different levels where people work and the interdependency between them in systems.

3.3 System implications: Blunt vs Sharp ends of System: Work-as-Imagined – Work-as-Done

A contemporary to Rasmussen and fellow safety-systems researcher, James Reason, called the opposing levels: 'the blunt and sharp ends' (Rosness et al., 2004; US Department of Health and Human Services, 2015). The decision contexts of people at different ends differentiate by levels of authority and nearness to service/production. At the blunt end are individuals removed from the hazard or operations interface, but with high levels of authority and control over planning, policy-

making, regulating, and management. The blunt end prescribes how the sharp end should make decisions and manage pressures in the workplace by resource allocation, instructions, and procedures. This group, with their unique stressors, prescribes 'Work-As-Imagined' with plans, schedules, procedures, and frameworks to work in. Rasmussen meant that managers have responsibilities to ensure safety in this system including providing information about operating states, being competent to make decisions, understanding the safety implications of their decisions, and ensuring adequate resources so the sharp end can operate acceptably (Le Coze, 2015).

Hollnagel (1941-) (Hollnagel, Wears, & Braithwaite, 2015) described the gap between Work-as-Imagined, and the actual adaptive 'Work-As-Done' by personnel at the sharp end. Work-as-Done does not always look like Work-as-Imagined, and reflects how work must be moderated to manage real, variable situations (Hollnagel et al., 2015). At the sharp end are operational people 'at the coalface', with low levels of authority, but proximity to the risks with service/production (Rosness et al., 2004). Sharp end personnel deliver the quality of work, and get the job done given their competence, workload, resource constraints, and design from the blunt end personnel. Rasmussen described this self-organizing phenomenon as people's 'degrees of freedom' to accomplish their work within the pressures and boundaries of the system (Le Coze, 2015; Rasmussen, 1997).

3.4 Dynamic Safety Model (Rasmussen 1997)

Origin: Rasmussen's Dynamic Safety Model (see Figure 2) stems from concepts in control and systems theories (Rasmussen, 1997). It is a product of decades of research investigating aspects of potentially dangerous work processes including: human-machine interactions, human error analysis, psychological competence, organizational science, decision errors in managers, and the legal aspects applicable to these factors (Le Coze, 2015; Rasmussen, 1997). Rasmussen & Cook (2005) applied this model to healthcare systems. Although Rasmussen originally was occupied with understanding safety and accidents, his model developed over time to discuss the vulnerable boundary of 'acceptable state of affairs' or 'acceptable performance' (Le Coze, 2015). I interpret this as enabling the theory to be applicable to standards, quality, and practice in complex work systems, like a specialist hospital.

Pressures: Services to be optimized in socio-technical systems, including human behavior, involve complex interactions where people at the sharp-end do their best to meet service or production demands, with certain 'degrees of freedom' (Rasmussen, 1997). These dynamic systems are constantly being pressured by conflicting goals where management's role is to encourage equilibrium. According to control theory, these efforts are dependent on control, coordination, monitoring and feedback (Woods et al., 2010). Unacceptable performance occurs when the real work processes become unsynchronized with control and pressures. Rasmussen considers human errors as

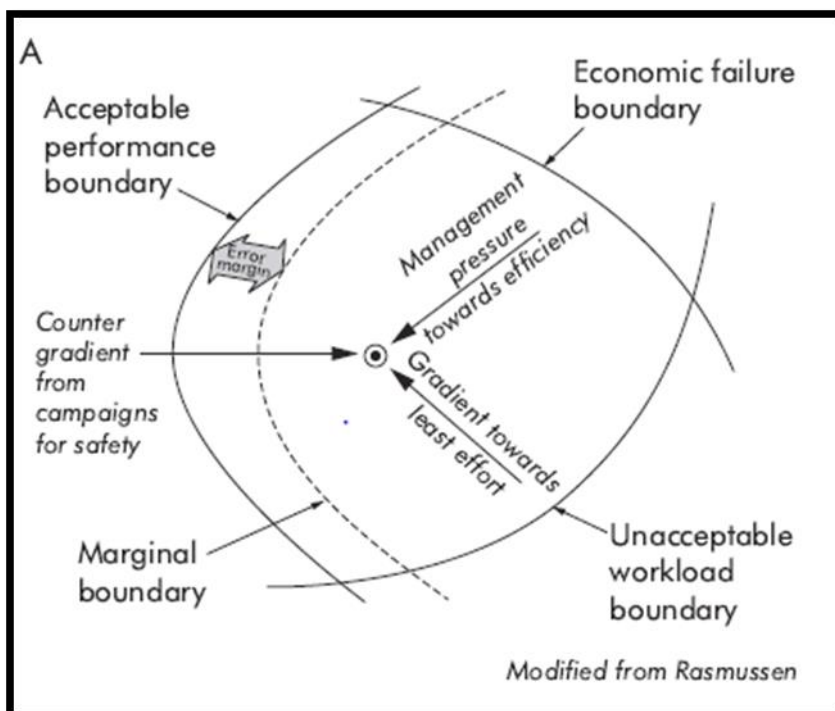
“...unsuccessful experiments with unacceptable consequences.”(Le Coze, 2015, p. 128), and emphasizes the importance of having a norm of performance for assessment.

Rasmussen describes three general constraints or boundaries surrounding the workspace depicted in Figure 2 (Rasmussen, 1997; Rosness et al., 2004; Woods et al., 2010):

1. Boundary of Economic Failure: applies pressure on the workspace to perform efficiently given monetary constraints by management;
2. Boundary of Unacceptable Workload: applies pressure on the workspace to produce work or services with least effort by workers;
3. Boundary of Acceptable Performance: functionally acceptable behavior/performance/safety, pressure from evaluations, feedback and safety campaigns. The boundary originally had one line, but recently has two lines: 1) ‘Marginal Boundary’ controlled by socio-technical factors of perceived acceptable practice; 2) the functional ‘Acceptable performance boundary’, which may move over time.

The behavior at the performance boundary yields to economic and workload pressures (Rasmussen, 1997; Woods et al., 2010). In Figure 2, this could be increasing workload pressing the operating state left, up to and past the acceptable performance boundary due to contributing efficiency pressures.

Figure 2: Dynamic Safety Model, modified from Rasmussen (Rasmussen & Cook 2005, p. 131)



Workspace and degrees of freedom: The encircled dot, centrally placed in the workspace in Figure 2, represents an operating state in perfect equilibrium between constraints. Real-life, high-risk

workspaces lie closer to the marginal boundary, as the result of people adaptively managing high workloads under management's efficiency pressures (Le Coze, 2015; Rasmussen, 1997). The operating state is ideally within the boundaries of the workspace – but not necessarily (Woods et al., 2010). The location of this state depends on the control of the system, or lack of, and the distributed, decision making of the people in the workspace who are more or less aware of where the operating state is. It also depends on the pressures they are dealing with, at one time, and over time.

Operators have a degree of freedom in their workplace to make choices of how to work given dynamic demands and expectations (Le Coze, 2015; Rasmussen, 1997). Rasmussen (1997) wrote:

“The problem is that all work situations leave many degrees of freedom to the actors for choice of means and time for action even when the objectives of work are fulfilled and a task instruction or standard operating procedure in terms of a sequence of acts cannot be used as a reference of judging behavior...they cannot foresee all local contingencies of the work context...in the actual situation, several tasks are active in a time-sharing mode.” (p. 187)

This ability to cope with challenges and find solutions is an example of resilience (Le Coze, 2015). Resilience when applied to human contributions to work describes how people foresee, respond, monitor, learn, adapt, avoid failure, and anticipate and achieve success in complex high-risk organizations (Hollnagel, 2016). This is done in demanding environments with risks, gaps, differing goals, and trade-offs to contend with (Jeffcott, Ibrahim, & Cameron, 2009).

Marginal creep: The operating state can migrate over both the marginal and acceptable performance boundaries causing unacceptable performance, errors or accidents. This is referred to as “marginal creep” (Cook & Rasmussen, 2005):

“The location of the marginal boundary is determined by sociotechnical processes. Over time, excursions of the operating point beyond the marginal boundary (“flirting with the margin”) that are not accompanied by overt accidents may lead to outward creep of the marginal boundary and regular operation of the system in what used to be the marginal region.” (p 131)

Marginal creep of work performance occurs even though the blunt-end organization has designed procedures for work processes and expects the sharp end to comply. Individuals, making well-intended decisions in real-life situations, will drift in performance, i.e. less acceptable quality or safety compliance, up to and past the marginal boundary for acceptable performance, breaking social norms (Cook & Rasmussen, 2005; Rasmussen, 1997). Poor coordination in an organization permits migration or drift of activities towards the boundary of unacceptable performance (Woods et al., 2010). If not monitored or corrected, poor performance results:

“The work space within which the human actors can navigate freely during this search is bounded by administrative, functional, and safety related constraints...During the adaptive search the actors have ample opportunity to identify “an effort gradient” and management will normally supply an effective “cost gradient”. The result will very likely be a systematic migration toward the boundary of functionally acceptable performance and, if crossing the boundary is irreversible, an error or an accident may occur”. (Rasmussen 1997, p. 189)

The performance, or safety, in a system may deteriorate over time when one activity changes without other activities evolving equally. Activities in one part of a system affect activities in the rest of the system and may have unforeseen consequences. *“Control theory embraces a much more complex idea of causation, taken from complexity theory. Small changes somewhere in the system...can lead to huge consequences elsewhere.”* (Woods et al., 2010, p. 70).

Most high-risk, complex sectors, including healthcare, are dependent on certain expectations or goals, that often are in conflict to each other. Cook and Rasmussen (2005) applied the system dynamics model to safety in healthcare where increased efficiency demands have reduced buffering capacities between units, and increased interdependencies. They used a metaphor from the nuclear industry – *going solid* – to describe a facility’s state when all units are at capacity, without buffers, forcing speedier decisions, shortcuts on care, and conflicts between management and sharp-end personnel. When a facility goes solid, personnel may exercise their degrees of freedom by “gaming” the system, using maneuvers within their reach to manage the workload. Some examples are overstating patients’ acuity, manipulating measures of workload, or deliberately timing patient flows to ease burden on own ward, yet more examples of resilient behavior.

Reinforcing the Boundary of Acceptable Performance: Rasmussen provided suggestions to counter the drift, or marginal creep, of work crossing the boundary of acceptable performance (Rasmussen, 1997; Woods et al., 2010):

1. Expand the margin for acceptable performance: pull the margin farther away from the other boundaries. This will inevitably draw the operations further out due to *“the law of stretched systems”* where *“...a system under goal pressure gravitates back to a certain level of risk acceptance yielding to efficiency and least effort.”* (Woods et al., 2010, p. 75)
2. Make the boundary visible by increasing awareness of state through campaigns and instruction. Push the operating state back into the working space envelope.
3. Managers should follow up safety and service performance the same way as economic performance.
4. Communicate openly about trade-offs between conflicting goals to avoid mismatch in what is proclaimed, i.e. safety, and what is followed-up on, i.e. budgets.

3.5 The tradeoffs: Efficiency-Thoroughness Trade-Off Principle (ETTO)

The tradeoffs made in the workspace, usually near or past the marginal boundary of acceptable performance, are the rapid decisions made by sharp-end operators when faced with conflicting demands to be efficient and thorough. Hollnagel's Efficiency-Thoroughness Tradeoff (ETTO) principle (2012) is a natural derivative of Rasmussen's model where it searches to explain how people in hectic workplaces balance demands and resources to get the job done. The actual tradeoffs depend on, and will reflect the real concerns of the workplace: efficiency and throughput. Efficiency refers to keeping the resources used to complete goals to a minimum. Resources can be money, effort, time, and equipment. Thoroughness refers to tasks being done only when prerequisite conditions are ensured by the organization so that no "unwanted side-effects" occur while fulfilling the goals. One can neither maximize nor minimize both efficiency and thoroughness simultaneously, one must find the right tradeoff between them.

Paradoxically, sharp-end operators face a "responsibility – authority mismatch", where they are responsible for the quality and outcome of their work, without having the authority to improve the conditions that influence their working conditions (Dekker, 2014). Hollnagel encourages avoiding the *"ETTO fallacy...to require that people are both efficient and thorough at the same time – or rather that they are thorough when with hindsight it was wrong to be efficient"* (Dekker, 2014, p. 9). The justifications for the actual tradeoffs can be rooted in the individuals' attitudes, collective norms, or organizational culture (Hollnagel, 2012). 'To ETTO', or make tradeoffs in increasingly complex, efficiency driven workplaces, is unavoidable. Hollnagel suggests that before holding people accountable for their actions, one needs to demonstrate that they had the authority to fulfill their responsibility, if not one needs to look elsewhere in the system (Dekker, 2014, p. 16).

3.6 Nursing Theory:

Like many professions, nursing has its own core standards and processes. The nursing assessment is the first stage of a universally fundamental process to nursing: The nursing process (Stubberud et al., 2016). This consists of 4 stages: (1) Data collection and evaluation of patients' physical, and psychosocial needs and resources; (2) Planning nursing interventions; (3) Implementing the nursing interventions; (4) Evaluating the results. This process should be universally applicable no matter what specialist field nurses work in, from community care, psychiatry, neonatal intensive care, or emergency nursing. This process goes back to Florence Nightingale (1820-1910), who appealed to nurses to be systematic in their observations and gathering of information (Tourville & Ingalls, 2003). The first stage of data collection and evaluation, or assessment, is essential to the rest of the process – without this one cannot systematically nurse patients. An initial complete

assessment should be performed thoroughly to get an overview of patients’ strengths, weaknesses, concerns etc.

At the study research site, the nursing assessment template is intentionally based on mirrors Virginia Henderson’s nursing care areas (see below Table 3). Virginia Henderson (1898-1996) was a leading nurse theorist who developed a model of nursing care (Henderson, 1998; Tourville & Ingalls, 2003). She worked for nursing to have a scientific, methodical, holistic basis, emphasizing that nurses’ primary responsibility was to patients, not physicians. Her model was patient-centered, built on the concept of strong relationships between patients and nurses, dependent on knowledge in sociological and biological sciences, and centered around the premise that nurses should assist individuals in the following 14 areas of need, within four domains, until they are able to do so independently. The table below lists these nursing areas (left), and compares them to the research site fields for nursing assessment (right), also based on Henderson (see Attachment 4), which mostly overlap, with only 2 noticeable contextual differences:

Table 3: Nursing Care Areas: Virginia Henderson’s 14 areas & Research Site (Henderson 1998; Tourville & Ingalls 2003)

Henderson: Domains	Henderson: Nursing areas	Research Site: Nursing areas
Physical	Breathe normally	Breathing / Circulation
	Eat and drink adequately	Nutrition / Fluids / Electrolyte balance
	Eliminate body wastes	Elimination
	Move and maintain desirable positions	Activity / Functional status
	Select suitable clothing	
	Sleep and rest	Pain, sleep, rest, well-being
	Maintain normal body temperature	Skin, tissues, wounds Or Activity, functional status
	Keep the body clean and well-groomed	Activity, functional status
	Avoid dangers and injuries to self and others	...
Psychological	Communicate with others in expressing emotions, needs, fears or opinions	Communication / Senses
	Learn & grow to pursue normal development and health, and use available health facilities	Knowledge/ Development / Psychological status Or

		Sexuality/Reproduction
Spiritual	Worship one's faith	Spirituality / Culture / Lifestyle Or Social status
Sociological	Work with a sense of self-accomplishment	
	Pursue recreation and relaxation	
	...	Other / Physicians delegations

Work-as-Imagined at the ED:Ward handover interface is based on local procedures and professional norms. Perceptions and consequences of the Work-as-Done, in the complex risky ED:Ward handover, will be explored in the results chapter.

4.0 Method

The following chapter addresses the scientific standpoint and design of this study. This was a qualitative, explorative, inductive study using focus group interviews to gain insight into the experiences nurses had of interdepartmental, clinical handover when admitting patients to hospital wards from the ED. The steps taken to collect and analyze data while adhering to ethical guidelines to answer the study questions are presented.

4.1 Scientific paradigm

In attempting to understand the true nature of phenomena using research, one must understand different perspectives on reality, knowledge, and pursuits of knowledge. Science can be described as a methodological pursuit of understanding (Polifroni & Welch, 1999). Scientific endeavors should exhibit the following criteria: objective testability, reliability, exactness, some degree of explanatory power, critical approach, and systematic coherence free of contradictions (Malterud, 2012; Polifroni & Welch, 1999). The aims of scientific inquiry reflect different ontological views of the nature of reality, truth, and what exists (Hofweber, 2014; Polit & Beck, 2012). In the study of human sciences, ontological positions are generally divided between positivism and constructivism. Polit and Beck (2012) described the constructionist stance: «*Reality is multiple and subjective, mentally constructed by individuals, simultaneous shaping, not cause and effect*» (p. 13). Paradigms influence what phenomena are deemed legitimate to study, how one pursues knowledge, one's epistemological position, and what methodology one uses to study and learn about these phenomena (Polit & Beck, 2012; Thornquist, 2003). Constructivists acknowledge that reality is contextual and permit interaction with the subject matter, accepting involvement and researcher's subjectivity and biases to better describe and understand the phenomenon. The study findings are inevitably influenced by interactions between researcher, subjects, and the socio-cultural environment they exist in (Polit & Beck, 2012).

4.2 Qualitative research

Qualitative research methods reflect the constructivist paradigm. The goal of this study was to gain insight into how nurses experience clinical handovers. Qualitative research was the preferred method in this context because it acknowledges the subjective thoughts, experiences and interactions of individuals in complex meaningful interactions (Malterud, 2003; Nasjonale forskningsetiske komiteer, 2010; Polit & Beck, 2012). In the study setting, clinical handovers are dynamic professional interactions privy to nurses, their professional "life-worlds". Qualitative research aims to explore the socio-cultural meaning of phenomena from the study subjects' view, and is suitable for exploring dynamic coordinating processes (Malterud, 2003, 2012). This paradigm is

appropriate when little is known about a phenomenon (Nasjonale forskningsetiske komiteer, 2010; Polit & Beck, 2012) as indeed the literature search revealed in chapter 2. There are different research traditions within the constructivist paradigm depending on the aims and questions, for example: ethnography, phenomenology, grounded theory, hermeneutics.

4.3 Reflexivity

Hans-Georg Gadamer (1900-2002), the father of hermeneutics, referred to a person's knowledge, experiences, competencies, and values as their "prejudice" in the positive connotation (Malpas, 2016). This prejudice, known as reflexivity in qualitative research, is constantly present and affects how one looks at the world and interprets it. Researchers must be critically reflective, aware and open about their preconceptions, preferences and biases (Polit & Beck, 2012). The researchers' reflexivity affects the entire research process and ultimately the results (Malterud, 2001, 2003). Reflections on reflexivity applied to this study follow.

Idea and Research Aim: The idea for the study grew over a few years. I am an emergency nurse and worked predominantly at the study site hospital for 15 years (2001-2005; 2007-present), 6 years at the ED (2006-2012), and have worked with the ED on projects since. I remember the demands of processing patients safely and quickly through the ED, doing hundreds of assessments and handovers to wards, and experiencing professional pride and frustration at the quality of handovers. I was taught to practice ED nursing in a holistic manner: history taking, evaluating body systems, functional abilities and psychosocial status (Bemis, 2007; Crouch et al., 2009).

The ED leads were open and genuinely concerned about complaints they received about the handovers. I wanted to investigate this problem from both sides and try to get closer to understanding the situation. Part of my job as a hospital coordinator for simulation is to help identify challenges in practice, and contribute to improvements. This contributed to my motivation. I was aware of the need to balance the advantage of having an emic (insider's) perspective, with an open-minded etic (outsider's) perspective on the participants' perspectives (Polit & Beck, 2012). In qualitative research it can be an advantage to understand the field context (Lundman, 2008).

Data gathering: In qualitative research it is expected that researchers and participants will be in physical and mental proximity during the data gathering period (Nasjonale forskningsetiske komiteer, 2010). The dynamic relationship between the researcher and subjects can be described as the instrument for data collection (Malterud, 2003; Polit & Beck, 2012). At the time of data collection, I knew most of the nurses in the ED, and had intermittently worked with them on courses and training since moving from clinical to educational work at the hospital. I was aware of the good relationships I had developed with the participants and the ward over years, and the need to balance

this with a professional research approach. I also knew some, if fewer of the participants from the ward interviews. My supervisor also knew some of the participants, and the emergency department, medical and surgical division leads were known to us.

Researching your own culture: Cato Wadel (1991) provided guidance to qualitative researchers doing field research in their own culture. For the purposes of this study, although I am foreign-born, I consider myself well assimilated into the Norwegian culture after nearly twenty years' residence in this region. I felt like I was doing research in my own professional culture in the emergency department. Researching in your own culture can have practical and professional advantages including: knowing the language – in this case actual and professional hospital language; 'mutual knowledge' of the sociological structures; and specialized knowledge of the work context like: hospital pathways, professions, procedures, language (Wadel, 1991). While collecting the data, it was advantageous that both interviewees were nurses from this hospital, experienced in critical/specialized care. The interviewees had both worked with ward nurses over a few years with an implementation project and had gotten to know their work systems well. We were aware of these relations and strived to maintain a stance of critical, open investigation, and pursue an attitude of non-judgmental inquiry (Rudolph, Simon, Dufresne, & Raemer, 2006).

4.4 Method Design

The study methodology was phenomenological-hermeneutical. The design was partly descriptive phenomenology because the aim was to learn about the nurses' experiences in their own words. Phenomenology broke with positivist traditions because it saw the object and subject as interdependent, and acknowledged people's subjective experiences and the fundamental lifeworld within which they experience phenomenon (Polifroni & Welch, 1999; Thornquist, 2003). Phenomenologists look for the experience and meaning people give to phenomenon (Furnes, 2005; Polit & Beck, 2012; Thornquist, 2003). In addition, the study sought to understand the nurses' perceptions of the factors affecting handovers, and the consequences to practice. This opens for interpretations of their lived experiences, both their own, and the researchers – a double interpretive horizon - which is in line with hermeneutics (Malterud, 2003; Thornquist, 2003). Malpas (2016) describes this as 'hermeneutic situatedness' where prior understanding is unavoidable, necessary, and can be a methodological advantage. The method of data collection was focus group interviews. The data was transcribed texts, the original dataset of the hermeneutic tradition (Malpas, 2016).

Focus Group Interview: In their review, Manser and Foster (2011) found 6 methodological approaches to handover research, this study belongs to the first category: clinicians' assessment of handover practice. Each approach necessitates different methods. At an early study stage, I briefly

considered audiotaping or observing handovers which would have yielded handover content and discourse information, but not insight into the context, meaning and implications of the handovers to clinical practice. Interviews are an appropriate method when trying to gain insight into participants' experiences, opinions, attitudes, and meaning (Kvale, 2001; Malterud, 2012; Thornquist, 2003). The group dynamic and opportunity provided by interviews for encouraging sharing experiences can be beneficial or stifling to expression of opinions depending on group dynamics, level of inclusiveness, or feelings of ease (Malterud, 2012; Polit & Beck, 2012).

Moderator: Qualitative researchers inevitably have a degree of involvement or interaction with the study field (Lundman, 2008). Focus group interviews are led by a moderator who is prepared, introduces topics and questions, and encourages group discussions by facilitating participation, discussion, and focus during the interview (Kvale & Brinkmann, 2009). When possible it can be a strength to have both a moderator and a 'secretary' (Malterud, 2012). The moderator initiates and steers the interview and uses herself as an instrument to collect data. A secretary follows the interview, takes notes, is prepared, follows up with inquiry as needed, watches the time, and can help summarize. We co-interviewed the ED and surgical focus group interviews, where I was the moderator, and my supervisor the secretary, but divided the medical ward interviews between us. We kept close contact between interviews and discussed experiences.

Moderators need to put people at ease, engage them to discuss, discern the flow and dynamics, have mental discipline and guide the group. My profession as a facilitator, and the supervisor's experience, have much in common with good interview qualifications like being open, steering, sensitive, critical – asking for explanations and meaning of statements, purposefully naïve, gentle, clear, knowledgeable (Kvale, 2001; Kvale & Brinkmann, 2009). Facilitator techniques include establishing a learning environment, ensuring engagement and psychological safety, structuring flow, asking open questions, using active listening techniques, summarizing and rephrasing, and being open about the frame of the activities, and encouraging reflection (Brett-Fleegler et al., 2012; Rudolph et al., 2006).

Transcription: The interviews were audiotaped and transcribed by the author. Confidentiality and anonymity were explicit ground rules before the recording started, and no names of nurses or patients were spoken during the interviews. The interviews were only identifiable by date, start time, duration, and wards represented by the nurses. Data were stored according to ethical considerations (Kvale & Brinkmann, 2009) and national standards (Norwegian Centre for Research Data, 2017). To ensure accuracy of the transcriptions, the audio files were listened to repeatedly while reading the transcriptions. Some challenges in transcription were the dialect variations among the nurses. The

transcriber tried to stay true to the dialects. All interviews were successfully recorded with only a few indiscernible minutes in one of the ED interviews due to technical sounds. In total, the transcriptions filled 71 pages of 237 minutes of interview.

Interview guide: Semi-structured interview guides were developed before the interviews to reflect the research aim, problem, and questions (see Attachments 5, 6, 7). Qualitative research allows for emergent designs - where researchers may adjust methods of inquiry based on previous experiences. The final interview guide for the ED nurses reflected some comments and experiences from ward interviews for the participants to respond to. No questions were taken away from the first interview guide. The questions were carefully designed to be open, unambiguous, short, clearly formulated and invited participants to share their experiences (Malterud, 2012). Both interviewers were aware of not asking leading questions to explore the nurses experiences and perceptions (Kvale & Brinkmann, 2009). An early question was: *Tell us about your experiences giving/getting handovers? Or What is the ultimate handover?* This technique of inviting narrative recounts is recommended to open up interviews (Malterud, 2012). Notes were taken by the moderators during the interviews to refer to during analysis.

4.5 Sampling

Sampling is important to ensure adequate and relevant representation to address the research questions. The study sampling strategy was primarily purposeful, to recruit knowledgeable participants who could provide rich information, with relevant experience in the defined research area (Malterud, 2012; Polit & Beck, 2012). Participants from both ends of the clinical handover were recruited to shed light on both perspectives.

Gatekeepers: The two researchers contacted the division lead nurses for the relevant study areas: medical, surgical, and emergency clinics, to gain permission to research this topic, inform them of the topic, and get assistance in recruiting the participants. The leads acted as gatekeepers because they had authority, the contact network with ward leads, and were positive to the research theme. We had an advantage of doing research in our own institution and had established trust and good relations with the gatekeepers (Malterud, 2012). Thus, we avoided time-consuming negotiating (Polit & Beck, 2012). A risk with gatekeepers is selection bias that could affect data collection (Oppong, 2013), but we found no evidence of this. Information about the study was provided in short e-mails, and face-to-face discussions with the leads. The e-mails were subsequently used by the division leads to inform the ward leads and start participation recruitment.

Participation: For this thesis, we conducted 6 interviews: 2 at the ED, 3 at medical wards, and 1 for surgical wards (See Table 4). The 3 medical ward interviews were combined with pre-

implementation interviews about detecting deteriorating patients. This was done to avoid interview fatigue at the hospital, and did not seem to affect the handover interview sections (see Attachment 5). The participation strategy was to open for heterogenous ward participation, to encourage sharing experiences and learning across wards, and not burden individual wards losing nurses simultaneously to interviews from clinical duties. Two of the four ward interviews went as planned, two others were homogenous. Clinical work and routines forced the researchers to be flexible, mobile, and schedule interviews to best accommodate the wards. A sociologist, Harold Becker, was quoted on this: *“No matter how carefully one plans in advance, research is designed in the course of its execution.”* (Toner, 2009, p. 181). In total 19 nurses participated, one male, the rest female, with clinical experience from 0,5 (one nurse) – 40 years. The purpose of group interviews is to stimulate reflection and discussion about the theme. We experienced this in all the interviews, regardless of the number of participants.

Experienced researchers recommend the ability to be pragmatic and compromise due to unexpected changes in participant numbers (Malterud, 2012). Opinions differ about the size of focus groups. Many suggest 6-10 participants per interview to stimulate discussion (Kvale & Brinkmann, 2009; Polit & Beck, 2012). *“Very small focus groups”* between 2-3 participants, have also proven to be sufficient for collecting valid data (Toner, 2009). Our interview groups had mostly 4 – 5 participants, but one had only 2. Although we were a bit surprised by the turnout, it was ethically responsible to grant the participants interviews since they had managed to organize work duties to attend. Toner (2009) reported lower participation than anticipated, but was grateful for not cancelling her interviews due to the powerful testimonies of those who showed up. It is advisable to recruit more people than optimal due to no-shows (Polit & Beck, 2012). This was the case for this study as clinical duties impeded participation for some nurses.

Table 4: Interview description table

Inter-view Nr.	Interview Time	Total interview mins.	# pgs	Planned Particip. # nurses	Actual Particip. # nurses	NB	Wards
1	25'-40'=15'	15	6	4-6	4	One nurse made effort to remain – important topic	MED Oncology – 1 ward
2	20'-44'=24'	24	6	4-6	2	One nurse cried reflecting on workloads – paused interview – participant wanted to continue	MED – 1 ward
3	42'-55'=13'	13	4	4-6	4		MED – 4 wards

4	00'-59'=59'	59	17	2 x 6-8	1 x 5	7 had signed up, 5 showed up	SURG – 5 wards
5	00'-61'=61'	61	20	6-8	4		ED
6	00'-65'=65'	65	18	6-8	5	Nurses asked by ward lead how the interview went – they enjoyed it, liked reflecting on practice and would like to “do these things” more often	ED
TOTAL		237 mins.	71 pgs	36-42	19 nurses	Clinical/practical considerations impeded more participation & Ward leads encouraged and enabled participation	

A concept presented as more descriptive about sample size than saturation, is information power (IP): “*The larger the information power the sample holds, the lower N is needed, and vice versa*” (Malterud, Siersma, & Guassora, 2016, p. 1756). The study sample sizes were deemed highly adequate in terms of information power. The five IP dimensions follow, and were considered high by the researchers in relation to this study:

- (1) A narrow *study aim*;
- (2) Dense *sample specificity*, i.e. the participants’ characteristics (knowledge, experience, engagement), were specific to the study aim (all but 1 participant very experienced);
- (3) Strong *quality of dialogue* in all interviews;
- (4) Applicable *theoretical framework* to explain data meaningfully;
- (5) *Analysis strategy* – cross cases rather than one case;

Timing: The interview dates were chosen both according to the availability of the researchers, and not to conflict with contemporaneous activities at the hospital. In this respect, the participants could have been any nurses working at the respective wards on duty on the chosen dates, who volunteered, which makes the selection secondarily convenient. The emergency department lead requested that we wait a few weeks for interviews due to involvement in other projects and a desire to protect the nurses from too many extra activities, in a busy clinical setting.

Interview schedule: An interview schedule was created in cooperation with the lead nurses, including location of interviews, dates, and times. The dates and times were followed as agreed upon. The interview location needed to be moved for two interviews with medical wards due to clinical work pressures, i.e. from a neutral room removed from wards, to a meeting room on the wards. This worked well, but there were a few interruptions from colleagues with questions about patients. The recordings stopped during these interruptions to protect patient data.

Inclusion criteria were: nurses, interested in being interviewed, with a ward-representative degree of specialization. We asked the leads to choose participants that reflected mixed levels of experience. All the nurses interviewed worked shifts. This is the norm, and reflects the general nursing population at the hospital, and the reality that patients are admitted around-the-clock. Only one nurse, a trainee, had minute experience in answering the admission telephones to the ward. As far as we are aware, no nurses refused to participate.

Reminder: As advised in research literature (Polit & Beck, 2012), I visited the wards the morning of the interviews to double check with leads on planned interview attendance, and remind them of the theme. This proved positive to the richness of the interview because one nurse had purposefully discussed the topic with her colleagues to get their input before she came to the interview.

4.6 Analysis

Qualitative data analysis is an iterative, arduous, creative process demanding sensitivity to reduce large amounts of data to meaningful units that communicate valid findings and generate understanding. One both reduces data into smaller meaningful units and inductively constructs meaningful patterns. Researchers choose an analytical method of categorization and coding complementary to the research aims (Elo & Kyngas, 2008; Kvale, 2001; Kvale & Brinkmann, 2009; Malterud, 2012; Polit & Beck, 2012). A general flow to analyses of meaning is: meaning coding – meaning condensation – meaning interpretation (Kvale & Brinkmann, 2009).

A content analysis method developed by Graneheim and Lundman was used (Graneheim & Lundman, 2004; Lundman, 2008). This method involved two major steps: (1) descriptive search for manifest content – the visible content: “what the text says” (p. 106); (2) interpretive analysis of the manifest content to find the underlying, latent content. The unit of analysis was transcribed text. The 5 steps were:

- 1) Extracting *units of meaning*, direct quotes from the text that constituted a unit of meaning that answered the research questions;
- 2) *Condensing* the units of meaning, making them shorter, but retaining the essence;
- 3) *Coding*: Abstracting the logical essence of the condensed text into a few words;
- 4) *Categories*: Interpretive labelling of the codes, grouping together codes that share content. Categories should be mutually exclusive and exhaustive meaning that all codes should belong to a category (p. 107). Categories answer the question of “What?”, what is the manifest content – what is this about?
- 5) *Themes*: Link the categories together, answer the question of “How?” These reflect the latent content, deeper interpretation of the data and may take the form of a metaphor. Graneheim and Lundman (2004) described themes such: “*We consider a theme to be a thread of an underlying meaning through condensed meaning units, codes or categories, on an interpretative level...an expression of the latent content of the text*” (p. 107).

Transcriptions were done in Norwegian, but further analysis was done in English. The data was analyzed using Excel and Word software as workspace. An example of the data analysis is in Table 5:

Table 5: Example of Analysis process

Interview # Pg. #	14-2
Meaning Unit	Jeg vil dra nytten av at denne pasienten har ligget hos en kollega av meg – så ikke jeg må begynne helt på skratsj, både for min del og for pasienten sin del som har allerede kanskje ligget 2- 3 -4 – 5 timer i mottak. Noen har snakket med det mennesket i løpet av de timene, noen har funnet ut av noe, og det vil jeg gjerne at videreformidles til meg, så jeg ikke trenger å begynne med det samme og at ikke pasienten trenger å svare på det samme igjen og igjen og igjen og igjen. For det oppleves – jeg ville i hvertfall opplevd som utryggt og (3) uprofesjonelt (ja) – (4) sånn som snakker de ikke sammen? (ja) uten at jeg har fått direkte kommentar om det fra pasienten. Det er jo ofte i hvertfall hos oss, godt voksne pasienter. Det er ikke en selvfølge at en er klar og orientert. Da er det greit å vite hvordan fungerer det...
Condensed text	I would like to benefit from having a colleague see the patients in ED - some nurse must have gotten to know the patient a bit – can't they relay their findings? It's tiring for patients to tell their stories over and over - seems unprofessional.
Code	4-2 Miss getting my nursing colleagues assessment in ED
Sub-category	Do nursing assessments (4-2)
Category	Need for structure and routines including nursing, tasks, documentation
Sub-theme	Need for routines and structure in handover
Theme	Bridging the interdepartmental gap professionally to ensure reliable handovers

Interview # Pg. #	5-1
Meaning Unit	Ja, jeg kan godt begynne jeg altså, det å melde en pasient er greit, men ofte så kjenner du ikke pasienten, du har ikke vært inne en gang, og her er det masse pasienter, og så må du melde for en annen, og en annen må melde for enda en annen, og så har du omtrent ikke vært inne hos pasienten, og så har legen skrevet en hel rekke ikke sant? (Mmm) Og så begynner avdelingen å spørre i detaljer, og det har du ikke svar på (mmm). Så det blir litt sånn ja. Det kan være vanskelig
Condensed text	Difficult when you must handover for a colleague and you know nothing about the patient - and there are lots of patients here - then wards start to ask detailed questions - you don't know
Code	5-1 Difficult to handover patients and not knowing them; Ward wants detailed information we cannot provide
Sub-category	Difficult not knowing patients at handover (5-1)
Category	Frustration at not knowing the patients handed over
Sub-theme	Nursing quality fading and it's frustrating
Theme	Efficiency tradeoffs cause ripple effects on quality

4.7 Trustworthiness

Intersubjective testability includes the transparent presentation of the research design and factors affecting the conduct of research to the scientific community (Polifroni & Welch, 1999). The

purpose is that readers may judge the quality of the steps take to gain knowledge, evaluate its relevance, and potentially replicate the process to test findings (Kvale & Brinkmann, 2009; Polifroni & Welch, 1999; Polit & Beck, 2012). Aspects of trustworthiness in this study were based on measures presented by Graneheim and Lundman (2008).

Descriptions of the research process were provided as evidence of credibility (Graneheim & Lundman, 2004; Polit & Beck, 2012) including sections describing aspects of reflexivity (4.3), research design (4.4), sampling (4.5), ethical considerations (4.9), analysis (4.6) and data selection (5). The selection and analysis of data was done by both researchers, which increased trustworthiness (Thagaard, 2009) and guarded against subjective bias. For validation of the analysis process, the interview texts were divided in half, meaning units selected and coding done by each researcher, then exchanged for critical assessment by the other. The researchers met to discuss the analysis findings, reach consensus on categories, and sub-themes. The study was presented for critique and advice at four masters' seminars to an audience of classmates and two professors. Examples of the condensation/coding/thematization process are shown in this thesis (Table 5). Data in qualitative studies are large and trustworthiness is increased by presenting direct quotes as examples in the results, as done here in chapter 5 (Polit & Beck, 2012).

Transferability of the study's findings regards the applicability of findings to other settings (Graneheim & Lundman, 2004; Polit & Beck, 2012). The study site context is described in section 4.9.2, and procedures relevant to the handover are described throughout the text, and included as attachments. Dependability refers to the stability of the data over context and time (Graneheim & Lundman, 2004; Polit & Beck, 2012). The data collection was done over a 1,5-month period. The participants were interviewed once. No interventions on clinical handover or interprofessional communication were undertaken during the data collection period. Participants were enthusiastic during the interviews, emphasized their life-worlds with affective language, and expressed wishes for improvements in the handover situations. A full range of quotations was presented that reflected all dimensions of what the nurses emphasized was important to their experiences, to work towards achieving authenticity.

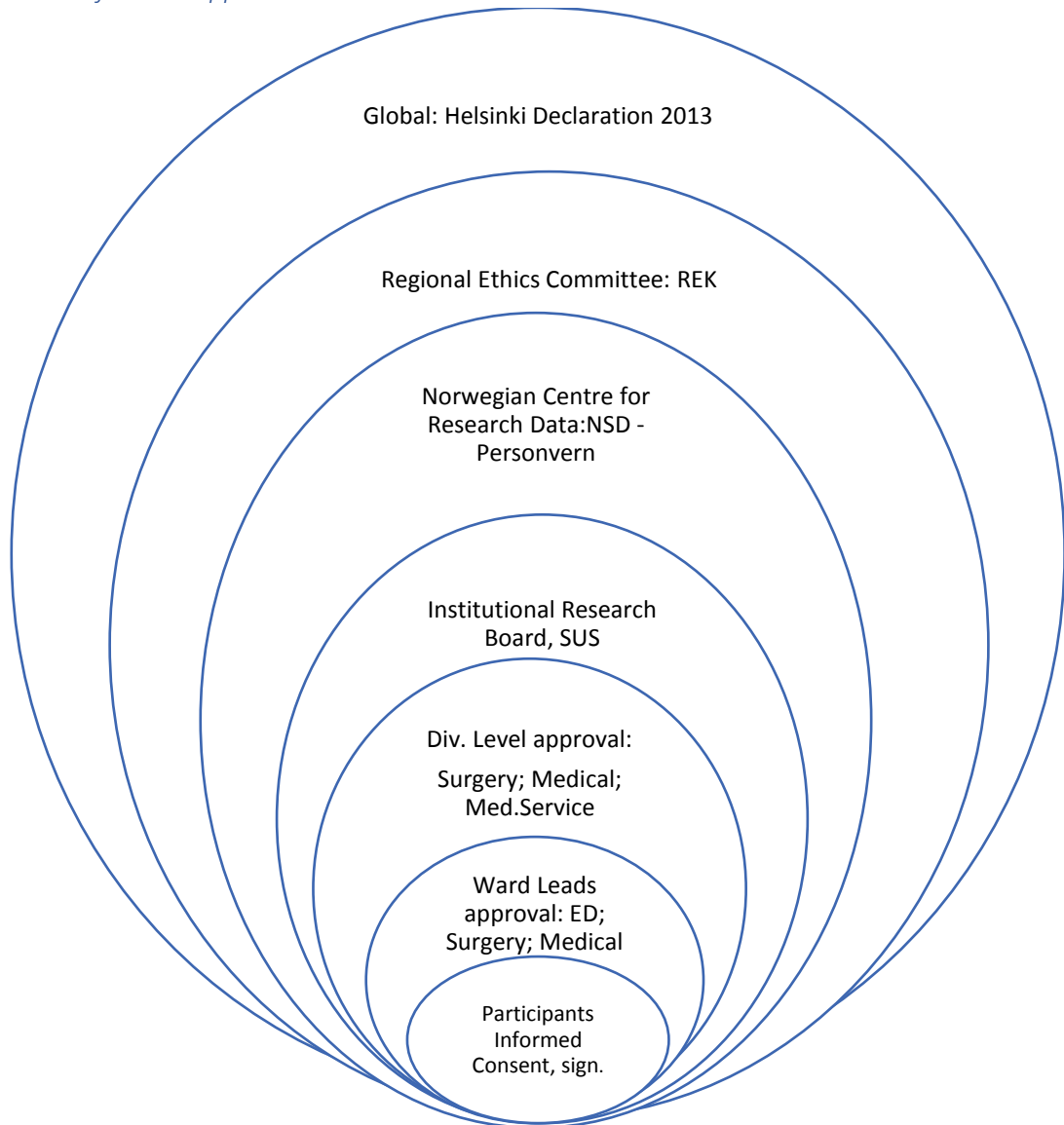
4.8 Ethics

Engaging in responsible research requires ethical considerations at all stages and levels, from international standards to participant protection (World Medical Association, 2013). Figure 3 below depicts the levels of ethical considerations taken in this study. Three fundamental research ethical principles of autonomy, beneficence, and justice, were continually under consideration (Orb & Eisenhauer, 2001). We foresaw beneficence for nurse participation in a potentially professionally cathartic situation. During one interview, a nurse cried after reflecting upon how busy their shifts

were. The moderator stopped the recording and gave her an opportunity to recover and exit the interview, but she wanted to continue. This showed the nurse's dedication, and concern and awareness of participant vulnerability (Orb & Eisenhauer, 2001). All nurses were pleased to get a chance to discuss the topic and looked forward to quality improvements. In the ED, they reflected that they would like to start every day with such professional discussions. Examples of international ethical principles upheld according to the Helsinki Declaration were: ethical standards ensuring respect (#7), considering national ethical standards (#10), research conducted by qualified individuals – supervisor (#12), consideration of risks and benefits (#16-18); justified research protocol (#22), submission to ethics committee (#23), confidentiality (#24), informed consent (#25) (World Medical Association, 2013).

The study protocol and plans were approved by the following groups: Norwegian Regional Ethics Committee (Attachment 8); Institutional arm of the Norwegian Centre for Research Data (Attachment 9); Hospital Research Committee (Attachment 10); Division leads (see Attachments 11A & 11B; respective division and ward leads verbally approved after e-mailed and in-person information provided by the researchers, and informed consent was provided by the study participants verbally and written (see Attachment 12). The Norwegian guide to the Health Research Law, and the law itself, were consulted (Helsedirektorat, 2010; Helseforskningsloven, 2008). As researchers, we have an obligation to disseminate the findings (World Medical Association, 2013# 36).

Figure 3: Levels of ethical approval

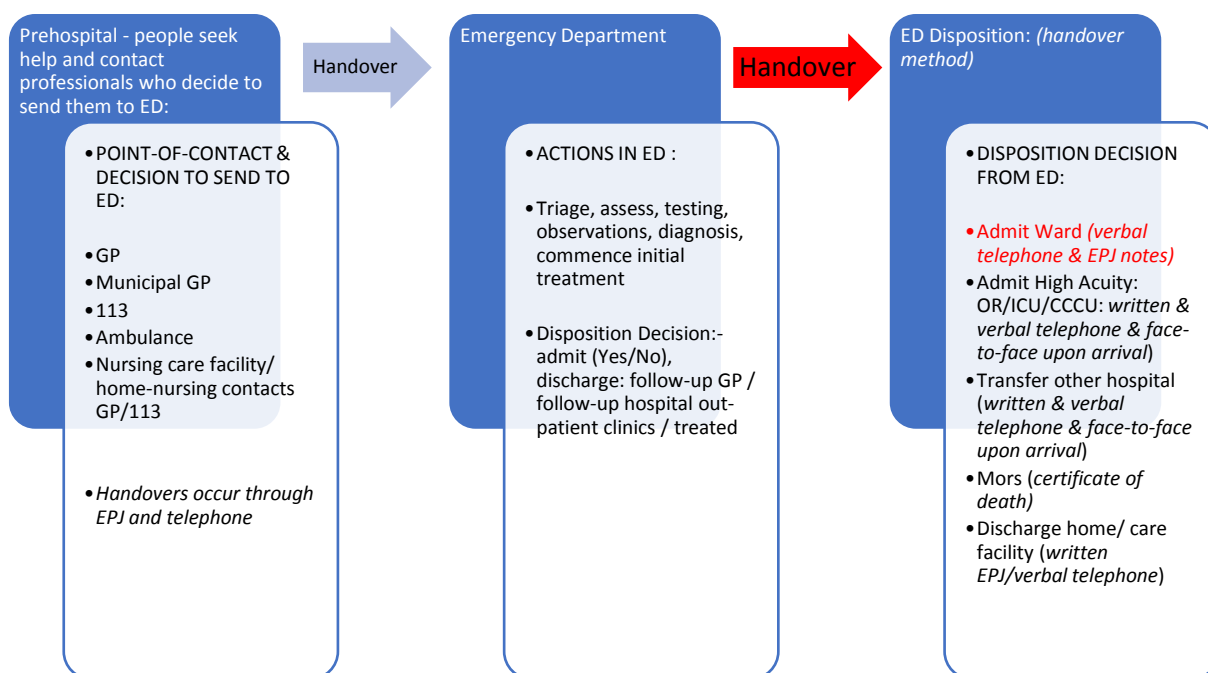


4.9 Context

4.9.1 Patient and handover pathways

In Norway, the prehospital pathways into the ED are similar but the in-hospital handover mechanisms may vary depending on size and procedures (Krogstad et al., 2015; Ringard, Sagan, Sperre Saunes, & Lindahl, 2013). Essential ED work answers three questions: discharge or admit patients; where and when to admit; how to safely discharge? (Hollnagel et al., 2013). An example of the pathways for patients to be admitted and discharged from the hospital through the emergency department, and handovers involved, are depicted in Figure 4. The study handover is in red text.

Figure 4: Patient pathways, decisions and handovers through the Emergency Department



4.9.2 Study Site - Emergency Department

The study site is a university tertiary hospital serving a population of 360,000 inhabitants, and employing 7,500 staff. The specific axis of study is between the ED and the medical and surgical somatic, adult wards. This ED serves all hospital wards except: low to middle acuity medical pediatrics, maternity and psychiatry. The ED has a treatment area including triage, waiting room, trauma bays, treatment rooms, of 1422 m² (Attachment 15). The study ED has an average of 102 (weekdays) & 75 (weekends) admissions per day. 80% are admitted to inpatient wards: 60% to medical wards, 40% to surgical wards. Admission rates at this ED have increased with the annual increase in patients of 10% from 2013 – 2017. On an average day, 90 patients are cared for in the ED. There is one physician employed at the ED, as a lead. There are 90 nurses, thereof 20 advanced care nurses. The nurses fill 69,5 positions. The admitting physicians work on inpatient wards, where their ED shifts are part of their rosters. The nurses at the study site work mainly in the ED. The annual nursing turnover rate in the ED is 9%.

At the emergency department, the disposition decision and ward-placement prioritization are done by the physicians responsible for the patients in the ED. The final bed allocation is nurse-led (Attachment 13). Written admission notes are sent both by paper and electronically by the physicians. The actual handover protocol states that ED nurses should complete and document a nurse assessment for their patients, and call in the admission handover to the designated ward and

charge nurse, by telephone (Attachment 14). The study site has a temporary breach protocol stating that patients should not remain more than 3 hours in the ED (Attachment 16).

When emergency nurses call up the handover, they have access to electronic test results, written physician admission notes, admission letters from the pre-hospital physicians or paramedic documentation, nursing charts from the ED, and their own assessment-based documentation and knowledge of the patients. The handover protocol does not specify what content or how to communicate, only that there should be a verbal handover.

The electronic nursing assessment documentation is based on Virginia Henderson's 14 points of nursing (see attachment 4). This is a holistic nursing assessment including physical, psychological, social and spiritual dimensions. The department protocol states that nurses should fill this out for every patient (see attachment 14).

5.0 Results

In the following chapter, the results of the interviews will be presented. The purpose was to explore the nurses' experiences with the interdepartmental clinical handover from the ED to wards. All 6 interviews were analyzed individually. Four bodies of data across the interviews emerged: Poor handovers from ED or Wards' perspectives; Successful handovers from ED or Wards' perspectives. The results generated 4 themes, 9 sub-themes, and 28 categories. The empirical data will be presented in two sections starting with what the nurses emphasized the most: poor experiences of handovers, then successful. The lived experience of both groups of nurses are mixed together.

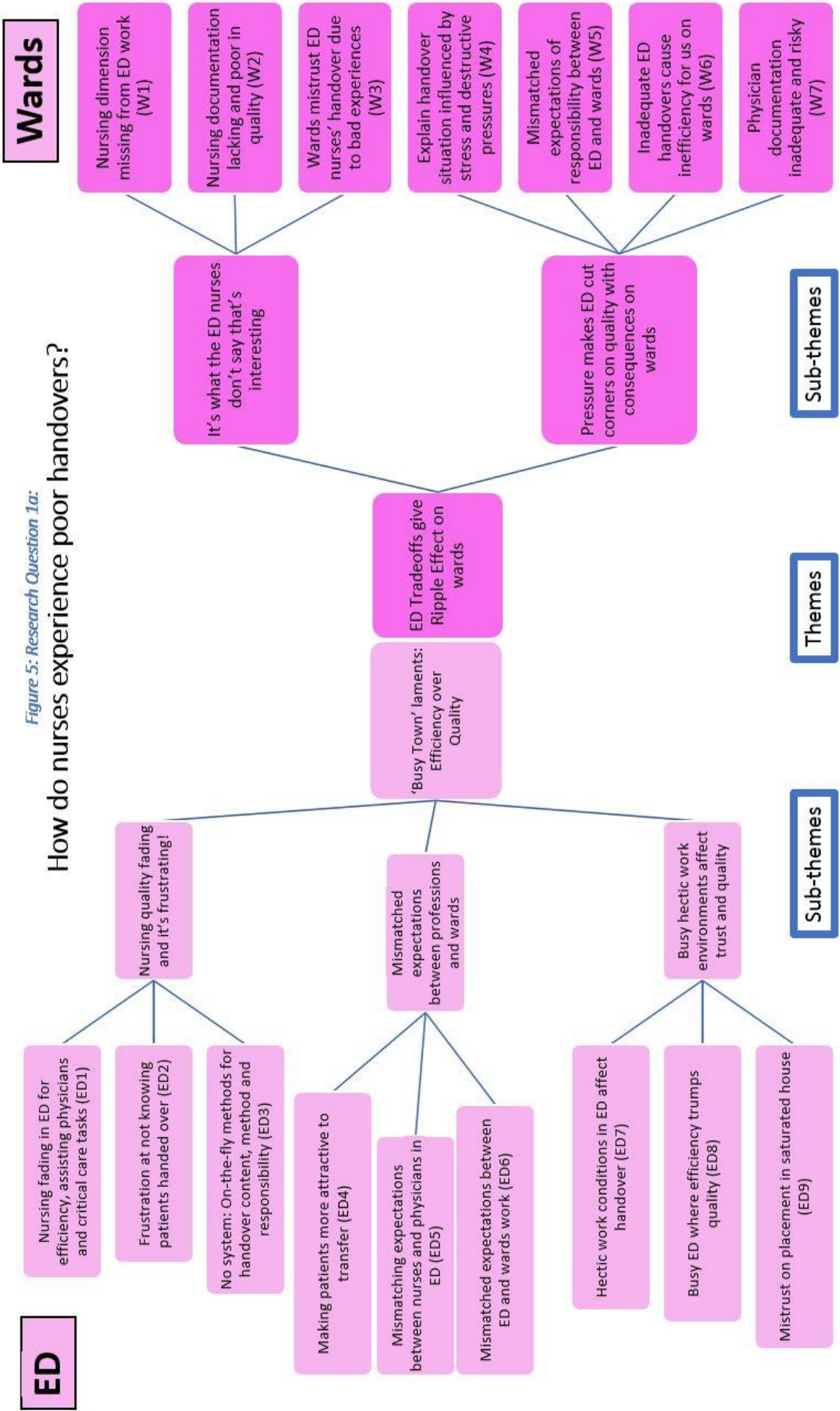
5.1 Experiencing Poor Handovers:

The participants were most interested in discussing the challenges and consequences of poor handovers. Two major themes: *'Busy Town' laments: Efficiency over Quality* & *"ED Tradeoffs give Ripple Effects on Wards"*, answered the question of how nurses experienced poor handovers. An overview of the results is on the next page: *"How do you experience poor handovers?"*, where categories are numbered ED1-9, and W1-7, in Figure 5.

ED

How do nurses experience poor handovers?

Figure 5: Research Question 1a:



ED1: Nursing fading in ED for efficiency, assisting physicians and critical care tasks: Part of the challenge the ED nurses faced were simultaneous demands to assist physicians, care for critically sick patients, and keep the flow moving:

“(5) No, I cannot send up a patient in need of nursing care (others agree), No, I do nursing care and attend to some things, but you see - then you have to run over, and receive a cardiac arrest, we need to be 3, you need to go to a trauma, 2 or 3 traumas come, and suddenly you need to prepare a room, and then the first patient has to go to the ward (other: you don’t have a chance!), you cannot manage to assist in care ...(other: no, you cannot)” (6-6)

“(1) ...and we don’t get time to get to know them, and write in DIPS, not necessarily time to talk to them even. (3) It’s a lot of in and out, (1) It’s a lot of serving the doctors with patients, and that’s from 1600 – 2100 hours. That’s when we really need to get a lot done. Then the nurses run to serve the doctors. Then we get a lot of quick fixes (others: mmhmm), that’s just how it is.” (5-10).

Nurses felt forced to prioritize patient flow, helping doctors and critically ill patients over nursing care.

ED2: Frustration at not knowing the patients handed over: Nurses on both ends were frustrated when the ED nurse didn’t know the patient they were handing over:

“...if it is really, really busy in the ED and the nurse who actually has the patient who should handover, doesn’t have a chance to do it, then one of us has to, and it’s really...not that great handing over a patient you don’t know and haven’t seen, it’s a challenge in the ED (others agree)” (6-1).

The ED nurses acknowledged they knew what the wards wanted to hear: *“...they miss nursing care info and what the patients can manage themselves...we cannot always know things like that down here” (5-18).* They knew their handovers weren’t good enough: *“So they are a bit thinned out and light, what we handover, right? It becomes, it can be wrong, and very frustrating to handover someone you don’t know” (5-3).*

“...When you stand and read (ed: physicians notes) and it says ‘blah, blah, blah’, and...we wonder why, just to read this? I don’t have time to get to know the patient. It becomes sloppy in a way (others agree).” (5-12)

Not all the nurses miss the nursing assessment and documentation:

“...but a lot of what I write in the admissions in DIPS is so thorough that I think this is typically something that they can write at the wards...they screen the whole patient... (3) We cannot do everything (others: no), cannot manage to go deep into each patient (others: no). (6-11)

W1: Nursing dimension missing from ED work: The wards agreed that the handovers were inadequate:

“What happens a lot is when you ask a little about the patients they say – ‘No, I’m just handing him over, I haven’t seen the patient’ – incredibly often they just handover a patient they haven’t seen or taken vitals from, but they handover for another, that is unacceptable, because they cannot really say anything about the patient, they haven’t gone in and seen the patient.” (2-3).

“...it’s more what they don’t say, that there is rather little being handed over many times. It’s passing the buck – like: ‘No I don’t know the patient’. No? Why is it then you who calls and reports him then? You can really wonder sometimes. (4-2)

The ward nurses are irritated by ED nurses just reading the physicians’ notes:

“(2) Yeah, that’s what they do, they just read the physicians notes...and then they don’t want to hear any questions, they get irritated (1) They get irritated if we ask a little extra (2) That happens really often” (2-3).

“(3) Sometimes the patient comes up demented or not coherent, and they haven’t mentioned it. (4) They haven’t said anything, or they omit things, especially negative things like dementia - they cannot get out of bed - they cannot help themselves at all, those things are omitted” (1-1).

This demonstrated a gap in mutual understanding of what content is expected in the handover.

ED3: No system: It became obvious from the interviews that there was no common practice around routines, structure, content of handovers. When asked about their system for handover the ED acknowledged individual variations:

“(2) I was going to say I don’t think there is any introductory training about handovers...(4) I have had a student, so I usually go through...the first time they handover a patient I stand there next to them, I do this many times and listen, if they have control of my system, which I have made...but like you said – it is my system (other: yes) but then the next nurse will come who will train a student or agency nurse, who has their system, so we, you know, I don’t think we have a system” (6-13).

In fact, only one ED nurse knew that there was a handover procedure, the others had neither seen nor heard of it although they had all worked at the ED for over 2 years:

“So you would be in a bad position in an inquiry if something happened (others Yes) (3) No, the procedure is being breached, I didn’t even know about it... (1) But I think it has just become accepted, (3) It has become an accepted issue that everyone sees we don’t have the time to do it, and everyone kind of agrees that we don’t have time to document anything.” (5-12).

Other signs of lacking handover system were examples of discontinuity of nursing care when charge nurses took initiative to move patients from triage to ED rooms, which interrupted continuity of care between triage and ED nurses:

“...But they haven’t gotten the beginning of the story, I understand that well, but to make ends meet here we just have to do it this way. So, it’s a dilemma.” (5-4).

W2: Nursing documentation lacking and poor in quality: Both ends of the handover acknowledged that the nursing element was lacking in the handovers. The ward nurses even experienced omissions of verbal handovers (1-1). The ward nurses missed ED nursing documentation:

“What is often stupid is that they have often had conversations with the patients, taken vitals, urine tests, blood tests and all, but they don’t write any reports in the ED... (3) Yeah (many at the same time). Not to us, not like the nursing admissions, we experience that extremely seldom, it’s just the nursing observation sheet...It’s silly to ask the same questions (ed: to the patients) ...I don’t think I’ve seen any reports in DIPS...admissions, there was more before, a few years ago, I think its several years now.” (3-1).

The ward nurses miss ED documentation of nursing impressions: *“...but there is often little about how they function, that’s my experience. And how they are observed – how do they look to the nurses in the ED?” (4-6).* This is an area of work that ward nurses have noticed has changed over time:

*“(1) I think it was better that sheet we got up before where nurses wrote on it...haven’t seen that nurses write so much now...(2) but some sometimes write a few lines at the bottom...admission – functional ability data, how they are when they arrive, what they receive of community help and such, a note like that was more common before, written by ED nurses, haven’t seen that note for years...(1) No actually...nurses wrote what the patients were like, from when they arrived, and more than what is written today, **now** it’s more measurements, what medications they gave, and tests ordered, and X-Rays and such.” (2-4).*

ED1: Nursing fading: The ED acknowledges the fading of nursing quality: *“But in the ED nursing is very important, but that is what can bleed a bit, you know, with the enormous tempo” (6-8).*

Documentation seemed to be open for interpretation:

“...the admissions template (DIPS) that comes up as standard, it has all these questions that have to do with the patients’ stay, like nutrition... so I usually just delete it and write free text – how was the patient at arrival in ED – with or without pain?” (6-11).

“(2) We have a template in DIPS we should fill out, but who has time? (5-7/8).

“...I seldom use DIPS – then only for very complex situations, situations where you have to be sure to comment: ‘the patient is very demented, cannot converse’; because you seldom have time to write the 5 lines you need to” (6-10).

One nurse came from a ward to work at the ED and reflected that it was nice to get to know patients and document well, however in the ED: *“But you haven’t got a chance, it’s bleeding (ed: nursing).” (6-11).*

ED4: Making patients more attractive to transfer:

In this busy environment, the ED nurses admitted to making patients attractive, or *“sweetening it a little bit” (6-5):*

“(1) You almost have to sit there and pretend you know the patient better than you do, (3) Yeah, sometimes... (1) You almost have to, because... they expect that you have been with the patient and know them, but you don’t always down here. Actually, very often we don’t. (5-2).

“(2) It depends a bit on what they ask, but I could well say that normally the patient is healthy and ambulatory, but now he has an infection that has put him in bed...(4) Even though we say that, and we say it often, they just hear: “in bed” (others: mmhmm), I feel at least (5) Yes, (4) They don’t say it but you can hear it – either they get really quiet (others mmhmm), or “Oh...ok...” (2) and that’s why I wonder if maybe that is the reason that we don’t always say it, because we get a reaction, and they feel we have tricked them because they feel the patient is sicker than we reported, (3) underreporting...(6-5).

The ward nurses are familiar with this:

“...a lot of what I think doesn’t add up, is when they report that the patient is ambulatory, cares for himself, can be in the corridor, and then what meets you is a patient that absolutely isn’t ambulatory, cannot care for himself, is maybe a bit disoriented, that has happened many times and I know it’s not just with me, and I don’t know if they cover up a bit so that we will accept the patient? (2-3)

Mismatched expectations: Part of the challenges in providing a good handover, lie in mismatched expectations both within the ED, and between the ED and wards. ED5: Within the ED the nurses experienced frustration in lack of collaboration with doctors in a system out of sync with responsibility and activity. Some physicians were unable to provide basic monitoring and care (6-12), lacked awareness of the nurse allocation system (5-16) and the activity level of the ED that demanded nurses attend to critically ill patients (5-3). Patients sometimes became abandoned by their allocated nurses in the ED, when nurses rushed between patients:

“(2) But it isn’t always like this that the nurse who gets a new patient goes to her colleague and asks them to take over the patient (others: No), and then the patient lies there without anyone having taken over, then the doctor comes and says that the patient is ready to go to the ward, or needs to go to X-Ray... (6-12);

One experienced nurse was fed up having to handover patients she didn’t know while the doctor who did know them sat nearby:

“...Well, (the doctor) just sat there and I sat here, and proceeded to handover the patient I didn’t know. So when I called up to handover, (the doctor) sat next to me and listened. It is just too stupid!... it’s stupid that I have to handover a patient I don’t know, but that happens so often, then it’s stupid that the one sitting next to me could have done it (themselves), and then sits and listens to what I say. Then I got pissed and said: “No I don’t know the patient, it’s very stupid that I call up the handover, but here it says this and that, I said, and you can just call the (doctor) if you have more questions.” Then I just sat there and fumed. The way that...oh it’s too stupid! (3) Too many middlemen. Unnecessary middlemen. Yeah, that’s what it is, you sit there like a secretary. (5-2)

It was the nurses’ task to handover the patient, while they supported multiple simultaneous patients and doctors. What system helps the nurses succeed in handing over patients?

ED6 & W5: ED – Wards

The wards experienced frustration about variation in degrees of: ED physician decisiveness regarding treatment plans causing delays (4-2); clarity of responsibility for taking tests (4-2); and clarity of handover regarding whether medications were given: “...then I come in with the Klexane medicine, and the patient says: ‘I just got that’ – if they had gotten a double-dose it could be dangerous” (1-1). The wards reflected:

“But I think that they maybe don’t have a chance to get involved with all the patients because many arrive there all the time. And you hear patients come up here and say: I was down there for 6-7 hours without almost anyone coming in to me. It’s different up here, so I don’t know how much we can expect either? (Others mmhmm).” (1-5)

The ED had experienced mismatched expectations too:

“It’s the nursing care and psychosocial areas the wards are really concerned about, and I understand that.” (6-13); and: “they miss getting the nursing care and functional abilities...we cannot always know things like that. Like when they come in with fever, high fever, and are sick, half-septic, so you don’t know how much they are capable of now compared to at home – I think a lot of them (ed: complaints) are about that right? (5-18)

These comments reflected different expectations about content and accountability. Both ends of the handover experienced individual variation in handover adequacy, from the wards:

“There is a big difference...some are very, tell you everything, you don’t have to ask about anything...and the other way too, that you have to ask about everything, you don’t really get enough info to receive the patient well.” (4-4)

From the ED: *“I disagree a bit that they want it (handover) short and concise, because there is big variation depending on who receives the handover, often they are like they want to have a list of all the former sicknesses, everything that has happened, absolutely everything about what will happen, be it how many times to measure the blood pressure, 4 or 2...” (5-5)*

One ED nurse couldn’t understand the fuss about getting a holistic picture of patients in the ED:

“... so I wonder: how important is it anyway that we know absolutely everything in advance before the patient goes up and its only 15 – 30 minutes ‘til then? I think there’s a bit too much focus from the wards’ end that everything should be clear before the patient goes up ... They want it on a silver platter...they want to have everything before, the whole overview, and you don’t have time for that.” (5-1/2)

ED7 & W4: Hectic work conditions in ED affect handover & Explain handover situation influenced by stress and destructive pressures: Nurses repeatedly referred to stressful working conditions on both ends influencing handovers, i.e: not double-checking plans and medications (4-10), being grumpy and pressed on both ends (2-1), being rude and dismissive (2-9), and hearing stress and chaos on the telephone (1-1). This affects patients and nurses:

"(4) They (ed. patients) are really hungry when they get up here, and thirsty, they haven't gotten anything. So many of them feel awful. (1) Everyone is hungry when they come up! (others: agree and laugh) (4) It has been tough for them, I gather, emotionally for them to be down there...(4) But that says something about how busy they have it. Because they don't do it on purpose to forget to give them food and drink of course". (1-1)

"...it can be incredibly irritating if they send up people because they want to empty the ED and we are at capacity already, and they won't listen to us, then I get extremely frustrated, it's the worst thing I know about the whole job!" (3-2)

"Often, especially when the whole house is under pressure, many wards, they are pretty rude on the phone, and I feel they are crabby from 'Hey' ...one evening we got up 17 patients, on one shift, that says a lot...(nurse started crying)" (2-1)

W6: Inadequate handovers cause inefficiency for us on wards: The degree of ED preparedness and adequacy of handovers was important for the wards and patients. One patient had a 24-hour delay in testing, including waiting on 'nil per os', due to inadequate planning and communication in the ED (4-3). Others experienced getting handover prematurely causing inadequate use of limited resources on wards (2-2).

"It's pretty frustrating at night, when you get a patient up at night and they say the patient is ambulatory and they aren't. And then we just, we don't have so many people to deal with things like that." (1-1)

"...then I get problems, when I have the ward, to allocate the patient, when they don't know anything about the patient more than what is written on the paper (ed: physicians notes)..." (2-2)

The ward nurses discussed how important it was to get a good handover to help them prepare for the patients on the ward:

"If you know a disoriented patient is coming who maybe is lying there in pain, then it is good to know what to expect up, so when the patient arrives you are ready to care for him, that's usually the problem, not that we put him in a 5-man room because they said he was oriented, but that you aren't prepared to receive a patient who is much sicker than the impression you got from the handover." (2-3);

"What's often lacking is more, how the patient functions, if they would have had a bit more time to find out how the patient really is, it would help us who are receiving, by allocating the patient (others: mmhmm), where would he fit best?" (2-3)

The wards found it undignified placing patients in need of protection on corridors based on poor handovers (3-3), and inefficient starting 'from scratch' at the wards when the handovers were inadequate (4-7).

W7: Physician documentation inadequate and risky: A problem mentioned especially by surgical nurses, which caused risk and extra work, were inadequate ED physicians' notes:

“(3) We have experienced that sometimes the patients arrive and have a problem and we don’t know what to do, like pain, and the patient isn’t on paracetamol, oxynorm, or anything...what is the point in going through the ED without identifying problems, initiating treatments so we can find out what to begin with?” (4-1).

They commented also about having to gather several nurses around the notes and try and guess at what was written (4-9). This was especially dangerous regarding medicine dosages, with some serious near calls. The nurses also missed seeing good treatment plans (4-4).

ED8: Busy ED where efficiency trumps quality:

The ED nurses were fully aware of the efficiency demands affecting the quality of their work and them: *“...and it (ed. the hospital) is saturated...you feel it in your guts” (5-7);*

“Oh, too few rooms, too few nurses...or the ratio between nursing and physician resources is disproportionate...It cuts corners on holistic nursing and care (1) Yeah it does, (4) It cuts corners on nurses, we run as much as we can, we barely have time to go to the bathroom, or drink or anything, we get tired and dizzy, but the demands are there” (5-11)

Two frequently mentioned difficulties were when the wards asked the ED nurses whether they had ‘cleared this placement with the coordinator’, and if ‘the patient could be placed on the corridor because those were the only beds available at capacity’: *“Yeah, can they? But there is no room anywhere else...I think it is hard to say they cannot, that they need a room, they are the ones deciding. » (6-3)*

The ‘need for speed’ came up among the ED nurses:

“So, you feel pressed to be fast and get in the next patient, (4) or the doctor is ready immediately for a new patient (4) because if the doctor doesn’t have anything to do, or help another nurse... (5) You have to be fast to work in the ED...you have to be the type that is a bit quick (others: mmhmm). It doesn’t do to saunter around...it will affect the other patients and your colleagues. (6-11)

ED nurses justified their decisions given their context:

“The consequence of us using enough time on the patient to get all the information and write in DIPS would create extremely long waiting times (1) Yeah, (3) Patients sitting in triage and waiting and waiting and waiting and waiting, more than they necessarily need to to get the help, physical help they need”. (5-10)

The busyness affected their ability to empathize:

“When you work in the ED...and the patients are pouring in, what I feel many times is at the end of the day...they aren’t people in a way, it’s just to find rooms, and ...is there someone we can send home? It’s really all about logistics, how long they lie here, can we get them in somewhere? You forget in a way, in the end, the humanity, the person, the patient. That’s how it is (others: mmhmm). (2) That is what they talk about, the top leaders, the time patients spend here – and how much it costs. (5) It costs...it goes in front of nursing. The more effective you are, the faster throughput there is, the better you are to “de-de-de-de-de”

(makes hand movements doing tasks), that is good, but nursing, that, that is bleeding in the middle of all of this. I am 100% sure of that (others: mmhmm). Don't you agree? (6-4)

The quality of nursing assessments was impeded by multiple changes in responsibility:

"When there are many patients in the ED, and you are "Nurse 1", you run around and you don't have time to do everything... 'Can you handover this one?' to the charge nurse...and you didn't know enough about the patient to give the ward the information they need, like not enough about their social or functional situations, or how well they hear..." (5-1).

It was hard to have peace to handover:

"...you get interrupted when you begin, just as you begin...and you gradually lose your structure in your (handover) system" (6-8); "...and then I begin to repeat myself, or hop over things, and then back and forth...and it gets confusing" (6-9); "We give the handovers in a chaos of noise (others: yeah), we try to get to a telephone...there is so much noise and people back and forth... (6-9)

W3: Mistrust & ED9 Mistrust on placement in saturated house: It is no wonder that the nurses developed mistrust after bad experiences:

"...and it signals something I think, when you ask for more information, I sit and listen to the handover and wonder about something, and you ask and then 'No, I don't know, I haven't seen the patient.' (others: mmhmm) Really?! You think, you wonder: What are you doing then, why did you call me? It does something to my attitude at least. (3) ...at least when it feels like the one giving the handover on the phone has a responsibility to pass on the information that you expect to be in a handover, about the patient's condition, why they came to the hospital, what was done in the ED, what will be done now? (2) It's also the way they handover, because if I give a handover about a patient I have neither seen nor spoken to, it's really hard!" (4-7)

"(2) If it is so busy that somebody else has to give the handover for you, why can't the one who gives the report go and take vitals for you, so you can give the report yourself, the one who knows...(1) Very often I think this is shirking responsibility (other: yes), then they get away with answering the questions, they can say "I don't know the patient, just handing him over, he is coming to you, useless to discuss this" (2-6)

The ward nurses said they would feel stupid if they handed over patients they didn't know (4-8), and often received little relevant information so they needed to start from scratch (4-4). Preparation was a theme:

"(1) ...other times you feel that when you ask questions, they don't know, and they need to check, just like they haven't prepared themselves enough for this telephone call (4-1). "...So, in a way, I haven't thought about it before...but the handover from the ED to us, it is imminently important to prepare yourself for that telephone" ...Sometimes a lot is lacking and they cannot answer." (4-1)

The ED also has learned to mistrust the system based on placement 'tag' in a saturated hospital with disagreements:

“It happens a lot (others: yes) that we have to call back, to the flow coordinator, even though we have spoken to her already, and then back to the ward, and then more arguing, and we say: You just have to call the coordinator yourself” – it’s tiring.” (5-5)

One ED nurse told about a particularly busy shift when they admitted patients from triage. A ward nurse questioned the placement, generating a triangle of phone calls between the triage, ward, and flow coordinator nurses:

“So she got the number and called, then called back after 5 minutes. She was practically crying, had been yelled at. That’s also not right (others: yeah). They are frustrated at their wards (others: yeah). And she said she was trying to take responsibility because so many have quit at the ward from overwork.” (5-6).

“You can in a way be hard back at them (4: yeah) and put your foot down (4: yeah) but then they aren’t able to take in the patient information you want to handover over (3: Yeah, that’s a point). I notice, you have to just sit there until things calm down (others mmhmm) and maybe just listen to their frustration (mmhmm) go away, before you get on with it...It’s almost as much discussion about how the situation is in the house and that we understand that...frustration takes as much time as the handover, that’s a shame” (5-5)

Placement discussions about infectious-isolation patients were mentioned several times by the ED nurses:

“...There have been many sepsis patients and gastroenteritis cases that need isolation rooms, and there is limited space, it’s hard, and we have to move pretty sick nursing care patients to big rooms (ed: with other patients) to isolate patients who are ambulatory and healthier...that’s hard...worst when they get moved to corridors. (6-2)

Sometimes the wards went into the patient placement data-systems (6-2) and checked on their neighbor’s capacity. This necessitated negotiations when trying to admit patients, which the ED nurses found time-consuming.

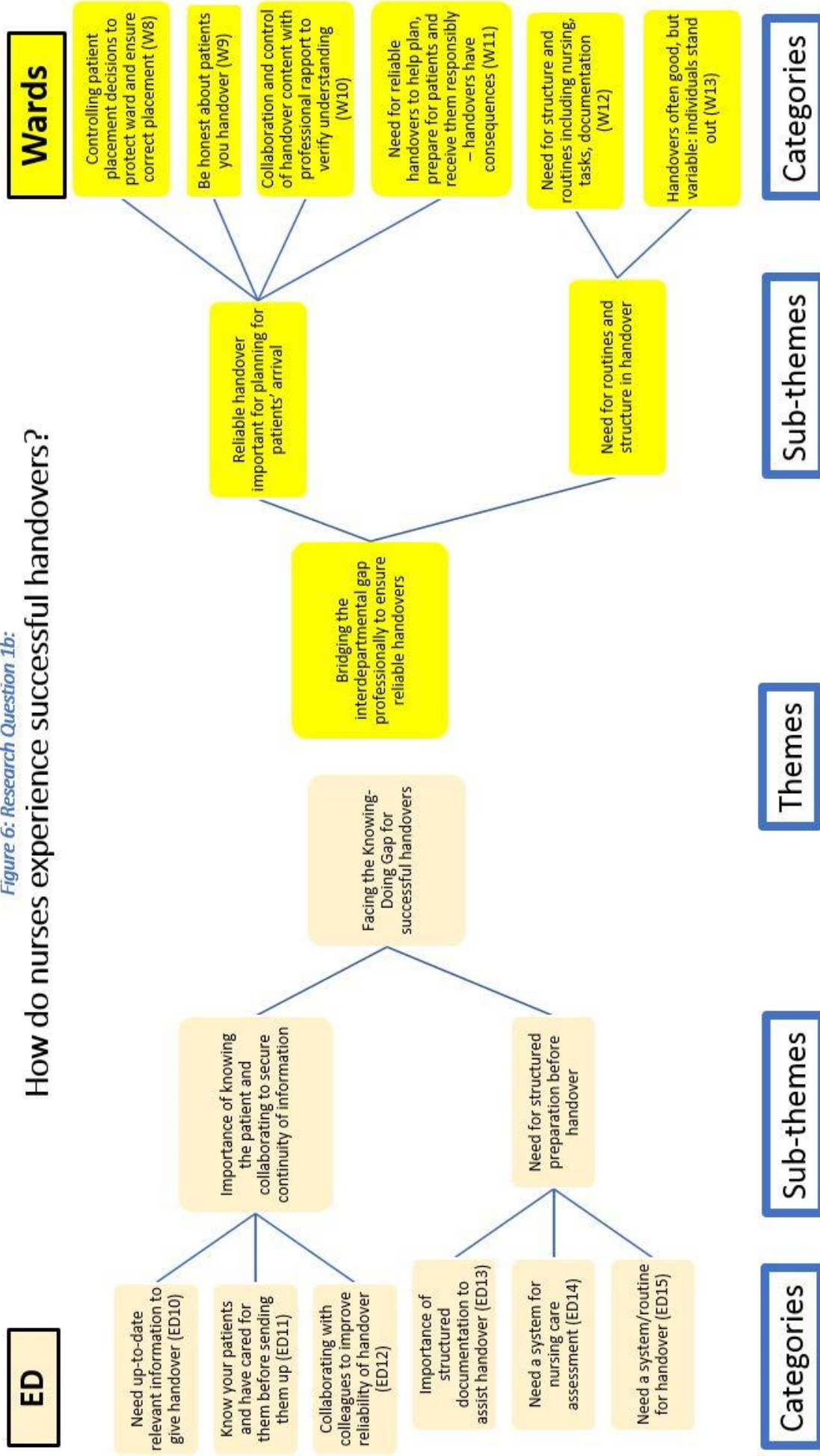
There is a lot of energy used by nurses on both ends negotiating, reasoning, arguing, doubling back and trying to place patients. It has side-effects on the people working in the system, and creates delays and even unsatisfactory, risky situations for many patients. Both ends of the handover were frustrated by hectic, busy working situations where the lack of reliable information, especially about nursing concerns and appropriateness of placement was a constant frustration for both groups of nurses.

5.2 Experiencing Successful Handovers:

The categories from interviews on both ends of the handovers revealed a body of knowledge based on professional, experience-based factors for ensuring successful handovers. The overview of these results is presented on the next page: *“How do you experience successful handovers?”* in Figure 6, where categories are numbered ED10-15, and W8-13.

Figure 6: Research Question 1b:

How do nurses experience successful handovers?



ED 11: The satisfaction of knowing and caring for the patients, and collaborating to secure continuity of information was addressed by the ED.

“It is really nice to handover a patient you have had from the start, and you have taken your time (others: mmhmm) and talked to, gotten the whole picture, it’s so much nicer. Then it is satisfying handing over a patient”. (5-4)

They liked to have completed tasks both for the patient and their colleagues on the wards:

“It’s good to be able to say: I have put in a catheter, hung up antibiotics, the bed is clean, he has patient clothes, you know you have done good nursing, before the patient leaves the ED, and if we can manage that then the wards will think it’s easier to receive the patient.” (6-6)

ED10: Need up-to-date relevant information to give handover

The ideal content of the handover was discussed by the ED, but there was no template or consensus:

“I think it goes in diagnoses...if they have temporary care, about their living situation: home, with home-care, family, diagnoses, if they manage themselves” (6-4); “Yeah, main diagnoses, if they have significant comorbidities like diabetes, (4) I think everything we say is relevant in the handover (5) Yeah (3) It should be up to us, right? (4) Who is the patient, diagnosis, here-and-now, what happened in the ED, what is the follow-up, what is relevant...what is relevant for now (4) Self-care, cognitive ability, disturbing other patients? (others: getting excited, talking) (5) if they are sad, depressed, seem out of it, if they have family I think, that is important, if they are in pain? Yeah, those are nursing things. (6: 15-16);

They discussed what amount of information was necessary...

“A good one would be concrete, short presented information that is “spot-on”, should use as little time as possible and least possible discussion, and that the patient goes up and they find out the rest that is, well, less important...”. (5-7)

... and how the content differed depending on the receiving ward:

“(5) You have to find a common ground (others: mmhmm), (3) On some wards this is important, on others it’s something else, what does the EKG show and such (4) what is relevant, depending on what ward the patient is going to...(5) what they are often interested in is what has been done, that we have taken tests...that they have been cared for, the practical things, they are interested in the treatment and everything, that it’s initiated quickly (mmhmm) that’s important.” (6-17)

ED12: Collaborating with colleagues to improve reliability of handover

It became apparent that within the ED they needed to collaborate and prepare to be able to give a good handover. When handing over for other nurses:

“It can be a good idea to use a half minute to read through the physicians’ notes and go take a quick look at the patient – how he looks – at least you have seen them...” (6-6);

“I usually ask a colleague – ambulatory patient? Mental state? Aware? Because I can read the vitals on the nurse charts, and the physicians’ notes- I can read them, it takes a moment (others: yeah). (4) My colleagues usually come and ask – do you have time to report for me because I have to go in (ed: to trauma room)? Yeah of course I can...but sometimes I find the

doctor and ask “Was there something special here, something unfinished, current situation? Ambulatory?” (6-12)

ED nurses brought up physician-nurse cooperation, even suggesting the doctors call up the handovers when it made sense because of limited nursing resources (5-3). Some ED nurses had worked abroad in hospitals where it was the doctors job to admit and handover the patients to the wards (5-3). They appreciated when doctors would bring patients in from triage when the nurses were stretched, a task usually nurse-driven (5-11). A suggestion from the ED nurses was to reinstate their routine of having a patient in tandem:

“(1) Before we always worked in tandem, (4) ... then we worked properly from the start (3: mmhmm), (4) No matter how demanding they (ed: patients) are we can deal with them, and care for them and position them in the bed, then they aren’t lying there across the bed with sloppy clothing. So from the start, if everything is good from the start...then I feel the handover up will also be good. (1) Then you’ve had time to talk to the patient, get a picture, holistic picture (4) You are right, (1) It’s much better that way...That’s how it should be...in tandem, then always one of us is left who can handover. We try to do it, but it falls apart, (1) ...falls apart, (4) the busier it gets, the more it falls apart. (5-8)

W9: Be honest about patients you handover:

The ward nurses repeatedly wished the ED nurses would be honest about the patients they handed over: *“(4) I think honesty, that’s the best from the ED... Be honest, don’t sugar coat it because you don’t want a discussion.” (3-1/2)*. This was essential to be able to prepare (3-1/2).

W11: Need for reliable handovers to help plan, prepare patients, receive them responsibly – handovers have consequences:

The ward nurses needed reliable handovers to provide reliable information along patients’ pathways, plan their resources, and ensure continuity of nursing observations:

“...but it’s really good to have that picture in your mind, so you can greet the patient in another way than if you don’t know anything at all. You can pass on information, have a plan...(4-5)

“...I think it’s scary enough to be here with white-clothed people everywhere, and you get asked the same questions again and again, honestly, I don’t know, because the physicians’ notes were skimpy or the handover didn’t mention anything about this. Then we give a second-rate answer, you cannot give a good answer to the patient...I need to know so I can pass on information in a confident manner, I think”. (4-3).

“It’s good to get an honest report both so you can plan where they will be placed and plan the resources needed for when they arrive.” (3-2)

“But it’s maybe hearing that the one who saw the patient in the ED reacts to their behavior ... so I can follow up that point – do I also see that? There is something about helping each other along a bit, where should I focus my observations, because you cannot get an impression of everything immediately... not when they arrive in a bed (others: mmhmm). (4-15)

They also saw the need to collaborate professionally and control the handover content to verify understanding (W10):

«(3) I think it's important to be polite to each other, they might experience us as stressed, crabby, and rude on the telephone... (2) Yeah, we have to have understanding for each other's situations...if they don't know how ambulatory a patient is, that's ok...but if everybody is nice, and polite (others: yeah), then it goes well, but maybe it's not easy when it is extra busy, for them or for us.» (3-3)

“For me it has a lot to say, that they are nice and helpful, that we talk to each other professionally. Because that has been a bit of a challenge.” (3-9); “...both us and them, if it is stressed at work (others: mmhmm) ... (3-10)

A recurring point for the ward nurses was double-checking the handover content, and physicians' orders (4-2):

“Yeah, I think that the nurse in the ED should read through the physician's orders and see that “O! here are lots of omissions, this and that, the medications aren't right, well...” I have experienced many times that the medications the patient has with them from home are a good list...but those don't match the transcription on the physician's notes. The patient says: “No, I don't use that one” ...So the ED nurse, I think, before they call up, can double check the notes to see the ordinations, you know: yes, abdominal pain, yes CT abdomen ordered, but not medications?” (4-3).

This was particularly important for the surgical nurses who were accustomed to admitting patients with incomplete physicians' orders, including for analgesics. This caused extra work for them to locate and contact the surgeons, who often were operating. They appreciated collaborating with the ED nurses to correct the orders before patients departed from the ED, since the surgeons were more available there than at wards. One group was curious about the ED situation and expressed a wish to visit and learn how they function (1-6).

W8: Controlling patient placement decisions to protect ward and ensure correct placement:

The ward nurses had often found it important to question placement of patients to their wards during the handover both to protect the ward and ensure correct patient placement.

“They (ed: ED) are probably sick of all the wards saying: “We are so busy, we are so full...” and maybe they are all full, but I think many times that there are patients who should have been at our or neighbor's wards, and the opposite, and then the day shift comes and has to start moving them – then I think it's better they go to where they should.” (4-9).

“We don't ask and probe so much to hear if it is really, really necessary that the patient comes here if we have 10 vacant beds, but of course, the more saturated we are the more critical we are to each patient they want to admit, we have to.” (2-1)

“...sometimes we ask: “Yeah, but does the doctor know how many patients we have up here?”, it's not certain they do, so they say, “No, I can ask”, and then it works out sometimes. (2-5)

These comments show awareness of consequences of incorrect placements, and taking steps to avoid them.

Need for structure and routines

Both ends of the handover expressed the need for more structure and routines to improve the handover.

W13: Handovers often good, but variable: individuals stand out:

This was probably most obvious when the ward nurses reflected on the variation in quality from the ED handovers:

"It really depends a lot on who it is who calls, I have had a few, they are a bit: "Yeah, now I have one: infection, uncertain focus, and a little fever, period." And it's like – no – "...is there more to report?", "No, it's all there". While others are good at giving a complete picture of the patient. I think it varies a lot, but mostly good experiences." (3-1).

"I have experienced a few times, especially one male nurse name...often then there is an admissions assessment written, not very long, but then I think "Well, well, well, can you believe it – look here! (others laugh). I think that's really good." (4-5).

ED14: Need a system for nursing care assessment

The ED nurses acknowledged that they didn't have a system for assessing nursing needs:

"I think it has most to do with routines, that we aren't good enough, I think that if we had built in much better routines, that one nurse helps undress and does the measurements, and the other sits with DIPS and documents and talks to the family, orders tests, and documents what the other nurse is gathering of information, it could be just as fast (other: yeah). It's just that we are bad at this, we could be better... (5-9/10)

"One of the easiest initiatives from our side must be just asking them how much help do you need at home, how much do you manage yourself, can you get to the toilet, do you have home-nursing? Actually a few short questions...then we would know." (5-19)

"...but the doctors sit there and talk to them, they get a good picture, right? (others: mmhmm), (3) They go through everything from functional level, home, family, everything. I have started myself just asking these things when I get them (ed: from triage), to be able to answer, you don't always get the time...then I don't have to stand there like an idiot when they ask later." (5-4)

One ED nurse suggested putting nursing assessments on the checklist with boxes to check off for ambulation, self-care, and cognition status (5-19).

W12: Need for structure and routines including nursing, tasks, and documentation:

The ward nurses appreciated the patient flow coordinator position in the afternoons. They felt the patients were more fairly placed, that the wards were listened to, and the ED tried to accommodate situations on the wards regarding admissions (2-1, 3-2). Some wards reported routines

where there were dedicated nurses on shifts to answer the admissions telephone who knew the right questions to ask and how to place patients (4-12). Another ward had developed their own handover reception template (3-3). Nurses advised the ED to fill in the 12-point admissions template in DIPS; *“And have a structure to what you say, then it’s easier to understand and avoid errors. (others: mmhmm). (4-10). They hoped the ED nurses would prepare better for handovers (2-5); and regarded them as colleagues across wards:*

“I want to reap the benefits of this patient having been with a colleague – so I don’t have to start from scratch, both for me and for the patient who has already been 2-3-4-5 hours in the ED. Somebody has spoken to that person within that time, found out something, and I want that to be passed on to me, so I don’t have to start from the top, and the patient doesn’t have to answer the same again, and again, and again. That must be – at least I would think it unsafe and unprofessional, like – don’t they talk together? (4-2)

ED15: need a system/routine for handover

One ED interview mentioned the SBAR template that had been introduced in the ED, but had kept their own system of handovers (6-12). They referred to the common practice where the nurse who is responsible for the patient should handover the patient, but that often they had to handover for each other, and then they ask for information (6-12). One ED nurse described what a good handover was:

“A good handover I think, is when you are systematic, (4) You are permitted to follow a nice system in the handover – not hopping back and forth, (3) that you are not interrupted, and not back and forth... (moderator: ‘what system are you talking about?’) “(4) that you, when they answer the telephone you say who you are and are from the ED and are going to handover a patient...if I can be able to do give the handover, then they can ask questions at the end.” (6-8).

Nurses revealed lacking common procedures and routines for handing over. They had individual ideas, methods and variation. The nurses acknowledged the need for a system of nursing assessment and structure in handovers. They presented ideas and knowledge about how the clinical handover should be done, but without structure and a culture for this, it wasn’t done: ‘The Knowing-Doing Gap’. Both ends wanted to improve, or bridge the gap. Suggestions for practice follow in the discussion.

6.0 Discussion

This research was inspired by complaints from the wards on handover quality, and an interest to hear both sides of the story: the ED and adult, somatic wards. The research questions addressed understanding both poor and successful handovers, and suggestions for improvement. The results revealed two clinical environments with a gap between them. The working conditions and existing nursing practice for handover in the ED affected the ability of nurses on the other end to plan and receive patients in a professional manner, while working under pressure themselves. Theoretical concepts and related literature will be used to discuss the results. The nurses emphasized the poor handovers so they are discussed first. The discussions about successful handover experiences provided implications for practice and further research. Design considerations will also be mentioned.

6.1 Poor Handovers (see Figure 5)

ED nurses described their workspace and norms of handover heavily influenced by a hectic work environment with high activity, ergo the theme of 'Busy Town' lamenting, and lack of agreed-upon nursing and handover structure. Nurses did their best to meet the needs of critically ill patients and patient flow, while acknowledging inadequate focus on delivering good handovers. A workplace where efficiency trumped quality. This influenced the interactions with the ward nurses, and stimulated reflections on the significance of the handover for ward nurses and patients.

In the ED, nurses lamented the loss of quality in work performed, due to efficiency demands. They were constantly facing 'Efficiency – Thoroughness' tradeoffs (Hollnagel, 2012) and efficiency won. Hollnagel pointed out that justifications for tradeoffs come from individual, collective, and organizational culture. In this complex specialist hospital system, levels influenced each other, and daily practice was the result of a combination of priorities and decisions. The ED's time pressures, patient arrival and flow demands, and workplace target of 3-hour breach, were examples of organizational factors known to negatively affect handover communication (Eggin et al., 2016). The tradeoffs described here seemingly reflect the concerns of the workplace – throughput of patients, over having prerequisite conditions in place to reduce unwanted side-effects. The side-effects of poor handovers were increasing mistrust from wards to what ED nurses reported, patients arriving in poorer conditions than reported, anger and frustration between nurses. ED nurses omitted documentation and devalued their own professional performance with non-critical patients, something they attributed to efficiency pressures. Ward nurses exemplified this by stories of hungry and worn-out patients arriving from the ED, near-misses on medications, inefficiency in time spent on double-checking orders and having to re-organize patients, duplication of assessment efforts, and not being prepared enough to professionally receive patients and maintain patients' dignity.

These situations do not help the hospital operate according to stated values of respect among colleagues, quality in processes, and goals of holistic treatments and effective use of resources (Helse NN Foretak HF, 2013). This highlights the difficulties an organization has in realizing its stated values, where prioritizing efficiency takes its toll on quality of work, patient experiences, and employees professional behavior. Recalling the WHO definition of quality (World Health Organisation, 2006), the results told of work situations that were ineffective because they were not based on the increasing body of evidence on the importance of reliable handovers to increase continuity of care. The work performed was inefficient with questionable nurse-physician resource allocation, and the potential for optimization of nursing resources to avoid duplication of work, or not creating more work for ward nurses that should have been done in the ED, i.e. complete assessments, documentation, test and medication orders. Reports of inadequate patient care plans and documentation from physicians also created inefficiency for the ward nurses, and delayed treatment for patients, because their work needed to be clarified and controlled by nurses on the wards.

Cook and Rasmussen (2005) described this as 'marginal creep' of practice beyond the boundary of acceptable performance. This happens when work processes become unsynchronized over time (Woods et al., 2010). The annual admissions rate has steadily increased at this hospital, and official reports project an increase in hospital activity due to population growth of 35% by 2025 (Helse NN Foretak HF, 2013). The challenge of balancing workloads with quality will only increase unless the work processes and resource allocations are revised.

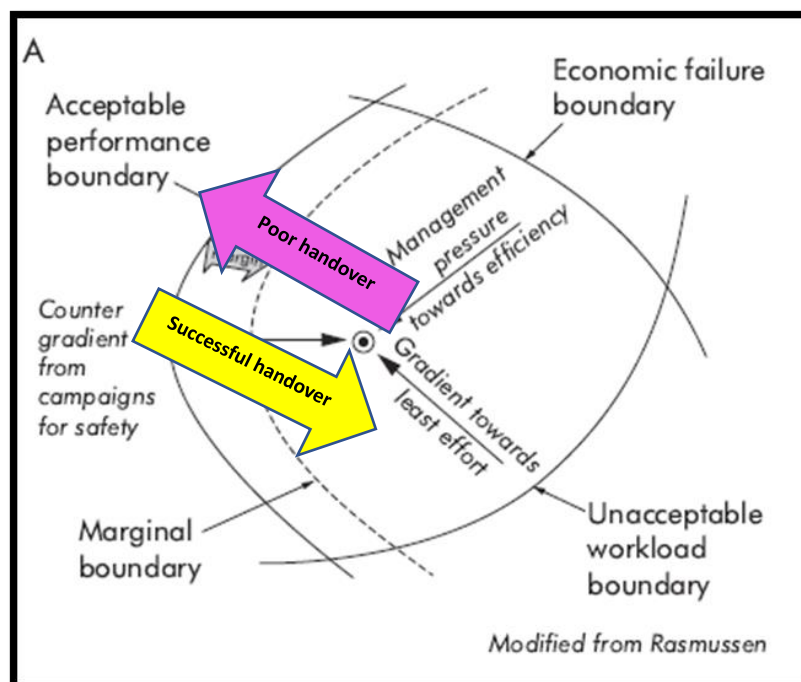
The quality of practice is drifting unacceptably. This has been described as the 'normalization of deviance in healthcare delivery' where professionals' practice over time drifts away from acceptable standards and procedures due to socialization, rationalization and institutionalization (Banja, 2010). 'Marginal creep' in this study is the cessation, over time, of working in tandem and documenting nursing assessments. This has become the norm. Another example was the lack of knowledge about the handover procedure itself. Ergo, new nurses are socialized into an increasingly efficiency-driven work culture that has pulled away from professional and legal standards. Rasmussen's model was criticized for insufficient consideration of socio-political dimensions that shape norms for behavior (Le Coze, 2015). An investigation into the socio-professional changes in this ED over time could shed light on this.

ED nurses at the sharp end, perceived the hospital leadership's priorities, at the blunt end, to be fast flow of patients and maintaining budgets. These are Rasmussen's boundaries of economic failure and workload that are unmovable and press personnel in the workplace to make decisions

and tradeoffs in their work (Rasmussen, 1997). In Figure 7 below, the pink arrow represents the blunt end setting the boundary of economic failure, and an increasing patient population putting pressure on the nurses to work faster. The result is handovers that are inadequate and cross the boundary of acceptable performance. The ED nurses gave examples of insufficient rest and nutrition on busy shifts, and feeling the hospital capacity pressures ‘in their guts’. One ward nurse said inadequate handovers and their consequences were the worst thing about the job. In their defence, the nurses strongly voiced dissatisfaction and frustration with the tradeoffs they felt forced to make.

Figure 7: Handover performance in Rasmussen’s Dynamic Safety Model: Factors from Results

Factors influencing poor handovers: Quality of handovers uncontrolled, no mutual routines or protocol for handovers, workload and efficiency overwhelming, nurses don’t know patients handed over, handover description inaccurate causing safety risks, duplication of work, re-planning on wards, orders incomplete/ inadequate, mistrust develops



Factors influencing successful handovers: Quality of handover prioritized & visible; realistic handover procedure developed & implemented, manageable efficiency, professional communication, reliable description of patients provided, nurses know patients, nursing assessment done, patient cared for, collaborate on placement and timing of handover, double-checking of orders, plans, and up-to-date patient status/ heads-up provided

Nurses on both ends exercised ‘degrees of freedom’ of control over their work. In the ED, they handed over patients for other nurses who were occupied with critically sick patients, sometimes ‘sweetened up’ the patients out of misplaced sympathy or efforts to avoid placement

discussions, and modified use of the institution's assessment documentation template. The ward nurses used their degrees of freedom in busy wards to question placement decisions from the ED and investigate capacity levels at neighbor wards. Cook & Rasmussen (2005) described 'gaming' situations that occur when personnel find themselves at maximum capacity, or 'solid', with no buffers. Personnel try to find ways to reduce workloads and performance demands. Nurses explained this as an attempt to protect their wards, patients, and colleagues from side-effects of over-capacity. This is understandable given the evidence that crowding is both dangerous for patients (Kunz et al., 2014) and causes staff to quit, as heard in one interview. A positive situation in this study, unlike others (Reid et al., 2005; Sutcliffe et al., 2004), was the apparent lack of hierarchy or power differences between departments, something positive to build on in the future. However, both sides deferred to the patient flow coordinator to make their case for patient admissions.

Ward nurses reported often being surprised by patients arriving in worse clinical, mental, functional-ability conditions than reported by ED nurses, as well as arriving with unreported infectious conditions. These situations exposed patients and staff to infections, caused more work re-organizing placements, and increased interdepartmental mistrust. While patients may occasionally worsen clinically during transport, this is hardly the case for more permanent conditions, or most patients. Sutcliffe et al (2004) found ward physicians unprepared by ED handovers for the seriousness of patients' conditions upon arrival, something they attributed to ED residents not wanting to seem ignorant, their lack of awareness of essential information, and poor communication practices. This was both risky for patients, and caused delays in treatment.

The philosopher Løgstrup (1905-1981) addressed a relevant phenomenon: immediacy of face-to-face interactions between human beings influencing our moral choices (Andersen & van Kooten Niekerk, 2007). By encountering 'the other' we by default should concern ourselves with them. Wouldn't it improve handover quality and interactions if the ED nurses must see and meet the patients they handover, and if the ED and Ward nurses could handover by seeing each other? Many publications looked at different modalities for handover, and several emphasized the benefits of face-to-face handovers (Arora, Johnson, Lovinger, Humphrey, & Meltzer, 2005; Drach-Zahavy & Hadid, 2015; Welsh et al., 2010). In today's world of audio-visual technology, maybe live video handovers could be a good solution? Sound-isolated telephone booths or designated handover areas could be used, with video transmissions where nurses on both ends see each other while handing over.

The investigated handover is the only interdepartmental handover. It is not primarily a nursing handover, but it is done by the nurses. This is unlike the majority of ED interdepartmental

handover publication findings where physicians hand over to other physicians (see Attachment 3, category 3B). Therefore, it is alarming that the dimension of nursing care is disappearing and often completely omitted from the handover, a point that the ward nurses miss, and the ED nurses are themselves frustrated over. They acknowledged not being able to perform to professional standards, and felt caught up in an environment calling for speedy work. This is an example of Rasmussen's Dynamic Safety Model (1997) where increasing workloads and efficiency demands press personnel in the workplace over the boundary of acceptable performance.

Unacceptable performances included lack of performed and documented nursing assessments in the ED, not knowing the patients being handed over, inadequate and incorrect handovers, and lacking a mutually acceptable structure for the handover. This was an example of the distance between the procedure for handovers, 'Work as Imagined', and the actual work done, (Hollnagel et al., 2015). Henderson's model for nursing care, if used as imagined in the ED, would help bridge the gap between expectations from the ward and performance in the ED, especially with its emphasis on holistic assessments (Henderson, 1998). One ED nurse suggested integrating simple nursing assessments into the established vital signs sheet, which sounds feasible.

The ward nurses needed to know the status of the patients and treatment plans which the physicians were responsible for, but missed getting the nursing dimension in the handover. Although surprising, several studies reported omissions in handovers suggesting a universal need to be prepared before handovers (Klim et al., 2013; Maughan, Lei, & Cydulka, 2011). Regarding the nursing assessment, this could be an ED professional culture, or local cultural norm that has developed. In some textbooks in emergency nursing, the functional, psychosocial and mental awareness dimensions are barely mentioned while body systems and diagnostics are in focus (Bemis, 2007; Crouch et al., 2009). Several studies demonstrated a philosophical, clinical and care difference between EDs and wards (Apker et al., 2007; Manias et al., 2014). EDs reacted to immediate care needs, stabilizing, and keeping patient flow moving, but wards wanted more information, and were proactively focused on quality of care and longer-term planning. Some studies implemented new intradepartmental ED nurse handovers, which emphasized physiology and medical treatment aspects (Kerr et al., 2016; R. Wilson, 2011). These publications demonstrate the dominance of the medical professional culture of the ED.

6.2 Successful handovers (see Figure 6)

Nurses on both sides agreed about circumstances and actions needed to deliver successful handovers (see Figures 6 & 7). The subthemes that emerged from both sides presented gaps to be bridged to ensure successful handovers. These themes invite a discussion about methods for cooperating and improving the handovers, to 'build a bridge', both day-to-day and longer-term processes, concepts related to resilience. Handover strategies based on resilience principles include: two-way face-to-face communication, written support tools, and content which captures intention (Wrae & Nyce, 2010). The ED nurses remarked on the need to use up-to-date notes, and nurses on both sides want content that is purposeful. Jeffcott and colleagues (2009) discussed application of three resilience principles to clinical handovers: 1) the ability to predict or have foresight about something bad happening; 2) the ability to cope or prevent something bad getting worse; 3) the ability to recover. As the results showed, the predictive element is often lacking in ED-ward handovers. This leaves the ward nurses to cope or recover after inadequate handovers which causes more work for them, generates mistrust towards the ED, creates potential errors or undetected situations with the patients, and inefficient time and resource management for the patients and wards. These concepts lie behind the research question of suggestions for improvement and form the basis for implications for practice. Handovers must be based on up-to-date information, presented in a mutually acceptable structure allowing for questions and verification from the wards so they can best prepare and meet the patients upon arrival. Friesen's review (2008) emphasized this aspect where handovers give professionals opportunities to re-assess and reduce risk for patients. It is clear from the results that an explicit norm for agreed-upon structure for handovers is overdue, something Rasmussen defined as necessary to enable monitoring of performance (Le Coze, 2015).

Rasmussen (1997) suggested countering marginal creep across the boundary of acceptable performance by making the boundary visible with awareness of the state. Perhaps this is done today through incident reports? These don't necessarily get back to the staff at large, or the staff involved. Rasmussen put his trust in awareness campaigns. That is a good start, but not nearly enough to truly get staff on both ends to know when they are on the acceptable or unacceptable sides of performance at work. Perhaps the staff need empowerment, encouragement and accept from management to take the time they need to perform according to professional and legal standards to increase the quality of handovers? One intradepartmental ED handover study concurred that implementing a standardized handover tool improved quality, with a slight increase in time used (Gopwani, Brown, Quinn, Dorosz, & Chamberlain, 2015). The time increase is well invested in reducing inefficiency on the receiving end. Another study demonstrated that introducing a tailor-made handover checklist increased quality of handovers and patient-related tasks for the next

physicians making it more efficient (Gillet, Ghuysen, Bonhomme, D'Orion, & Nyssen, 2015). Rasmussen also suggested empowering managers to follow up on service performance the same as economic performance (1997). Institutional buy-in for improving handover quality is an acknowledged precursor to improvement (Australian Commission on Safety and Quality in Healthcare, 2011). The ED nurses rationalized their need to be fast in the ED to avoid increased waiting times in the ED for seeing physicians and getting help. This is a valid point too, proving their considerations of risks involved in waiting for arriving patients.

ED routines for responsibility for handover should be discussed including physician representation. The ED nurses suggested that in some situations it made sense for the physicians to call up the handover, which is the norm in several published sites (Horwitz et al., 2009; Reid et al., 2005). Physicians would inevitably focus on their notes and findings, so the challenge again would be to include nursing care dimensions.

The ED environment has been found to negatively affect handover quality (Klim et al., 2013; Manser, Foster, Gisin, Jaekel, & Ummenhofer, 2010; Sutcliffe et al., 2004). Considering the busyness in the hospital, this point is challenging, but consideration should be given to finding and advertising appropriate times and places to handover without disruptions. The ED nurses told of noise and interruptions when trying to handover, a known negative factor in handover quality in EDs (Eggins et al., 2016). The timing of handovers will by necessity remain unpredictable, upon completion of admission screening, stabilization, and disposition decisions. Both ends of the handover recounted cooperative practices where nurses negotiated on transfer timing of patients depending on shifts. Good examples should be shared.

The nurses brought up the patient placement issue in a hospital at or over capacity. The patient flow coordinators, ED and ward charge nurses, and ED and ward floor nurses and ED physicians are involved in these decisions according to hospital procedure (see Attachment 13). There were examples of good and challenging placement situations so perhaps this procedure needs reinforcement.

Recalling the definitions of clinical handover, and the emphasis on responsibility and accountability, a fresh look at the purpose, structure and content of the ED-Ward handover is overdue. Gillet et al (2015) made the case for first understanding the actual work situations and goals of the handovers before standardizing. Principles of implementation also emphasize applying evidence-based practice while considering the specific context where a change is to be implemented (Rycroft-Malone, 2004). The ED-Ward clinicians are experts on their context and as the results revealed, they have suggestions for reliable handovers.

The ED procedure (Attachment 14) is overdue for a revision. The WHO (World Health Organisation, 2007) and Australian commission's (Pascoe et al., 2014) advice should be followed where structure and content are agreed upon. This would reduce the individual variation in handovers experienced by ward nurses. Other researchers have found large variation in handover quality prior to introducing structured handovers (Alvarado et al., 2006; Welsh et al., 2010). An improved handover procedure should be visible, practical, feasible and displayed on both ends of the handover located where handovers are done.

The ED nurses liked to know their patients and be prepared for handover, or have foresight in resilience terms. This is in alignment with Australian principles of handover (Australian Commission on Safety and Quality in Healthcare, 2011). The ED nurses remembered a time when they worked in tandem enabling at least one nurse to know the patient at handover, another example of marginal drift over time. This issue is barely mentioned in publications, although nurses in one study emphasized how positive it was to receive handovers directly from the nurses who had cared for the patient (O'Connell et al., 2008). The nurses expressed a wish to have this work form today. If tandem ED nursing is to be reinstated, the work processes in the ED need to be investigated to see how this could be managed with increasing workloads with limited resources.

An interprofessional practice of double-checking orders and plans before handing was appreciated by the ward nurses. Although this is not consistently today's practice, it makes sense to double-check what has been done and planned for the patient before calling up the handover, as an ED nurse suggested. This is also a principle of preparing for handovers: "*Prior to handover the clinicians should obtain all relevant documents*" (Australian Commission on Safety and Quality in Healthcare, 2011, p. 47). ED nurses remarked the need for accessible up-to-date information contributing to successful handovers. Obtaining them is one step, ensuring their quality and reliability is another. The ward nurses missed this aspect in the handovers, especially the surgical nurses who reported having difficulties in reaching surgeons on call due to conflicting operation and ED work. These findings echo another study where clinicians on units were less satisfied with handovers than ED clinicians due to less proximity to specialists (Benham-Hutchins & Effken, 2010). This is part of both physicians and nurses in the ED transferring "*professional responsibility and accountability for some or all aspects of care for a patient...*" (British Medical Association, 2004, p. 7).

The wards can also prepare by having up-to-date overviews of the ward capacity for admissions from ED. Patients get admitted around the clock every day of the week so it would help the wards prepare for admissions by having regularly updated status of their capacity. I argue it is the ward's responsibility to decide where the patient should be placed, and not a question for the ED nurses to

answer: *'we only have room in the corridor...'*. If the ED nurses assess and know their patients they can give a reliable description, but the wards need to place the patients. These differences in priorities and concerns were found in research on ED-Ward physician handover revealed that the ED doctors felt the wards didn't appreciate their work or time pressures (Reid et al., 2005). Each end needs to focus on what it does best. This would increase handover focus on the patients' needs.

Honesty was an important success factor to handovers. Reported strategies of 'sweetening up' patients, 'gaming' on wards to check other wards capacities, and triangulating discussions with coordinators don't necessarily help patients get quality treatment, and may further serve to undermine interdepartmental trust. However, the wards had a point in trying to ensure correct placement of patients on wards. This calls for constant emphasis on correct usage of the placement procedures (Attachment 13).

Professional behavior of being polite and collegial on both sides was called for. Lack of professionalism was a factor found to contribute to critical episodes in patient handovers in Denmark (Siemsen et al., 2012). In their study, the safety culture of the hospital was found to be immature with work done in silos, independent of consideration for others. In an opinion article, rudeness and hostility were acknowledged as disruptive and impeding clinical performance in handovers (Al-Rais, 2017).

Nursing assessments must be revitalized, as the nurses reported and the first step of the nursing process dictates (Stubberud et al., 2016). The format should be chosen by an interdepartmental workgroup, but the Henderson template in the hospital's existing procedures (see Attachment 4) would include the areas ward nurses reported missing: assessment of functional / mental / psychosocial status. Following Rasmussen's advice to counter the marginal creep of performance, this practice should be monitored and visible (1997). A feasible method of assessing and documenting findings in the ED, which is adequate for the wards, must be implemented. This should gradually improve interdepartmental trust. Documentation in patients' journals must be taken more seriously. Referring to resilience principles, nurses must prepare to handover specific concerns or issues to the wards so they are prepared to meet the patients' needs, making the handovers truly responsible and accountable.

There must be acceptance for questions and verification of content and plans during the handover. This would contribute to resilient proactive behavior and conform with an acknowledged quality criteria in handovers (Friesen et al., 2008). Although the study ED nurses didn't appreciate getting interrupted with questions, questions are necessary to create a shared understanding of the patient's situation, and enable the receiving end to accept professional responsibility for the patient

(Manser, Foster, Gisin, et al., 2010). Several examples were given by the nurses of one-way communication from the ED nurses, a theme also found when assessing ED physician-hospitalist handovers (Apker et al., 2007). A study with audio recordings of interdepartmental handovers showed the need for collaborative aspects in standardizing handovers, and incorporation of patients' social and psychological needs early in the pathways (Sujan et al., 2015).

The repeated need for systematic nursing structures in handovers will demand effective education of staff. This step is often underestimated in educational interventions and would ensure that all nurses can use and apply the agreed-upon procedure, and understand why it is important. This should be part of the induction programs for new nurses, as well as training for employed nurses to establish a new social norm at the wards.

The Australian Commission on Safety and Quality in Healthcare published an implementation toolkit for clinical handover improvement (2011). A designated project group should be dedicated to this work, and contextualize the toolkit to the study site hospital, and the new procedure. The quality of handovers needs to be monitored and feedback given. This would comply with Rasmussen's suggestions for strengthening the boundary of acceptable performance (1997).

Implications for Practice

Below are implications for improving the clinical handover practice between the ED and wards, based on evidence from this thesis and international standards (Australian Commission on Safety and Quality in Healthcare, 2010, 2011; British Medical Association, 2004; World Health Organisation, 2007).

Table 6: Suggestions for Improvement of interdepartmental ED – ward clinical handovers

1. Gain interdepartmental leadership buy-in for importance of handover improvement initiative
2. Establish interdepartmental project work group (Quality Improvement, Clinical Educators, Charge & Floor nurses (champions), leads: nursing and doctors) to reach consensus on mutually acceptable routines for both ends of handover
a. Create mutually agreed upon clinical handover procedure template – check publications, and make local adjustments: content/structure/team-work
i. Be prepared for the handover on both ends
1. ED: double-check patients' status & nursing/physician orders
2. Wards: be prepared to receive patients 24/7 (up-to-date patient placement overviews) with pro-active attitude.
ii. Be honest and professional
iii. Resuscitate Nursing Assessments
iv. Document nursing admission assessments
b. Establish quiet, dedicated handover area with video-link
c. Allow two-way communication: verifications and double-check

d. Mind the Gap: Give wards a heads-up on patients prioritized needs
3. Run effective education sessions: address knowledge, skills, attitudes/importance; employ active learning principles in simulation (scenario-based)
4. Facilitate the improvement process: collaborate with Quality Improvement personnel to monitor agreed upon indicators of quality in handovers; give feedback to wards – make it visible. Celebrate good examples, improve poor areas.

Suggestions for Further Research

Action research could be done to complement the implementation process. Jeffcott et al. (2009) suggested action research for discovering handover gaps and “...*designing sustainable interventions for improved patient safety*” (p. 259). Action research involves actively working with study subjects in collaborating to define the problems, and design methods and analysis to improve the study area (Polit & Beck, 2012).

Action research on procedure design, revision and implementation can be done by recording or taking field notes on the consensus process of establishing routines and procedures. Several studies developed both tailor-made (M. Farhan, Brown, Woloshynowych, & Vincent, 2012; R. Wilson, 2011), and modified ISBAR templates for improving handover practice (Blyth, Bost, & Shiels, 2016; Marmor & Li, 2017b). Research on the degree of implementation fidelity, the degree of success in achieving a change in a workplace according to plans, could be done (Augustsson, von Thiele Schwarz, Stenfors-Hayes, & Hasson, 2014). It would be interesting to study and explore variations in implementation between wards and clinical areas.

One could research the educational design and training in using the template (Jeffcott, Ibrahim, et al., 2009). The Institute of Medicine strongly encouraged establishing interdisciplinary training programs like simulation to improve handover practice (2000, p. 14). Simulation training based on Kolb’s experiential learning principles would provide nurses practice opportunities delivering handovers in a safe environment based on realistic handover situations (Stocker, Burmester, & Allen, 2014). Guidelines for reporting simulation research were recently released and should be considered (Cheng et al., 2016).

One could do pre-and post-satisfaction surveys of handovers, with careful design of questions to match site experiences and international guidelines. Questions may include: the reliability of information handed over compared to the patient’s arrival status; number of nurses who know the patients handed over; numbers of patients arriving with documentation fulfilling legal and professional standards; amount of adequate nursing care information; compliance to procedure. Manser and Foster (2011) suggested observational studies based on behavioral standards for handover. This was successfully done in an english ED to study the impact of implementation of a tool for handover (Maise Farhan, Brown, Vincent, & Woloshynowych, 2012; M. Farhan et al., 2012).

Published studies have developed rating tools for handover quality and could be considered (Apker et al., 2010; Manser, Foster, & Gisin, 2010; O'Connell et al., 2013). One could audio-record the telephone handovers to hear if a change in practice is occurring like Gillet and colleagues did (2015), or audit incident reports before and after interventions.

6.3 Design considerations

In retrospect, exclusion criteria could have been better designed. One nurse was a trainee who seldom took the handover telephones from the ED, but undoubtedly had a positive learning experience from participating. The ED nurses who also worked as patient flow coordinators in the evening brought interesting insights to the interview, but also took some discussions into the organizational perspective of the hospital at capacity. Still, this was relevant for them to describe situations affecting handovers. The nurses were interviewed once, and encouraged to contact the researchers with additional reflections, but none did. A follow-up interview may have provided additional reflections from participants and their colleagues. Given work duty pressures on participation, the researchers would need to follow-up participants in a field-work manner.

Regrettably I did not gather detailed demographic data on all the participants and this should have been done to describe the sample, increase transparency and give readers ideas about transferability. I learned after some interviews that many wards had dedicated nurses for receiving handovers during the day, who also met regularly due to administrative positions. It might have been useful to request a focus group with only these nurses. The comments on collaboration between nurses and doctors, and quality of orders received by the wards could have been followed up with a focus group interview with ED physicians, keeping with emergent qualitative design. However, it might be complex to incorporate a third dimension of life-world experiences and draw conclusions.

When preliminary findings were presented at a master's seminar, and discussed with clinically active nurses recently, the response was that the handover situations have not improved, so the results should be useful to the study site.

7.0 Conclusion

The results of this thesis provide evidence for improving interdepartmental handovers. There is a gap in quality with consequences. Lack of nursing care dimensions, structure, and effects of busyness create situations where the handovers are inefficient and inadequate to meet the needs of the patients' transfer to wards. The patients, nurses, departments and organization will benefit from a long-term improvement project. Nurses on both ends have knowledge about what it takes to improve their practice but will need an organizationally grounded commitment to design and facilitation of an implementation process to success. The leaders, educators and clinicians involved must together define achievable success indicators, and use all means to ensure successful improvements. The patients depend on interprofessional trust, quality and reliable clinical handovers of professional responsibility.

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9.0 Attachments

9.1 Attachment 1: Study Protocol with ED

Forskningsprotokoll

Pasientoverleveringsprosessen/rapportering mellom sykepleiere fra et akuttmottak til voksenavdelinger.

Mastergradsprosjekt av Sigrun Anna Qvindesland SUS/SAFER, veileder Britt Sætre Hansen SUS/UiS, i samarbeid med Avdeling NN: *Leder 1 og Leder 2*

Tittel: En eksplorativ studie for å beskrive pasientoverleveringsprosessen mellom sykepleiere fra et akuttmottak til voksenavdelinger, **i to deler**.

Del 1: Analysere avviksmeldinger mellom sengepost og akuttmottak om pasientoverleveringer/rapportering – tematisering – hva klages det på?

Del 2: Fokusgruppeintervju med hhv. sykepleiere på post, og sykepleiere i akuttmottak for å få fram erfaringer av pasientoverleveringsprosessen og faktorer som påvirker pasientoverleveringer: Hva er det som karakteriserer en god og dårlig pasientoverlevering/rapportering, og hvorfor?

Bakgrunn:

I akuttmottaket ved *Sykehus NN* handler overvekten av synergimeldingene i 2013 om misnøye med kvaliteten på rapporteringer når pasienten overføres til avdeling. Dette medfører risiko for at opplysningene som gis er mangelfulle eller feil og kan få konsekvenser for pasientene, og mottakende avdelingene. Nyere forskning (DeMeester et al 2013; Manning 2006; Wallin & Thor 2008; Van Bogaert 2013) viser at kvaliteten på den daglige tverrfaglige kommunikasjonen påvirker pasientsikkerheten. Det er økende oppmerksomhet hos WHO (2007), og nasjonale helseinstanser (BMA Junior Doctors Committee. 2005; Australian Commission on Safety and Quality in Health Care 2009; USA) på å forbedre kvaliteten av pasientoverleveringer mellom avdelinger (Apker, Mallak, Gibson 2007, Beach, Croskerry, Shapiro 2003, Cohen, Hilligoss 2010, Hilligoss 2014, Hilligoss, Cohen 2012; Horwitz et al 2009).

Problemstilling:

1. Hva klages det på i avviksmeldingene mellom sengepostene og akuttmottaket? Tematisering.
2. Hvordan erfares pasientoverleveringsprosesser – eksemplifisert?
3. Hva er det som karakteriserer en god og dårlig pasientoverlevering – Hvorfor?

Studiets Mål: Å lære om sykepleiernes forventninger, erfaringer, og opplevelser av pasientrapporteringen, både den muntlige pasientrapporteringen som skjer via telefon, og den prosedyrebasert skriftlig rapport i DIPS, når voksne pasienter flytter fra akuttmottak til sengepost.

Design: En kvalitativ studie i to deler: tematisering av avviksmeldinger ang. pasientoverleveringer, og fokusgruppeintervjuer.

Populasjon og utvalg: Studien består av to deler som går sekvensielt:

Del 1: Aktuelle synegitekster analyseres og tematiseres utfra pasientsikkerhetsteori (Thomas, Schultz, Hannaford, Runciman 2013, Hollnagel 1993). Akuttmottaket i samarbeid med masters student skal bli enige om hvor mange avvik (tidsrom) skal sees på for å få et godt oversikt som omfatter typiske avvik, f.eks. det kan dreie seg om årene 2011-2013. Mastersstudenten ønsker å ha en samarbeidspartner fra akuttmottaket til gransking og tematisering av avvikene – utnevnes av mottaket. Dette kan dreie seg om 3-5 dagers arbeid.

Tilgang til synergidatabasen og arbeidsplass utdeles av akuttmottaket.

Del 2: Fokusgruppeintervju.

Fokusgruppeintervjuene blir tatt av SAQ og BSH, tatt opp på lydbånd, transkribert og analysert. Informert samtykke blir innhentet hos deltagerne. Avdelingsledelsen kan velge ut deltagerne, men det er hensiktsmessig å ha en spredning av ansiennitet, og spesialsykepleiere og offentlig godkjente sykepleiere, samt noen vaktledere for å belyse tema. Avdelingsledelsen i samarbeid med SAQ og BSH finner rom, datoer og tider som er hensiktsmessige for avdelingen. For å belyse om intervjudeltagerne er representative, blir alder og års erfaring som sykepleier/sykepleier i mottaket innhentet.

A. Denne delen består av 2 fokusgruppeintervju med et strategisk/tilfeldig utvalg (ca 8-12 stk totalt) vaktledere/sykepleiere med videreutdanning/sykepleiere uten videreutdanning, lang og kort erfaring) i akuttmottak.

B. Intervju med strategisk utvalg av sykepleiere på de mest aktuelle kirurgiske og medisinske sengeposter (2 x 8-12 stk totalt). Målet er å få belyst deres erfaring med rapporteringer fra akuttmott

Datainnsamling

Del 1: Det blir ikke skrevet ned noen identifiserbar data om hverken pasienter eller helsepersonell fra avviksdatabasene. Et midlertidig register med dato og enkle, anonymiserte, relevante sitater blir laget i samarbeid med avdelingen, og data blir lagret på passordbeskyttet arbeidspc hos SAQ. Alt data blir slettet når funn foreligger.

Del 2: Denne delen består av fokusgruppeintervju av sykepleiere i akuttmottak. Vi ønsker å samle data om hvordan denne kommunikasjonen er nå, hvordan den oppfattes av den enkelte, hvilke faktorer som påvirker rapporteringen positivt og hvilke faktorer de mener som forhindrer den.

Intervju med strategisk utvalg av sykepleiere på de mest aktuelle kirurgiske og medisinske sengeposter. Målet er å få ny kunnskap om sykepleiernes daglige erfaringer med rapporteringer fra akuttmottak og deres forhold til å melde i synergi.

De som samtykker til å delta vil skrive under et informert samtykke. Intervjuene lagres på lydfil som oppbevares på passord beskyttet arbeids pc hos mastergradsstudenten. Disse transkriberes anonymt og lydfilene slettes.

Dataanalyse: Kvalitative data transkriberes, anonymiseres og analyseres for tema og subtema.

Tidsplan: Oppstart datainnsamling vår 2014, avsluttes innen mars 2016.

Budsjett: Lønn dekkes av de enkelte prosjektmedarbeideres arbeidsgivere. Ellers påregnes det ingen utgifter.

Prosjektorganisasjon:

Britt Sætre Hansen

professor, UIS/HBV/ SUS

Etikk:

Søknad med prosjektbeskrivelse sendes til personvernombudet ved SUS, og REK for å høre om det er fremleggingspliktig. Ingen pasient eller helsepersonelldata blir lagret på noe tidspunkt i datainnsamling, analyse, eller publikasjoner. Informert samtykke blir innhentet hos alle intervjudeltagerne. Tillatelse hos klinikkdirektørene er allerede innhentet, og innhentes av avdelingsledelse akuttmottaket.

9.2 Attachment 2: Categorization and Thematization of relevant articles

#	Date	Database	Limits	Search terms	# articles found	# articles used
1	07.04.2017	CINAHL (Cinahl headings)	Peer - Reviewed, English, 2006 - 2017	«clinical handover» AND «emergency department» AND «nursing»	0	
2	07.04.2017	CINAHL (Cinahl headings)	Peer - Reviewed, English, 2006 - 2017	“handover OR hand off OR handoff” AND “emergency department” AND “nursing”	0	
3	07.04.2017	CINAHL (Cinahl headings)	Peer - Reviewed, English, 2006 - 2017	“handoff” AND “emergency department” AND “nursing”	2	0
4	07.04.2017	CINAHL (Cinahl headings)	Peer - Reviewed, English, 2006 – 2017	“clinical handover” AND “emergency department”	6	2 (Kerr et al., 2013; R. Wilson, 2011)
5	07.04.2017	CINAHL (Cinahl headings)	Peer - Reviewed, English, 2006 - 2017	“interdepartmental handoff” AND “emergency department” AND “nursing”	0	
6	07.04.17	MEDLINE (MeSH heading)	English, 2006-2017	“clinical handover” AND “emergency department” AND “nursing”	0	
7	07.04.17	MEDLINE (MeSH heading)	English, 2006-2017, Academic Journals	“clinical handover” OR TX “emergency department” OR TX “nursing”	20	0
8	07.04.17	MEDLINE (MeSH heading)	English, 2006-2017, Academic Journals	“clinical handover” AND “emergency department”	69	15 (-2 from search # 4) =13
(Blyth et al., 2016; Calder et al., 2012; Calleja, Aitken, & Cooke, 2016; Maisse Farhan et al., 2012; M. Farhan et al., 2012; Fernando, Adshead, Dev, & Fernando, 2013; Gillet et al., 2015; ledema et al., 2012; Kerr et al., 2013; Marmor & Li, 2017a; Sujan et al., 2015; Talbot & Bleetman, 2007; Zakrisson et al., 2016)						
9	07.04.17	SweMed+	Peer- Reviewed English, Swedish, Norwegian 2006-2017	“clinical handover” AND “nursing” AND “emergency department” Without “clinical”	0 0	

				AND Without "nursing"	0	
10	07.04.17	Oria	English, 2006-2017, Peer-Reviewed	"clinical handover" AND "emergency department" AND "nursing"	178	15-2 from Search #2= 13
(Calleja, Aitken, & Cooke, 2011; Drach-Zahavy & Hadid, 2015; Eggins & Slade, 2012; Iedema et al., 2012; Jeffcott, Evans, et al., 2009; Kaye et al., 2015; Kerr et al., 2013; Klim et al., 2013; S.-H. Lee, P. H. Phan, T. Dorman, S. J. Weaver, & P. J. Pronovost, 2016; Manser & Foster, 2011; Munroe, Curtis, Murphy, Strachan, & Buckley, 2015; O'Connell et al., 2008; Pascoe et al., 2014; Sarvestani et al., 2015; Wood, Crouch, Rowland, & Pope, 2015)						
11	2014 – 2017	Combination Search 1-10 reference lists, and snowball inclusion from results	English, Peer-Reviewed, Clinical handover, in-hospital,	• TOTAL	<u>65</u>	
				• Government Directives:	4	
				• Systematic Reviews:	7	
				• Empiric studies on handovers	52	22
				• Excluding high-acuity wards, ambulance-ED, intradepartmental physician handovers, multi-professional ED shift handovers	-30	

9.3 Attachment 3: Categorization and Thematization of relevant articles

	THEME -Syst. Review/ Govt Dir/ Theory/ Empirical: Setting (ED/Non ED, Mix w/ED); Profession (Dr- Dr, N-N, Mix)	(Reference) <i>Aim</i>	Study Design Or Type of publication	1. Setting 2. Professions 3. Handover Type 4. Subject, circumstance	Conclusions
1.	1A: ED – ED Nurse – Nurse	(Kerr et al., 2013) <i>To explore patients' perspectives of bedside handover by nurses in ED</i>	Semi-structured interviews N=30, qualitative, descriptive study	1. ED - ED 2. Nurse – Nurse (from patients perspective) 3. Intradepartmental 4. Verbal, shift	Two main themes: Patients express importance at maintaining confidentiality/privacy, and patients value bedside handover – they can clarify and contribute, and are reassured about competence of nurses and continuum of care.
2.	1A: ED – ED Nurse – Nurse	(Kerr et al., 2016) <i>To evaluate the implementation of a nursing handover model – effect on completion of nursing care and documentation.</i>	Pre-and post-implementation study: survey and audit.	1. ED – ED 2. Nurse – Nurse 3. Intradepartmental 4. Written & Verbal, shift	Framework was developed to address deficits in nursing care practice in ED: viewing the patients charts for meds, vital signs, fluid balance; handover at bedside. Handover Guide published. NB – audit of “9 ED nursing activities”. Very medical. 4 statistically sig. improvements: handover conducted bedside; patients could listen/contribute; Nurse has been provided with adequate info about all patients in ED; less reports of missing vital signs. Increase in all other nursing activities.
3.	1A: ED – ED Nurse – Nurse	(Klim et al., 2013) <i>Explore ED nurses' perceptions of shift nursing handovers: current practices and essential components</i>	Mixed methods: Survey (N=63) and group interviews (N=41)	1. ED – ED 2. Nurse – Nurse 3. Intradepartmental 4. Verbal, shift	Identified <u>gaps in handover</u> : omission of important information about meds, vital signs, nursing care needs. Interviews: <u>5 essential features</u> : systematic approach, treatment, appropriate environment, reference to charts, efficient communication. Essential info: patient details, presenting problem, future care/disposition plan, treatment, nursing observations.
4.	1A: ED – ED Nurse – Nurse	(R. Wilson, 2011) <i>To audit implementation of a standardized handover process in ED</i>	Mixed methods: Pre and post implementation audit (N=161 handovers); Survey; Feedback about meetings; Audit of critical incidents; public complaints registration; and opinion survey	1. ED – ED 2. Nurse – Nurse 3. Intradepartmental 4. Verbal, individual patients at shift	1. Audit: Observed handovers to see if met new handover guidelines – mostly compliance – but still some deviations in observations, treatment and medical recordings. Very medical. 2. Staff survey: Like new handover process; believe benefits patients, enhances learning, good length 3. General decline in complaints; 4. General decline in clinical incidents
5.	1B: ED – ED Dr - Dr	(Beach, Croskerry, & Shapiro, 2003) <i>Present a case study where</i>	Case study analysis	1. One hospital – ED 2. Physicians 3. Intradepartmental handovers 4. Verbal on shift	One patient arrives ED, seen by 30 doctors, multiple transitions, with fixation failure to diagnose medical illness – assumed a psychiatric illness when in fact

		<i>multiple ED transitions perpetuated failure, demonstrate need for improved handovers</i>			myocardial infarction: <i>psych-out error</i> (form of posterior probability error) Proposed more education to staff on hazards re transitions – opportunity to correct; study transitions; foster supportive culture for joint accountability through training, recognize biases, implement Info Technology to support awareness, alarm when results available.
6.	1B: ED – ED Dr – Dr	(Blyth et al., 2016) <i>Evaluate impact of medical education session on new handover format (SBARM) between doctors in ED</i>	Pre-Post intervention design, Observational study (24 pre/24 post) and Individual interviews.	1. Hospital ED 2. Physician – physician 3. Intradepartmental shift handovers 4. Verbal handover	(Re)introduced SBAR with SBARM M for medication errors and delays in meds in ED, 1 hour information teaching. Many used SBAR already – but more emphasis on the M post education. Any new initiatives should also include senior physicians – they were not charged with supervising handovers – they are agents in the system. Time constraints in ED affect introducing changes into practice.
7.	1B: ED – ED Dr – Dr	(Cheung et al., 2010) <i>“Provide up-to-date evidence and collective thinking about the process and safety of handoffs between physicians in the ED” s. 171</i>	Presents literature thematically, with ideas about research agenda	1. Hospital ED 2. Physician – Physician 3. Intradepartmental 4. All methods	Good overview, barriers, potentials, legal, risk, research agenda suggested.
8.	1B: ED – ED Dr – Dr	(Gibson, Ham, Apker, Mallak, & Johnson, 2010)	Editorial	N/A	Highlights challenges in communication between ED and wards – effective vs. detailed, many factors affect handover quality
9.	1B: ED – ED Dr – Dr	(Gillet et al., 2015) <i>“To improve communication during shift handover in an emergency department” p.192</i>	Observation & video recording of handovers, analysis, development of two cognitive tools, testing impact on handovers	1. ED – ED 2. Doctor – Doctor 3. Shift/ 4. Intradepartmental Verbal	Observations showed medical content, with less emphasis on treatment plan, evolution of condition and history under ½ content – these increased significantly after introducing ward-developed checklist. Physicians were deterred from clinical work by administrative tasks and interruptions. Handoff tool 1 used more – to help prepare for handoff; less time wasted by physicians when handover tools used, more time with patients (!) Standardized tools increased types of information transmitted, esp. treatment and disposition plans; became more proactive processes. Good handovers increased patient-related tasks for next physician, more efficient!
10.	1B: ED – ED Dr – Dr Shift	(Marmor & Li, 2017a) <i>To evaluate implementation of</i>	Mixed design (audit and survey) of implementation of standardized,	1. ED – ED 2. Doctor – Doctor 3. Intradepartmental 4. Verbal	Bedside handover improved patient involvement, communication and non-significant trend to improved patient safety; However,

		<i>standardized bedside handoff between physicians in ED</i>	bedside handover process using ISBAR, Audit of process and survey of physicians before and after.		preference for centralized handover with ISBAR remained (non-bedside). Barrier could be staff are time-poor, need to get staff buy-in for change. Suggest adequate staffing, and small, gradual improvements with continual auditing of outcomes.
11.	1B: ED – ED Dr – Dr Individual pt.	(Maughan et al., 2011) <i>Identify ED physician handoff practices with observational study, and describe handoff communication errors</i>	Observational study, handoff form designed, errors categorized	1. ED-ED 2. Doctor – Doctor 3. Intradepartmental 4. Verbal/ Individual patient	Errors in examination or test results (13% of handovers) and omissions (45% of time) of clinical pertinence occurred during ED physician handovers. Use of written/electronic support reduced omissions. Longer ED stays yielded more test omissions.
12.	1B: ED – ED Dr – Dr Shift	(Gopwani et al., 2015) <i>Test hypothesis that implementation of standardized handover tool would improve quality</i>	Observational study of handovers, then design and implementation of standardized handover tool: SOUND (Synthesis, Obj. data, Upcoming tasks, Nursing, Double-check)	1. ED – ED 2. Doctor – Doctor 3. Intradepartmental 4. Verbal	Improved completeness of handovers in ED setting. Slight increase in time used.
13.	1C: ED – ED Multiprofessional	(Fernando et al., 2013) <i>Implementation of multiprofessionals handover tool (MPH) in ED</i>	Questionnaire before and after implementation of a multiprofessionals handover tool in ED, questionnaires, to determine effectiveness and usefulness	1. Hospital ED 2. Multiprofessional 3. Intradepartmental 4. Verbal, Shift-Shift	Staff found new tool (MPH) useful, provided enough info about patient care, and effective, improves operational processes in the ED.
14.	1C: ED – ED Multiprofessional Shift	(M. Farhan et al., 2012) <i>To develop a new handover tool for multiprofessionals handover in ED</i>	Literature review, semi-structured interviews and observations of handovers	1. ED-ED 2. Multiprofessional 3. Intradepartmental 4. Verbal / Shift	Developed a simple tool for shift handover including clinical, operational information to achieve efficiency and organized handover. Used mnemonic ABCDE (areas/allocation - # patients; Beds, bugs, breaches; Colleagues/Consultants (staffing); Deaths, Disasters, Deserters; Equipment/External Events)
15.	1C: ED – ED Multiprofessional Shift	(Maise Farhan et al., 2012) <i>To study impact of implementation of handover tool in ED</i>	Prospective observation of handovers, before and after implementation of handover tool	1. ED-ED 2. Multiprofessional 3. Intradepartmental 4. Verbal / Shift	Successful implementation of tool, better organization of shift, more awareness of patient safety issues – can aid preparing for events in the next shift.
16.	2: ED – ICU Doctor – Doctor	(Dunn, Gwinnutt, & Gray, 2007) <i>To present scenarios involving critically ill patients and discuss important issues about transfer</i>	Conceptual article – describes important factors and questions involved in safe patient transfer prehospital – ED – critical care – scenarios and discussion points	1. ED-ICU 2. Doctor – Doctor 3. Interdepartmental 4. All	Discussion article about important factors in transport, stabilization, of critically ill patients. Key factors: Patient knowledge, transfer staff qualified and ready, equipment suitable and ready, well organized, receiving unit ready, and informed of ETA, needs upon arrival etc.

17.	2: ED – ICU Mix – Mix	(Zakrisson et al., 2016) <i>“To investigate the causes and frequency of information discrepancies with handover and explore solutions for improving information transfer” p. 929</i>	Mixed methods: Chart audits, Focus group interviews (ED/Nurses) and individual interviews of trauma team leaders	1. ED – ICU 2. Mix – Mix 3. Interdepartmental 4. Written & Verbal	¼ patients had missed injuries, information discrepancies in ½ patients (unknown med. History – treatment changes needed); Nurses more than doctors perceived interdisciplinary stress and variable handovers. Suggest standardizing handovers, more human factor training for doctors, and nurse-driven safety cultures.
18.	2: ED – ICU Nurse – Nurse	(McFetridge, Gillespie, Goode, & Melby, 2007) <i>To explore the process of patient handover between nurses in ED – ICU</i>	Multi-method design with documentation review, ind/focus group interviews.	1. ED – ICU 2. Nurse – Nurse 3. Interdepartmental 4. Verbal	No structure or consistent approach to handovers, both groups lacked clarity as to when handover starts, though recognize the importance, they would benefit from a structured framework.
19.	2: ED – Ward ED – Post ED (Trauma chain)	(Calleja et al., 2016) <i>To understand: (1) staff perceptions of best practice for information transfer for multitrauma patients on discharge from the emergency department; (2) what information should be conveyed at transfer and (3) how information is transferred.</i>	Focus group interviews. 6 focus groups, 1 individual interview, N=28 (2 doctors, 26 nurses)	1. Prehospital – Hospital 2. Ambulance – ED 3. Interdepartmental 5. Paramedic – ED staff – Post-ED	Four major themes found: variability, continuity, putting together the pieces, and values/context. These affect the quality of information transferred. Staff proposed information content: pat id., current/proposed treatment, response to interventions, acuity, stability, info about property/family / psychosocial, police/social work; Best practice for info transfer: clear and concise information, pertinent communication, relevant & clear documentation that was continuous, communication with engagement from sender and receiver & standardized process meeting everyone’s needs.
20.	2: ED – Trauma wards, (attempt at Systematic Review)	(Calleja et al., 2011) <i>To review publications to identify best practice in information transfer from the ED for multi-trauma patients, conduits and barriers to information transfer in trauma care and related settings, interventions that can have impact on handover and beyond</i>	Mixed-method narrative review. Included studies if regarding issues that influence information transfer for patients in healthcare settings. Literature review	1. Hospital 2. ED – Trauma wards 3. Interdepartmental 6. All	No specific articles found on this theme. Expanded: Barriers to handover: communications issues with trauma team processes; lack of structure; lack of clarity; missing info, irrelevant info, inaccurate info; distractions and poorly documented care.
21.	3B: ED – Ward Dr – Dr	(Apker et al., 2010) <i>Develop and evaluate Handoff Communication Assessment tool</i>	Observation tool development & Qualitative Observational study 15 handovers	1. One Hospital (ED-ward) 2. ED Dr– Inhosp. Dr 3. Interdepartmental 4. Verbal: face-to-face; Individual patients, when admitted	Obs. tool: 11 content + 11 language form categories, good interrater reliability (K=0.71) for content/ language form: (K=0.84) ED – Hosp handover is mostly info. giving 90,7%, by ED (67%) drs. content mostly pat. presentation; only 8,8% info-

					seeking, and 0,4% information-verifying...handover not reflecting possibility for Q&A.
22.	3B: ED – Ward Dr – Dr	(Apker et al., 2007) <i>Identify perceptions of ED and Inhosp doctors re: handover when patients admitted.</i>	Qualitative Individual interviews 12 doctors Thematic analysis	1. One hospital (ED-ward) 2. Dr – Dr 3. Interdept. 4. Verbal: telephone / Individual patients,	(1) “Gray Zone” with comm. barriers: information ambiguity: (a) uncertainty of diagnosis / lack of information (b) lack of clarity about disposition (joint decision) / conflicting needs for information (difference in philosophical orientation to medicine: immediate care vs long-term approach (2) ED boarding: (a) should move to ward, but waiting in ED – who is responsible? Risk to patient safety for “true” and boarding ED (b) boarding ED patients’ ED drs leave – new drs come – more handovers waiting for Inhosp dr (c) pts may worsen while boarding
23.	3B: ED – Ward Dr – Dr EXCLUDED – ELECTRONIC SYSTEM CONTEXTUAL	(Gonzalo et al., 2014) <i>Evaluate impact of electronic handoff tool for residents to use in transfer from ED to medical wards</i>	Mixed methods: Surveys, adverse event audit,	1. ED – Ward 2. Dr – Dr 3. Interdepartmental 4. Electronic	User satisfaction with eSignout, no change in adverse events, compared to previous verbal handover method – participants found this more efficient. Conclude that hybrid model should continue with verbal and electronic platform to help standardize handover.
24.	3B: ED – Ward Dr – Dr	(Hilligoss, 2014) <i>Analyze the way doctors make sense of handover interactions.</i>	Ethnographic study: two years including semi-structured interviews, observations, recorded telephone handovers.	1. ED – Ward 2. Dr – Dr 3. Interdepartmental 4. Verbal, individual patients	4 metaphors used by doctors: sales, sports & games, packaging, teamwork. Underlying organizational and social structures. Handovers as: persuasion, competition, expectation matching, collaboration.
25.	3B: ED – Ward Dr – Dr	(Horwitz et al., 2009) <i>Identify, describe and categorize adverse events in ED to ward handovers</i>	Surveys of physicians on both ends of handover from ED to wards	1. ED – Ward 2. Dr – Dr 3. Interdepartmental 4. Verbal, individual patients	29% of respondents reported their patient had experienced adverse/near misses after ED – ward transfer: errors in diagnosis, treatment, disposition, ... failures: inaccurate or incomplete info, crowding, cultural / prof. conflicts, hard to access key info, boarding in ED, ambiguous responsibility, nonlinear flow; differences in expectations
26.	3B: ED – Ward Dr – Dr	(Reid et al., 2005) <i>To develop handover standard from ED to Ward doctors, audit adherence, identify risk areas, recommend improvements and implement those</i>	Telephone questionnaire to audit standard adherence before and after implementation	1. ED – Ward 2. Dr – Dr 3. Interdepartmental 4. Verbal, Individual	56% said “Yes” to having difficulties with referrals; factors: receiving individual as person, own knowledge of subject, lack of protocols for referrals, self-confidence (as doctor) time constraints; some specialties difficult to refer to, Inpatient specialties needed test results – caused delay. ED doctors younger and more inexperienced; personality clashes, ED doctors feel the wards don’t appreciate their work or time pressures.
27.	3C: ED – Ward Mix incl. N - N	(Benham-Hutchins & Effen, 2010)	“Explorative, Descriptive observational study to examine	1. One hospital 2. Multi-professional	Non-linear strategies with multiple methods used to handover to multiple providers. No standard patterns of number

		<i>Learn about how healthcare providers communicate and exchange patient clinical information during patient handovers between units in acute care settings.</i>	patterns, methods (verbal, paper, electronic) of communication used by healthcare providers from multiple professions to exchange clinical information during pt handoff." p 253	3. Interdepartmental and intradepartmental 4. Hybrid: Hybrid: Verbal & Written (paper/electronic); Individual patients	of handovers. 82% of ED providers and 54% unit providers satisfied. ED providers satisfied with communication with ED providers, but difficulties with inter-unit communication. ED providers work in proximity to each other – easier access. Drs on units have pts on several units – spread locations for chart access. Nurses on units more challenged communicating with drs on units (telephone/paging/writing notes). Most providers preferred verbal communication over paper/electronic. Providers don't understand eachothers, units – call and want to transfer pt immediately. Lack of confidence in electronic journals. Informal emergent communication networks do not reflect organizational chart – they emerge depending on needs of providers. Additional challenge with unsynchronized shift changes between multiprofessionals.
28.	4: ED – Prehospital Paramedic – ED staff	(Murray, Crouch, & Ainsworth-Smith, 2012) <i>Audit the accuracy of patient information transfer from prehospital to ED documentation</i>	Audit of 100 ED patients, comparison of documentation.	1. Prehospital – Inhospital ED 2. Paramedics – ED staff 3. Interdepartmental 4. Written	26% of ED records had information omittance or alteration after handover: medical history, timing of event, frequency of event, allergies, medications.
29.	4: ED – Prehospital – ED Paramedics – ED staff	(Talbot & Bleetman, 2007) <i>To evaluate current handover practice in two EDs, introduce modified MIST tool, evaluate retention of information by ED staff following tool use</i>	Two stage, prospective, observational study, and handover tool development	1. Prehospital – ED 2. Paramedic – ED staff 3. Interdepartmental 4. Verbal	Decline from 56,6% retention of handover info in ED, to 49,2% after using DeMIST. But small population. Stresses the short-term memory under stress with patient delivered, and fatigue?
30.	4: ED – Prehospital Paramedic – ED staff	(Iedema et al., 2012) <i>To evaluate paramedic-ED handovers, design improved protocol and test it</i>	3 stages: Video-Reflexive Ethnography, filmed real handovers, analyzed them, *Paramedics and ED clinicians developed new protocol together* designed new protocol and trial-ran it. (also pre-post survey)	1. Prehospital – ED 2. Paramedic – ED staff 3. Interdepartmental 4. Verbal	New Protocol: Identify patient; Mechanism/Med complaint, Injuries/Info; Signs, Treatment; Allergies, Medications, Background and Other was preferred protocol. Improvements: greater volume of information ordered well, fewer follow-up question, shorter handover time, fewer repetitions.
31.	4: ED – Prehospital Paramedic – ED staff	(Jenkin, Abelson-Mitchell, & Cooper, 2007)	Quantitative, descriptive, survey with questionnaire to paramedics and	1. Prehospital – Inhospital ED 2. Paramedics – ED doctors and nurses 3. Interdepartmental	ED staff need to appreciate how important it is to listen to handover, this reduces frustration. Ambulance must expect to repeat their handover.

		<i>To identify the current process of information transfer between ambulance staff and ED staff during patient handover</i>	ED nurses and doctors. Mostly closed questions, some qualitative questions.	4. Verbal	Two phase handovers should payout for critically ill patients. Suggest national handover guidelines and more instruction.
32.	4: ED - Prehospital-ED Prehospital – ED Paramedic – Clinicians	(Dean, 2012) <i>Report on a protocol to reduce misunderstandings between paramedics and clinicians</i>	Conceptual article / Analysis Reports on video analysis of ambulance – ED handovers –	1. Prehospital – Inhospital ED 2. Paramedics – ED staff 3. Interdepartmental 4. Verbal	Greater eye contact associated with shorter handovers. Paramedics had to repeat information in 67 % of handovers. Recommend ban on interruptions during handover and hands off – and maximize eye contact during handover. Hard to identify who was senior trauma team leader. After changes made – more structure to handovers, and shorter time of handovers, decrease in repetition and more eye contact
33.	4: ED- Prehospital-ED	(Wood et al., 2015) <i>To review literature published on handover between prehospital and hospital settings</i>	Literature review	1. Prehospital – Inhospital ED 2. Paramedics – ED staff 3. Interdepartmental 4. Verbal	21/401 studies included. Envmt. Of noise complicates handovers, lack of time; Poor communication: not listening, mistrust and misunderstandings; standardization with mnemonics seems to be beneficial. Otherwise poor existing research quality.
34.	5A: Mix Incl. ED Nurse – Nurse	(Johnson et al., 2012) <i>Develop a minimum data set (MDS) for clinical handovers, content analysis of actual handovers</i>	Mixed method: observational study with digital recordings and analysis, and field notes noting process of handovers (location, members, leaders)	1. One hospital – 10 units 2. Nurse – Nurse 3. Intradepartmental 4. Verbal with pre-printed sheet; Shift change –	13 data fields emerged. Only one specifically on care plan which could include psycho-social concerns, one on clinical risks, and skin integrity, others all demographics and medical data. ED: low on care plans, Resus status, risk status, skin status. ED turnover high– handovers concise much MDS factors obsolete, lots of focus on vital signs and meds. Need for flexibility in MDS system – high variation across wards for MDS factors handed over – depended on context.
35.	5C/3C: MIX Incl. ED ED – Ward Team (Doctors, Nurses, pharmacists)	(Manias et al., 2014) <i>To explore how health professionals, patients, family members communicate about managing medicines from ED to medical wards</i>	Qualitative, descriptive study, with semi-structured interviews with Patients & family members; focus groups and interviews with doctors, nurses, pharmacists.	1. ED – Ward 2. Multiple professions (doctors, nurses, pharmacologists) patients and family 3. Interdepartmental 4. Verbal and written?	4 themes emerged: contextual environment of care, competing responsibilities of care, awareness of responsibility for safety, inter-professional communication. ED: reactive focus; Wards: proactive stance.
36.	5C: MIX Incl. ED Three settings: Ambulance – ED; Anesthesia – Post-anesthesia; post-anesthesia – ward nurse Paramedics, ED Staff, nurses	(Manser, Foster, Gisin, et al., 2010) <i>Develop a rating tool for handover quality, not merely information transfer. What constitutes a safe and effective handover?</i>	Multi rater and multi-site testing of handover rating tool	1. Prehospital – ED – wards 2. Paramedics – doctors – nurses 3. Interdepartmental 4. Verbal	Three factors predict quality : information transfer, shared understanding, working atmosphere Feasible rating tool.

37.	5C: Mix Incl. ED	(Siemsen et al., 2012) <i>Primary: To explore healthcare professionals' attitudes and experiences with critical episodes in patient handover; Secondary: Secondary: identify possible solutions to improve handovers.</i>	Qualitative: Semi-structured individual interviews N= 47, at univ. hospital in DK. Multiprofessional and different speciality areas, incl ED		Eight (8) central factors: communication, information, organization, infrastructure, professionalism, responsibility, team awareness, culture. Handovers are complex, the organization didn't acknowledge that handovers are critical safety areas – immature culture for safety. Work done in silos.
38.	5C: MIX Incl. ED Three settings: Ambulance – ED: resus / majors; ED – Ward Paramedic – Dr; Dr – Dr	(Sujan et al., 2015) <i>Explore what is communicated and how this is communicated during different types of handover across emergency care boundaries</i>	Audio recordings of handover conversations, analyzed for content and language forms.	1. Prehospital – ED – wards 2. Paramedics – doctors – doctors 3. Interdepartmental 4. Verbal, Individual	Standardization of handovers need to make room for collaborative aspects AND should incorporate content on patients social and psychological needs to establish appropriate care at earliest opportunity. Handovers include descriptive and collaborative talk to joint decision making.
39.	5C: Mix inkl. ED Doctor – Doctor General communication	(Sutcliffe et al., 2004) <i>“To describe how communication failures contribute to medical mishaps”</i>	Semi-structured interviews with 26 physicians about general work event, medical mishaps, descriptions and possible causes	1. Inhospital 2. Doctor – Doctor 3. Multifaceted communication 5. Verbal	70 mishaps: omission, diagnosis, treatment, commission, few medication errors Contributing factors: knowledge and communication. Knowledge revealed lack of awareness of important information and not communicating effectively. Contributing to this: busyness, hostile superiors, interpersonal skills. Residents don't want to seem ignorant, ESP ED – ward: omission of vital information – dangerous! Not being prepared by handovers to ward for seriousness of conditions from ED; risky and causes delays. Impt with face-to-face & niceness in communication
40.	6A: Non-ED: Shift Nurse-Nurse Shift	(Sarvestani et al., 2015) <i>To explore challenges of nursing handover process during shift rotations in hospital</i>	Descriptive, exploratory design, qualitative content analysis approach, N=130 patient handovers observed (field notes) and recorded – analyzed.	1. Inhospital, pediatric ward 2. Nurse-nurse 3. Intradepartmental 4. Verbal handover – shift	Two main themes, 5 sub-themes: (1) Nonholistic approach: a. Unstructured content: very dominated by medical/physical content, little patient care with psychosocial, functional, spiritual, family needs; no uniform structure/wrap up / style b. Low nurses' ethical and practical involvement: low engagement, could be judgmental/labelling pts. c. Non-patient centered approach: objectify pts. (2) Poor management a. Poor time and space mgmt.: varying time used, no dedicated space for handovers b. Poor task mgmt. Many tasks to be done simultaneously, many interruptions

41.	6A: Non-ED Shift Nurse – Nurse	(Alvarado et al., 2006) <i>Develop & Implement Transfer of Accountability (TOA) Guidelines & Patient Safety checklist</i>	Pilot study: Survey & lit.review to devp. Best practice guidelines Intervention: orientation package/e-mail/telephone support to 2 wards; questionnaire 4 months later to follow-up.	1. One hospital, two wards (Surg/Gyn) 2. Nurse-Nurse 3. Intradepartmental 4. Hybrid: verbal & written handover, face-face Individual patients, at shift change	Variation in method and content of handovers before intervention. Succeeded in developing: Nursing care standards for patient safety during handover; written handover checklist, bedside patient safety checklist, and face-to-face reporting for clarification. Improved effectivity, coordination of communication among nurses at shift change, more complete communication about patients' needs and safety issues.
42.	6A: Non-ED Shift Nurse-Nurse Inpatient wards	(O'Connell et al., 2013) <i>Develop and examine psychometrics of a Handover Evaluation scale</i>	Survey analysis N=299 nurses, 24 wards, healthcare service. Exploratory and Factor analysis.	1. Healthcare service 2. Nurse-Nurse 3. Intradepartmental (same ward) 4. Verbal, Shift	Results: 14 item Handover Evaluation Scale developed, simple, valid, reliable, 3 subscales: 1) quality of information 2) interaction and support 3)efficiency Monitoring handover is an important quality assurance process to meet standards in AUS.
43.	6A: Non-ED Shift Inpatient wards Nurse – Nurse	(O'Connell et al., 2008) <i>Examine nurses' perceptions of handover, find strengths and limitations of handover process.</i>	Staff survey N=176 nurses Positive and improvable aspects identified.	1. One hospital 2. Nurse – nurse 3. Interdepartmental 4. Verbal; Shift – shift	Positive perceptions: Being able to clarify information provided; being provided with sufficient information; being able to follow information flow easily, relevant & thorough info; receiving handover directly from the nurse who cared for the patient! Negative perceptions: Information too subjective, info they could have obtained from patients' charts; not relevant to patient care, and takes too much time, incomplete or missing info, busyness of ward negative. Suggest: ward specific handover templates; handover done by nurse caring for patient, strategies to streamline process!
44.	6A: Non-ED Shift Nurse – Nurse	(Drach-Zahavy & Hadid, 2015) <i>To examine the relation between #/types of treatment errors and strategies nurses employ during handover.</i>	Mix-method: document audit, surveys, Observation study, N=200 handovers between nurses in 5 somatic wards. Specifically looking at compliance with High Reliability Organization (HRO) handover strategies & treatment errors?	1. One hospital, 5 wards 2. Nurse – nurse 3. Intradepartmental; 4. Verbal handover; Shift change;	1/5 contained medication dosage inaccuracy, 1/3 order filled late, ½ documentation lacking. Variation in use of HRO strategies. But: Face-to-face verbal updates with interactivity, update from other practitioners, topics initiated by both in/out teams, ideas about care plans, and writing summary prior to handover were significant to fewer treatment errors! Better HRO strategies = fewer errors
45.	6A: Non-ED Nurse-Nurse Inpatient wards	(Welsh et al., 2010) <i>To identify specific barriers and facilitators to nursing end-of-shift handoffs</i>	Qualitative, descriptive pilot study, semi-structured interviews N=20 with nurses to find current process, limitations, ideas for improvement	1. Hospital 2. Nurse-Nurse 3. Intradepartmental 4. Taped vs Written; – end of shift	6 barriers: too little info, too much info, inconsistent quality (individual variation), ltd opportunity to ask questions, equipment failures (tape recorder), interruptions 4 facilitators: “pertinent” content (varied by unit), Notes and space for notes, face-to-face interaction with outgoing nurse, structured form/checklist.

					3 step process: (1) content transfer, (define this) (2) embed Q&A - ask/answer for clarification, (3) review charts before handover; do peer evaluations
46.	6B: Non-ED Shift handover Doctor – Doctor	(Arora et al., 2005) <i>To describe how communication failures can lead to patient harm between physicians on wards</i>	Interviews post-handover from another doctor. Analysis of communication failures	1. Inhospital 2. Doctor-Doctor 3. Intradepartmental 4. Verbal	Failures were: omissions (medications, problems, tests), failure-prone communication processes like lack of face-to-face – emerged as major categories of failures. Lead to uncertainty in patient care. Interns want through but relevant verbal sign-outs that also anticipate issues. Also, legible, updated written handover sheets.
47.	6B: Non-ED Doctor – Doctor Shift wards	(Pascoe et al., 2014) <i>To evaluate residents' shift-to-shift handover practices compared to national standards</i>	Mixed methods: Quantitative online questionnaire N= 61, and focus group interview N= 11	1. Inhospital 2. Doctor-Doctor 3. Intradepartmental 4. Verbal, shift	NB – 10 Australian NHQHS standards, # 6 on Clinical Handover: 1) Specific time and place for handover 2) Structured and standardized handover documentation 3) Develop and teach criteria for who and what to handover 4) Set clear expectations 5) Provide training throughout year 6) Perform handover at bedside for unstable patients Questionnaire: Much concern about handover quality, 53% reported risk for adverse events 98% see improvement potential, 100% say quality depends on individuals reporting. Focus interviews: concern about structure, documentation, attendance, content and training.
48.	6B: Non-ED Doctor – Doctor Shift Wards	(Payne et al., 2012) <i>To introduce and evaluate handover practices before and after introduction of standardized handover tool – electronic</i>	Surveys	1. Inhospital 2. Doctor-Doctor 3. Intradepartmental 4. Verbal/written; shift	Increased perception of fewer near miss events among doctors, more updated data on electronic handover page, increased confidence of improved handovers.
49.	6B: Non-ED Doctor – Doctor High Acuity to low acuity wards	(Toccafondi, Albolino, Tartaglia, Guidi, & Molisso, 2012) <i>To analyze handover communication between high-acuity/low-acuity units for content, social context, threats to patient safety</i>	Mixed methods: Observational study of handover (N=22), followed by focus group interviews	1. Inhospital 2. Doctor-doctor 3. Interdepartmental 4. Verbal	Limited common ground interferes with correct interpretation, may lead to adverse events. Ltd accessibility to info in medical records, infrequent involvement of nurses in pre-handover pd. Low acuity wards not aware of alert signs (only 40%), only few selected team members had common ground Differing valued information bits,
50.	6C: Non-ED Operation – Recovery Doctor – Nurse	(Arenas, Tabaac, Fastovets, & Patil, 2014)	Observational study N=10, 50 handovers recorded, then	1. One hospital (OR operation – recovery) 2. Anesthesiologist – Nurse	Improved recall of information after handover with undivided attention paid. Undivided attn: 90,2% recall;

		<i>Identify effect of undivided attention on handover postoperative from anesthesiologist to nurse</i>	analyzed for content; noted if nurses gave undivided attention 20 mins later recall assessed by researchers	3. Interdepartmental 4. Verbal Individual patients: post op recovery admission (interdept)	Attn not undivided: 67,5% recall
51.	6C: Non-ED Doctor – Doctor Simulation ENT	(Bhabra, Mackeith, Monteiro, & Pothier, 2007) <i>Compare reliability of three different handover methods between doctors, one-to-one, simulated patients</i>	Observation of handovers of 12 simulated patients over 5 handover cycles. Three methods: verbal only, verbal with note taking, printed handout with all information	1. Hospital-ENT 2. Doctors- doctors 3. Intradepartmental 4. One patient – handover between clinicians, Shift handover 3 types (verbal/combi/only written)	Best patient information retention with updated patient information written. Over 5 physician handovers, verbal only data in handover by far the worst retention – only 3% retained at end. Verbal AND note taking over 80% retained, Printed sheet with patient data – over 95% retention. Revealed that important information lost as much as non-important. Implications: the printed sheet is only as good as the information updated on it. Will take time and effort of physicians to update.
52.	6C: Non-ED Ward – Ward Nurse – Doctor	(De Meester et al., 2013) <i>To determine the effect of introducing SBAR communication tool between nurses and doctors with deteriorating patients on satisfaction and incidence of serious adverse events</i>	Pre and Post intervention study with questionnaire of nurse-physician communication, and record auditing for serious adverse events.	1. Inhospital 2. Nurses – Doctors 3. Interdepartmental 4. Verbal & journal audits	Increased perception of effective communication and collaboration in nurses, increase in unplanned ICU admissions from wards, and decrease in unexpected deaths. Stresses critical success factors: bottom up perspective, dissociate the errors and failures ass. With human performance from clinical competency; perspective of helping smooth day, increase safety – effective, acknowledge that good people are set up to fail in bad systems – take a systems perspective, visible support from senior leadership and strong clinical champions. Changes must be seen as making work better and safer. Identify successful elements
53.	6C: Non-ED OBGYN – OBGYN Shift Patients perceptions	(Kaye et al., 2015) <i>To assess patients’ perceptions of the structure, process and outcome of intrapartum care on labor wad at shift handover</i>	In depth interviews at hospitalization and a few months later. Thematic analysis	1. Hospital – OBGYN 2. Healthcare personnel 3. Interdepartmental 4. Verbal; Shift	Patient dissatisfaction – esp. process of handover, decision making after, and failure to communicate information to patients and caretakers. Gaps in continuity of care – poor quality of care experienced.
54.	6C: Non-ED ICU – ICU Nurse – Nurse	(Manias & Street, 2000) <i>To examine the nurse communication practices during handover on ICU</i>	Critical ethnographic study, 6 nurses, ICU. Professional journaling, observations, individual and focus group interviews.	1. ICU-ICU 2. Nurse – Nurse 3. Intradepartmental 4. Verbal; shift and individual	Identified two shift handovers – a global handover to all nurses, and bedside handover from nurse – nurse about individual patients. Global handover: serves the needs of nurse coordinators; Individual bedside handover: examination, tyranny of tidiness, busyness, and create a sense of finality. Should be more sensitive to other nurses needs to promote collaborative and supportive communication
55.	6C: Non-ED Shifts	(Randell, Wilson, & Woodward, 2011)	Multi-site case study, observational and	1. Inhospital 2. Doctors – doctors, nurses – nurses	Verbal handovers at shift are practically focused – ability of professionals to know what

	Mix: Three case sites; Doctors shifts, and nurses shifts	<i>Describe current practices of shift handovers and consider role of technology in supporting handover</i>	audio recording analysis of verbal shift handovers	3. Interdepartmental (Medical ward, EAU/ clinical decision unit, pediatric surgical ward 4. Verbal; Shift	information is required and when further explanation needed. Can support teaching and team cohesion, and opportunity to reflection on previous shift work, and discussions with patients. Benefits of face-to-face handover – technology should support not replace this.
56.	7: Systematic Review	(Abraham et al., 2014) <i>Review literature on handoff evaluation studies- especially methodology/ theoretical foundations.</i>	Systematic review of literature 1983-2012 36 publications met criteria (only on evaluation of handoff tools)	1. Healthcare environment 2. Doctors or nurses 3. Intra & Inter departmental 4. All	Most studies about perspectives on handoffs, tools varied in structure & implementation to practice. Electronic handoff tools significant. Patient safety effects of handover usage minimally focused on. More focus on localized metrics for efficacy and usability, info gap... not patient outcome. Not a holistic perspective on impact of handover. NB p 155: theoretical perspectives underlying publications: information processing, stereotypical narratives, social interaction, resilience, accountability, distributed cognition, cultural norms.
57.	7: Systematic Review	(Australian Commission on Safety and Quality in Healthcare, 2005) <i>Summarize literature on clinical handover to identify: designed to identify: -1-factors relating to clinical handover associated with patient safety; -2-the effectiveness of safety cultures within non-health industries; and -3- the quality of evidence and gaps in research</i>	Literature review	1. Healthcare environment 2. All 3. All 4. All	Handovers affect patient safety, workflow, quality of care. Ineffective handovers can: -lead to wrong treatment -delays in med. Diagnosis -adverse events- even life threatening -patient complaints (reduced satisfaction) - increased costs -increased length of stay Three domains relating to handover variables identified: 1) System design factors (policies, procedures, work systems, routines, types of tools (written/taped...) 2) Organizational cultural factors: communication between and among groups that impacts patient care; interpersonal relationships 3) Individual: K/S/A affect ability, as well as extrinsic factors
58.	7: Systematic Review Nurse – Nurse General	(Friesen et al., 2008) <i>Chapter presenting overview of handoffs, gaps in knowledge, suggestions for improvement and research on nurse handoffs</i>	Summary of nursing handoff literature	1. General 2. Nurse – Nurse 3. All 4. All	Summarizes from literature: T2: Strategies to improve handoff communication (JCAHO); T3: Nurse-Nurse change of shift handover (by method); Context (where); shift-shift; Nursing Unit – Nursing Unit; Special Settings – incl. ED; discharge, medications, physician-physician; Text: Evidence-based suggestions: electronic support, decrease number of transfers, effective handoff process: standardized; human factors, research implications;

					T4: Ext/Int factors contributing to handoff errors; T5: Org/system issues cont. to error in handoff T6: Special situations incl. emergency situations
59.	7: Systematic Review	(Manser & Foster, 2011) <i>To review the current state of research and improvement efforts on clinical handover, and identify key areas for future research</i>	Literature review	1. Inhospital 2. All 3. Focus on anaesthesiology, or other 4. All	Further areas of research: Need more systematic approach to establish valid measures of handover quality and safety, establish causal effects of handovers, identify best practices in handover and effective interventions. How to measure quality and safety of patient care from handover? (1) Content: depends on context (2) Process: Environmental and behavioral (3) Outcome outcomes of handovers: satisfaction and safety consequences – account for both ends. Content omissions/failure-prone communication processes NB p 186 approaches to research 187: mental model!! – audit point/resiliency potential!
60.	7: Systematic review	(Robertson et al., 2014) <i>To evaluate effectiveness of interventions aimed at improving quality and safety of intrahospital handover process</i>	Systematic literature review	1. In-Hospital 2. All 3. All 4. All	Poor quality of research articles, difficult to draw conclusions about optimizing handover. Need for a taxonomy and common language b/c heterogenous - handover settings and types in healthcare.
61.	7: Systematic Review	(Wong et al., 2008) <i>To provide a structured evidence based literature review regarding effectiveness of improvement interventions in clinical handover</i>	Systematic literature review of Australian and international published works on clinical handover	1. Inhospital and discharge to community 2. All 3. All 4. All	218 data sources, categorized into 5: 1. Comprehensive intervention based study 2. Intervention based study 3. Pre-intervention (descriptive, explorative, identifying gaps) 4. Published opinions 5. Govt reports Growing awareness of importance of handover for improving safety and quality, call for more intervention research on structured approaches. Confirms handover is a high-risk scenario; Identifies critical success factors (standards, education, training, electronic support, different types of handover) P16: (Apker – ED to ward found unequal expectations)
62.	8: Government Directive	(Australian Commission on Safety and Quality in Healthcare, 2010) <i>Serve as a guide to Australian</i>	Government report, based on research & reference group	N/A	Guide for implementing clinical handover standards. Importance of Plan-Do-Study-Act cycle, Face-to-face communication for read-back/double check of information; and importance of hybrid method: verbal & written.

		<i>Healthcare institutions for successful implementation of standardized clinical handover</i>			User-centered approach with iterative feedback implementation. P. 11: What does standardized handover look like? P. 19: describe current practice of handover
63.	8: Government Directive	(British Medical Association, 2004) <i>Provide guidance on clinical handover for clinicians and managers</i>	UK NHS BMA – Jr Doctors committee – guidance on clinical handover	National guidance on clinical handover Between physicians	Provides guidance to doctors on best practice in handover, highlights safety perspective with continuity of information, increase number of personnel involved due to shift patterns, shorter working week hours. Good handover needs focus: enough time, clear leadership, technology support, sufficient and relevant information, briefs of concerns from previous shifts, tasks not completed yet are handed over, with prioritization of task and plans for further care.
64.	8: Government Directive	(Revere, 2008) <i>Summary of changes from Joint Commission National Patient Safety Goals for 2008, from earlier</i>	Advice about the new safety goals, including Goal 2: Improve the effectiveness of communication among caregivers.	1. All Veterans Hospitals 2. All caregivers 3. All 4. All	Good list of Goal 2 details: 2a) Verify complete test results with read-back; 2b) Standardize abbreviations 2c) Take action to improve timeliness of reporting critical test results 2e) Implement a standardized approach to “hand-off” communications, including an opportunity to ask and respond to questions.
65.	8: Government Directive	(World Health Organisation, 2007) <i>Report on Patient Safety Solution number 2 from The Joint Commission: Improve communication during patient hand-overs</i>	Directive with suggestions for improvement, and barriers.	1. International focus all healthcare settings 2. All professionals	Summary statement of problem and impact of communication failures during hand-overs; Suggested actions for improvement: (1) Implement standardized approach like SBAR, give time for handover and questions, provide relevant info, limit to necessary info; (2) Ensure system for hospital discharge; (3) Incorporate training on hand-over in education and continuing education of professionals. Opportunities for family / pt involvement; potential barriers.
66.	9: Theory / Communication failures	(Sutcliffe et al., 2004) <i>To describe how communication failures contribute to many medical mishaps.</i>	Qualitative – Semi-structured interviews, face-to-face, with residents (N=26) about work environments and mishaps.	1. Inhospital 2. Dr – Dr 3. All 4. Verbal	70 mishaps recounted, communication and patient management were two most common contributing factors. Communication failures related to: hierarchy, concerns with upward influence, conflicting roles, role ambiguity, interpersonal power, conflict, ambiguity in responsibility. Contributing factors: specific situation (busy ED), practitioners’ interpersonal skills, work environment (hostile superior). ‘Practitioner’s knowledge’ as factor – meant practitioner’s awareness of pertinent information – not communicated effectively: lack of information. See p 191: ED-ward-near crash-ICU

67.	9: Theory / Safety	(Vincent et al., 1998) <i>To provide a framework for analyzing risk and safety in clinical medicine, based on human factors, James Reason, active/latent failures</i>	Conceptual article	Health sector	Seven levels of factors influencing clinical practice safety: 1) Patient characteristics 2) Task factors 3) Individual staff factors 4) Team factors (communication, supervision, structure) 5) Work environment 6) Organizational / Managerial 7) Institutional context – government, financing
68.	9: Theory / Conceptual framework for PS and Handover	(Jeffcott, Evans, et al., 2009) <i>To present a research conceptual framework for a research agenda on patient safety and clinical handover.</i>	Conceptual article	N/A	Presents a matrix framework with two axes: 1. Key handover elements: information, responsibility/accountability, system. 2. Key measurement elements: Policy, practice, evaluation. Measurement through research will identify gaps in Knowledge and promote more rigor in design of research to study handover practice linked to reduce patient harm.
69.	9: Theory / ED Description	(Croskerry et al., 2009) <i>Book about ED with Patient Safety focus</i>		ED	Characteristics of ED compromising Patient Safety p 18-19: - Unbounded demand (infinitely expandable) - Multiplicity of patients at one time - High degree of uncertainty at presentation (ref: The Consequences model: extent of consequences vs time available – high immediate, lower later) - Narrow time windows - Fast demands on decision making - Poor feedback - Interruptions / distractions - High variety in conditions yields little specialization/practice - (NB also crowding/boarding)
70.	9: Theory / ED Description	(Flowerdrew, Brown, Russ, Vincent, & Woloshynowych, 2012) <i>To identify key stressors for ED staff, investigate +/- behaviors working under pressure, and interventions to improve team function</i>	Qualitative study, semistructured interviews, N=22 doctors and nurses	ED Doctors and Nurses	Stressors: 4 hour breach, excess workload, staff shortages, lack of teamwork both intra and interdepartmental. High pressure affects communication, overview, and management of staff and patients. Mediating factor: leadership and teamwork – affect objective stress (workload/staffing), and subjective experience. High levels of misunderstanding bet. Sr and jr staff. Suggest non-technical skill training and leadership training to reduce stress.
71.	9: Theory / ED Description /Breach	(Cronin & Wright, 2006) <i>Explore concept of breach avoidance</i>	Discussion article	ED	Background for 4 hour breach targets in UK – NHS Plan mandated in 2001, Reforming Emergency Care purpose:

		<i>facilitator in ED, share initial difficulties when introducing role, and benefits</i>			Services more patient centered, should receive consistent responses, no delays due to absence of equipment or specialist, and Emergency Care should be delivered to clear and measurable standards.
72.	9: Theory / ED Description /Breach	(Eatock, Clarke, Picton, & Young, 2011) <i>Build a simulation model to capture coping strategies and reflects process occurring in ED</i>	Data simulation experiment. Simulation model with input data – output data compared with records, expert opinion used to generate the pathways	ED	Since 2004, EDs in the UK have been required to ensure that at least 98 per cent of patients are either discharged or admitted to hospital within 4 hours. Authors successfully replicated Length of Stay in hospital – and trialed again. Looked at coping strategies by LoS.
73.	9: Theory / ED Nursing Assessment	(Munroe et al., 2015) <i>To describe process and present evidence-informed ED nursing assessment framework</i>	Literature review followed by Delphi process with expert ED nurse panel to produce framework	ED Nurses	HIRAID framework: H: History I: Identify Red Flags A: Assessment I: Interventions D: Diagnostics, reassessment, communication Also emphasizes importance of standardized handover framework ISBAR, assertiveness with colleagues, nurse-patient communication, complete and thorough documentation notes so colleagues are up to date (very medical)
74.	9: Theory / Human Factors / clinical handover shift	(Wrae & Nyce, 2010) <i>To discuss clinical shift handovers in light of resilience theory</i>	Presentation of resilience theory, discussion about clinical handovers		Handoff strategies from HR industries: 1- two-way face-to-face communication 2- written support tools 3- content in handover which captures intention Mentions ETTO!
75.	9: Theory / Method Critical Incidents	(Runciman et al., 2002) <i>To provide a basis for setting priorities to improve PS</i>	Classification of 1712 adverse events (from 28 hospitals) into 581 principal natural categories (PNCs) – by frequency, resource consumption, outcome severity	Hospitals	Good explanations of Generic Occurrence Classification (GOC) -Natural categories: descriptors of incidents recognizable and useful to clinicians. Basic NCs, Principal NCs, Dominant NCs. Results yielded many categories. Hard to find core issues to enable preventative actions. Important to target the mundane problems which consume most resources (60%), as well as rare but serious problems (40% resources).
76.	9: Theory / Quality in Healthcare	(World Health Organisation, 2006) <i>To define quality in healthcare and provide healthcare system leaders a process to help implement effective interventions to promote quality in healthcare</i>	International conceptual article		Quality defined, 6 dimensions: 1) Safe: deliver healthcare minimizing risk and harm to users 2) Equitable: non-discriminatory access and delivery of healthcare due to demographic profiles 3) Patient-centered: respect for patients' preferences and culture 4) Accessible: timely/geographically

					<p>reasonable with skills/resources appropriate</p> <p>5) Efficient: delivery maximizing resource use and avoiding waste</p> <p>6) Effective: evidence based practice resulting in improved health outcomes</p>
77.	9: Theory / Safety	(Insitute of Health, 2001) <i>Summary of IOM report on how health system should improve system of care</i>	Government report	N/A	<p>Patient safety is urgent problem – there is a chasm between the health care provided and the health care that could be provided as evidence-based.</p> <p>6 aims for improvement: safe, effective, efficient, personalized, timely, equitable; too much silo activity w/o complete information.</p> <p>10 rules for redesign of system: care is continuous healing relationships, customized to patients’ needs, pt. is source of control, Knowledge is shared and information flows freely; decision making evidence-based; safety is a system property, transparency is must; Needs are anticipated; cooperation among clinicians is a priority: collaborate and communicate to ensure info exchange and coord of care.</p>
78.	9: Theory / Safety	(Makary & Daniel, 2016) <i>Addresses the problem that human and system errors are not on the International Classification of Disease (ICD)</i>	Conceptual article		<p>Estimates based on different reporting systems, suggest that medical error is the third most common cause of death in the US. But currently deaths by errors are unmeasured, and prevention follows in limited manner. Advise asking whether deaths could have been prevented. Create root cause analysis for local learning.</p>
79.	9: Theory / Safety Culture	(S. Lee, P. Phan, T. Dorman, S. Weaver, & P. Pronovost, 2016) <i>To analyze how different elements of patient safety culture are ass. with handovers and perceptions of patient safety</i>	Quantitative: hierarchical multiple linear regression from 2010 Agency for healthcare and quality’s hospital survey on patient safety culture (HSOPC). Controlled for hosp size, type, ownership, staffing on perceptions of PS	Hospital	<p>Staff views on behavioral dimensions of handovers influenced their perceptions of hospital’s level of PS.</p> <p>Suggest: Training and monitoring to improve handovers, b/c links b/t perception – attitude – behavior.</p> <p>Findings: Effective handovers necessary to pos. perceptions of PS, feedback & communication about errors pos. rel. to transfer of patient information; teamwork within units & frequency of event reporting pos. rel. to transfer of responsibility; teamwork across units pos. rel. to unit transfers of accountability for patients.</p>
80.	9: Theory /Opinion Handover hostility	(Al-Rais, 2017) <i>Opinion article on avoiding handover hostility</i>	Opinion article	<ol style="list-style-type: none"> 1. General hospital 2. Doctors 3. All 4. All 	<p>Rudeness and hostility disrupt and impede clinical performance</p>
81.	9: Theory/ Background / ED Description / Incident reports	(Tighe et al., 2006) <i>To review and revise the critical incident reporting system in an ED, to enhance</i>	Description of reporting system, analysis of critical incidents by: type, severity, contributing factors;	<ol style="list-style-type: none"> 1. ED – ED 2. All 3. Intradepartmental 4. Written critical incidents 	<p>Leape’s analysis properties: Relatively safe (Ltd confidentiality for users); Relatively easy to use (needs guidance on classifications); Effectiveness: Not always feedback for minor</p>

		<i>learning and feedback.</i>	Compared to Leape's successful reporting system properties: safe, effective, easy to use.		incidents, variable feedback/info after report, hard to assess. Audits: Delays, general (sub-optimal care), diagnostics, patient care, staffing, procedures... Impt to have qualified staff classifying and analyzing incident reports.
82.	9: Theory/ Method Critical Incidents	(Thomas et al., 2013) To sample and categorize incident reports in acute care settings	Audit of Australian national incident report system including term "handover", n= 459 over 4 years. Method: bottom-up, data-driven approach to classify into Principle Natural Categories. Generative process		1. 4 failure types: Tasks not done; Information absent; Information incorrect; Absence of acceptable handover 2. Error types hard to identify b/c ltd. Info about etiology 3. Failure Detection mechanism: 1 st place: Expectation mismatch, 2 nd place: Clinical mismatch – condition didn't match that conveyed, 3 rd : Mismatch with documentation (verbal ≠written info).
83.	9: Theory Safety	(Amalberti & Vincent, 2016) <i>Book addressing safety strategies aimed at managing risk in complex and adverse working conditions of healthcare: work intended vs work done</i>	Book on Patient safety – collection of chapters – emphasis on the ideal vs the real	1. All healthcare areas from home to specialist 2. All	Series of arguments and ideas about viewing patient safety as management of risk over time. Ch 1: progress and challenges for patient safety Ch 2: The ideal and the real Ch 3: approaches to safety – risk... Ch 7: Safety strategies in hospitals
84.	9: Theory	(Jeffcott, Ibrahim, et al., 2009) <i>To introduce concept of resilience and how it applies to clinical handovers in healthcare</i>	Conceptual article	N/A	Resilience is system based approach: individual – team – organization; humans in a system avoiding failure and obtaining success, creating safety despite hazardous settings. Having a safety culture as a bedrock across organization, and mindfulness at all levels at all times, bedrock – but not enough. 3 factors: foresight to predict, coping to prevent worsening, recovery after occurrence.
85.	9: Theory / ED Description	(Bellow Jr & Gillespie, 2014) <i>Describing the evolution and causes of ED Crowding</i>	Conceptual / Discussion article		ED crowding: a condition that occurs when the need for emergency services outstrips the available resources in the emergency department, s. 153 Multiple factors involved: lack of inpatient beds (so patients board in ED), increase in pt. volume, less access to primary care, etc
86.	9: Theory / ED Description	(Claret et al., 2016) <i>To investigate the impact of new organization in ED on patients' mortality and delays</i>	Quantitative study: Pre and Post organizational flow change study. N= 61,118 + 22,204	ED	Decrease in mortality and improvement in time to first medical contact after both geographical layout change and nursing staffing increase, but no increase in physicians.
87.	9: Theory / ED Description	(Curtis et al., 2009)	Conceptual article	ED Nurses Intradepartmental	Description of clinical ED evmt. 5 step nursing assessment for ED (very medical):

		<i>To present the uniqueness of ED nursing, and structured ED Nurse Assessment framework</i>			<ol style="list-style-type: none"> 1) History taking (incl social, not psychiatric, no function level) keep an open mind 2) Potential Red Flags – screen/prioritize for severity/triage 3) Clinical examination: ABCDE method (clinical), then focused asmt. “Issues related to social and environmental history are impt. as well” 4) Investigations – understand significance 5) Nursing interventions
88.	9: Theory / Handoff in organizational context	(Hilligoss & Cohen, 2011) <i>Through organizational theory: To review handoff literature and provide a framework for handoffs: multifunctional, situated organizational routines.</i>	Literature review and discussion with organizational theory to provide framework.	Inhospital All All All	<p>Many points to consider for researchers and administrators;</p> <ul style="list-style-type: none"> --Increasing regulatory and sentinel event reports blame communication failures – Framework: --Multifunctionality: Handovers are more than information transfer, including transfer of responsibility, control, resilience, co-constructing shared mental models, and learning. --Standardization/ Improvement efforts must consider culture – contexts in addition to protocols. --Situatdness: factors that shape handoff dynamic: situation (environment, participants, tools, technologies); divisions of labor (shifts or within departments)
89.	9: ED – Ward Dr – Dr	(Hilligoss & Cohen, 2013) <i>Identify distinguishing structural features of between-unit transitions between ED and ward – identify contextual factors</i>	Conceptual article, based on literature review, observations of doctors and nurses, prior ethnographic study, and prior observational study	<ol style="list-style-type: none"> 1. ED – Ward 2. Dr - Dr 3. Interdepartmental <p>Verbal mainly, individual patients</p>	<p>Trigger for interdept handoff is pat. Illness changes- irregular and unpredictable timing;</p> <p>Two contextual factors are unique:</p> <ol style="list-style-type: none"> 1) Negotiation: IP differences, uneven power b/t units, no established relationships, less face-to-face; Subtle interactions – tacit agreements <p>Coordination: Less awareness of other units state; responsibility and control transferred separately (?)</p>

9.4 Attachment 4: Nursing assessment documentation template, ED

16.03.17 kl. 11:15 Spl AKM innkomst SO
Default v/sykepleier Fornavn Etternavn

Innleggesårsak:

- 1 **Komm./sanser:**
- 2 **Kunnsk/utv./psyk.:**
- 3 **Åndedr./sirk.:**
- 4 **Ernær./væske/el.bal.:**
- 5 **Eliminasjon:**
- 6 **Hud/vev/sår:**
- 7 **Aktivitet/funk.status:**
- 8 **Sm./søvn/hv./velvæ.:**
- 9 **Seksual./reprod:**
- 10 **Sos./planl. utskr.:**
- 11 **Ånd./kult./livsstil:**
- 12 **Annet/legedeleg.:**

e... Nytt mål... Nytt tiltak... Nye forordn... Bediger... Slett... Avsk...
splanelementer FO Frekvens/situas
dlingsplandiagnoser

(Date) (time) Nurse ED Admission SO
Default, Nurse (first, family name)

Admission reason:

- 1 Communication/Senses
- 2 Knowledge/Development/Psychiatric
- 3 Respiratory / Circulatory
- 4 Nutrition / Fluids / Electrolyte balance
- 4 Elimination
- 6 Skin / Tissues / wounds
- 7 Activity / Functional status
- 8 Pain / Sleep /Rest / Well-being
- 9 Sexuality / Reproduction
- 10 Social status / Discharge plans
- 11 Spiritual / Cultural / Lifestyle
- 12 Other / Doctors orders...

9.5 Attachment 5: Interview Guide 1: MED Division

Intervju guide, MIT på med.

1) AVDELINGEN

Det er viktig for oss å få et innblikk i hvordan deres hverdag er, og hva dere har behov for.

Hvordan var opplæringen på sykepleiefaglige kunnskap og rutiner da dere begynte i avdelingen (tilfeldig eller systematiske)? **(betydningsfullt for at MIT skal fungere kontinuerlig)**

Hvordan er system for læring organisert her i avdelingen (faste undervisningsdager etc)? **(er det et systematisk fagutviklingssystem på avdelingen)**

Hvordan anvendes spesialkompetanse i deres avdeling, f.eks. kreft, sår, HLR, evt andre. Og i tilfelle hvordan brukes denne kompetansen? (hvorfor lære folk opp som MIT ansvarlige hvis de ikke brukes aktivt? – før MIT innføres – er det et system for å bruke ressurssfolk?)

2) PASIENT I FORVERRING

Hva legger du i begrepet «dårlig pasient»?

Hvordan beslutter dere at en pasient er blitt dårlig?

Hva er det som skjer når en pasient blir definert som dårlig (hvilke tiltak iversettes)?

Hvilke områder dere kjenner at dere mangler kunnskap i forbindelse med at pasientens tilstand forverres?

Hvordan systematiseres beslutning / behandling av pasienter i terminale faser? Vet dere til enhver tid hvem som er terminale (minus HLR og respirator osv)?(jfr. Kristin intervju)

Hvordan er det å få legen til å komme når dere ringer? Fortell om en gang...(Kveld – Natt – Helg)

3) MÅLINGER

Hvordan er systemet for måling av vitale parametre? (når og hvor ofte sjekkes hva)?

Har avdelingen noen regler på når og hvor ofte målinger foretas? (dvs spesielle pasientkategorier som utløser målinger)

Hvilke faktorer utløser målinger? Hvilke målinger tar dere?

Hvem bestemmer at målinger skal taes?

Hvilken rolle spiller hjelpepleierne her? Har dere hjelpepleiere i alle vakter?

Hvordan organiseres målingene i avdelingen? Er det en som tar alle?

Hva er prosedyrene for å skrive ned målingene – når? Hvor?

Når en pasient blir ustabil, hvor fører dere opp målingene da?

Evaluerer dere respirasjonen? Evt hvordan?

Hvordan sjekker dere bevissthet, er det bare "hallo hører dere meg"?

Hender det at dere involverer intensiv fortell?

Og hvordan har dere det med utstyr??

4) AKUTTMOTTAK

Hvordan er den ultimate rapport fra akuttmottaket?

Hva er deres opplevelse i forhold til at akuttmottak melder ny pasient til deres avdeling?

Fortell om en god opplevelse og hva gjorde den god? (Aktiv lytting og bekreftelse)
Fortell om en dårlig opplevelse og hva gjorde den dårlig? (Aktiv lytting og bekreftelse)
Hvilke råd ville du gitt til sykepleierne i akuttmottak dersom de ønsket å gi bedre rapporter?
Hva kan du gjøre for å få fram et bedre rapport fra akuttmottak.
Hvordan tror du at andre opplever dine rapporter når pasienter flyttes? Og hvorfor?

HAR DERE NOE Å TILFØYE?

HVIS DERE KOMMER PÅ NOE VIKTIG SOM DERE HAR LYST TIL Å SI KAN DERE TA KONTAKT
MED OSS

Oppsummert har jeg oppfattet at dere sier at:

9.6 Attachment 6: Interview Guide #2 – Two ED focus groups

metode
Enkle
* Valgfriheten utspørte om de løsn ut - gg
fadrack - fin måte å starte dagen - Veldig hyggelig

AKUTTMOTTAKET

Å GI RAPPORT...

1. Hvordan har dere det når dere skal melde opp en pasient til post?
2. Hvordan oppleves det å melde opp pasienter til sengepost?
3. FORTELLE OM EN GANG DERE SKULLE MELDE OPP EN PASIENT...
4. Hvordan er kvaliteten på meldingene?
5. Hvilke faktorer påvirker kvaliteten på meldingene?
6. Hvordan er en **god** melding fra akuttmottaket til post?
 - a. Hva gjør dere for å melde opp en pasient på en god måte? Gi eksempler...
7. Hvordan er en **dårlig** melding fra akuttmottaket til post?
 - a. Hvorfor er det vanskelig? Gi eksempler...
8. «Vær ærlige!» er et utsagn fra post til akuttmottaket – hva synes dere om det?
9. Fortell om hvordan telefonmeldingene pleier å være - Hvordan opplever dere kommunikasjonen med mottakeren dere ringer til? Gruer du deg til samtalen? Hvorfor/hvorfor ikke?...
10. Hvordan vil dere ha kommunikasjonen i meldingen? (WHO: åpne for mulighet å stille spørsmål og få svar...to veis eller en veis kommunikasjon?)
11. En pasientoverlevering er en prosess der man overfører opplysninger og ansvar for en pasients behandling fra en person/gruppe/enhet til en annen for å sikre kontinuitet i behandling og pasientsikkerhet (Wong 2008; WHO/JCO 2007)...hvordan er dette i deres hverdag her?

☁
D

2

3. juni 2014
②
- opplevd at en annen har hatt pas.
- forhandleren er hvem som skal ha pas.
- vurdering av hvilke pas. kan legge på seg gang

↓
↑ verktøy
↓ system

+ samme språk

- føler press
- føler at det må være trykkt
- husker
- statter med + skriver, resyme
- da må vi se 4:30

SYSTEM

12. Hva synes dere er viktig å ha klart før dere melder?
13. Hvilke system eller rutine har dere for å melde pasienter fra akuttmottaket til post?
Prosedyrer, DIPS brukes den... Hvorfor /hvorfor ikke??? Også for nyansatte?
 - a. Innkomst sykepleier rapport i DIPS - Skriftlig spl rapport? → *frage p'ler for p'ler ved dokumentasjon*
14. Hvem melder opp hvilke pasienter? Har det noe å si?
 - a. Kjenner dere pasientene dere melder opp? Fortell...
15. Hva synes dere hensikten er med å melde opp en pasient til post? (er det for å forberede avdelingen på den som kommer eller er det for å selge billig...for å få pasienten ut...)?
 - b. Hva med pasientenes **psycho-sosiale forhold**? Har dere et oversikt over de? Klarer dere å formidle det videre?
 - c. Hva med **pleietyngden** – Har dere oversikt over det? Klarer dere å formidle det til post?
16. Hvordan kartlegger dere en pasient før flytting? (PLEIETYNGDEN)
17. Hva har dere behov for å melde? Gi eksempler

☉

Symensis tekniske mangler
↓ styring DIPS
↓ dokumentasjon
↓ pleie / skift
↓ personalmøte

Å FÅ RAPPORT...

18. FORSLAG TIL Å FÅ TIL EN GOD PASIENTMELDING FRA AKUTTMOTTAKET TIL POST?
19. Hva setter dere pris på i overlevering når dere tar i mot en pasient – fra triage/ambulans/vaktskiftet?
20. Hva skal til for å få en god rapport fra en annen?

2 av 2 helsettskand
1 valgfri
1 erfaren spl

“lystet å få hørt seg”

9.7 Attachment 7: Interview Guide #3 – Surgical ward focus group

- fng 7-opp
- 7. lejemmer pas
- ustrukturert - 7. klar

3 juni (3)

bl (33)

KIRURGISK DIVISJON

Å GI RAPPORT...

i samme en plan fra legerne

1. Hvordan har dere det når dere tar i mot melding om en ny pasient til post?
2. Hvordan oppleves det å få meldinger om nye pasienter fra akuttmottaket?
3. FORTELLE OM EN GANG DERE FIKK MELDT OPP EN PASIENT...Gi eksempler
4. Hvordan er kvaliteten på meldingene?
5. Hvilke faktorer påvirker kvaliteten på meldingene?
6. Beskriv en **god** melding fra akuttmottaket til post?
 - a. Hva gjør dere for å ta i mot en melding på en god måte? Gi eksempler
7. Beskriv en **dårlig** melding fra akuttmottaket til post?
 - a. Hvorfor er det vanskelig? Gi eksempler...
8. «.....!» er et utsagn fra akuttmottaket til post – hva synes dere om det? *Hva stilles en god og en dårlig melding*
9. Fortell om hvordan telefonmeldingene pleier å være – Hvordan opplever dere kommunikasjonen med mottakeren dere ringer til? Gruer du deg til samtalen? Hvorfor? *Har bestudet, vet hva de snakker om - planen forelyser*
10. Hvordan vil dere ha kommunikasjonen i meldingen? (WHO: åpne for mulighet å stille spørsmål og få svar...to veis eller en veis kommunikasjon?)
11. WHO: En pasientoverlevering er en prosess der man overfører opplysninger og ansvar for en pasients behandling fra en person/gruppe/enhet til en annen for å sikre kontinuitet i behandling og pasientsikkerhet (Wong 2008; WHO/JCO 2007)...*hvordan er dette i deres hverdag her?*

SYSTEM:

12. Hvilke system eller rutine for melding av pasienter fra akuttmottaket til post? Prosedyrer, DIPS brukes den... Hvorfor /hvorfor ikke??? Også for nyansatte?
 - a. Innkomst sykepleier rapport i DIPS – Skriftlig spl rapport?
13. Hvem melder opp pasientene? Har det noe å si? «De kjenner ikke pasientene de melder opp»
14. Hvem tar i mot meldingen fra akuttmottaket?
 - a. Skal de ha pasientene som meldes opp?
15. Hva synes dere hensikten er med å melde opp en pasient til post? (er det for å forberede avdelingen på den som kommer eller er det for å selge billig...for å få pasienten ut...)?
 - a. Hva med pasientenes **psycho-sosiale forhold**? Har dere et oversikt over de? Klarer dere å formidle det videre?
 - b. Hva med **pleietyngden** – Får dere oversikt over det? Klarer dere å formidle det til post?
16. Hvordan kartlegger dere en pasient som kommer opp på avdelingen? (PLEIETYNGDEN)
17. Hva har dere behov for å vite når en pasient meldes...Gi eksempler

Å FÅ RAPPORT...

18. FORSLAG TIL Å FÅ TIL EN GOD PASIENT MELDING FRA AKUTTMOTTAKET?
19. Hva setter dere pris på i rapport fra andre avdelinger når dere tar i mot en pasient – intensiv, operasjon, annet?
20. Hva skal til for å få en god rapport fra en annen?

9.8 Attachment 8: Regional Ethics Committee approval

Vår ref. nr.: 2015/1411

Prosjekttittel: "Eksplorativ studie å beskrive pasienthandovere fra akuttmottak til post ved bruk av fokus-gruppe intervjuer av de respektive sykepleiegruppene. "

Prosjektleder: Sigrun Qvindesland

Kjære Sigrun Qvindesland,

Vi viser til Framleggingsvurdering mottatt 28.06.2015.

Generelt om fremleggingsplikten

Helseforskningsloven gjelder for medisinsk og helsefaglig forskning på mennesker, humant biologisk materiale eller helseopplysninger. Medisinsk og helsefaglig forskning defineres som virksomhet som utføres med vitenskapelig metodikk for å skaffe til veie ny kunnskap om helse og sykdom. Prosjekter som søker ny kunnskap om helse og sykdom, skal fremlegges for REK.

Prosjektbeskrivelse

Studien tar utgangspunkt i at det ofte er mangelfull opplysninger i pasientoverleveringer mellom etater eller avdelinger. Studien vil ha fokus på rapportering fra sykepleier til sykepleier. Undersøkelsen gjennomføres bla. ved hjelp av fokusgruppeintervju med sykepleiere ved akuttmottaket og ved Kir Div, ~~vest~~. Spørsmål som prosjektet bl.a. skal besvare: Hvordan opplever sykepleiere på post og i akuttmottaket pasientoverføringene? Hvilke erfaringer har sykepleierne av å gi rapport og ta i mot rapport? Hva mener begge sykepleiergrupper kjennetegner en god overlevering og hvorfor?

Konklusjon

Prosjektet søker ny kunnskap om erfaringer og opplevelser hos helsepersonell ved pasientoverlevering, men tar ikke sikte på å søke ny kunnskap om sykdom og helse som sådan. Etter vår oppfatning er prosjektet ikke fremleggingspliktig for REK.

Du bør kontakte personvernombudet ved institusjonen for om studien skal meldes dit.

Vi gjør oppmerksom på at konklusjonen er å anse som veiledende, jfr. Forvaltningslovens § 11. Dersom du allikevel ønsker å søke REK vil søknaden blir behandlet i komitémøte og det vil bli fattet enkeltvedtak etter forvaltningsloven. Vi ber om at alle henvendelser sendes inn via vår saksportal: <http://helseforskning.etikkom.no> eller på e-post til:

post@helseforskning.etikkom.no. Vennligst oppgi vårt referansenummer i korrespondansen.

Med vennlig hilsen

Camilla Gjerstad

rådgiver

post@helseforskning.etikkom.no

T: 55978499

**Regional komité for medisinsk og helsefaglig
forskningsetikk REK vest-Norge (REK vest)**

<http://helseforskning.etikkom.no>





Til
Britt Sætre Hansen
Universitetssjukehus



Intern ID
Tildeles av
forskningsavdelingen

Ephorte saksnr
2015/3700

Saksbehandler:
Inger H Bleskestad, tlf 5151 3865

Dato:
19.11.2015

Tilbakemelding på melding om behandling av personopplysninger i forbindelse med prosjektet: «Sykepleieres erfaringer med pasientoverleveringer fra akuttmottak til somatiske avdelinger, en kvalitativ studie».

Det vises til innsendt melding om behandling av personopplysninger datert 20.10.2015 vedlagt e-post datert 12.11.2015.

Personvernombudet har vurdert prosjektet og finner at behandling og utlevering av personopplysninger i denne saken er meldepliktig til personvernombudet med hjemmel i Personopplysningsforskriften § 7-12, jf. Personopplysningsloven § 31 første ledd. Behandlingen tilfredsstiller kravene i personopplysningsloven.

Formålet med prosjektet er å lære- og å utvikle ny kunnskap om hvordan sykepleiere i akuttmottaket og på sengepost opplever pasientoverleveringsprosessene fra akuttmottaket til sengepost og i hvilken grad kvaliteten på overleveringen påvirker pasientenes situasjon.

Fokusgruppeintervju med ansatte (sykepleiere) i akuttmottak og på medisinske og kirurgiske sengeposter vil bli gjennomført som ledd i prosjektet. Helseopplysninger inngår ikke i datagrunnlaget. Fokusgruppeintervjuer av sykepleiere gjennomført i løpet av 2014 ønskes benyttet som en «kvalitativ baseline/referansemateriale».

Personvernombudet tilrår prosjektet under følgende forutsetninger:

1. Behandling av personopplysningene skjer i samsvar med og innenfor det formål som er oppgitt i meldingen, jf. personopplysningsloven § 11 c). Dersom formålet eller databehandlingen endres må det straks gis skriftlig melding til forskningsavdelingen som vil ta saken opp til vurdering i møte med personvernombudet.
2. Tilgangen til opplysningene skjer i overensstemmelse med taushetspliktbestemmelsene.
3. Data innhentes ved fokusgruppeintervju av helsepersonell. Personvernombudet minner om at det av hensyn til helsepersonells taushetsplikt ikke kan fremkomme identifiserbare opplysninger om enkeltpasienter eller enkeltbrukere og anbefaler at forsker minner informantene om dette i forbindelse med intervjuet.
4. Samtykkeskrivet er godt utformet, men inneholder en formell feil. Under punktet «GODKJENNING» er det anført at prosjektet er godkjent av Regional komite for medisinsk og

helsefaglig forskningsetikk. Dette medfører ikke riktighet og punktet må fjernes i sin helhet fra samtykkeskrivet.

5. Personvernombudet har ingen innvendinger til at fokusgruppeintervjuer fra 2014 blir benyttet som «referansemateriale». Melding om behandling av personopplysninger ble sendt personvernombudet den gang, men tilbakemelding ble aldri gitt, slik at oppstartstillatelse etter interne foretaksrutiner ikke forelå før prosjektstart. I og med at datagrunnlaget er personopplysninger innsamlet etter at informert samtykke var innhentet og ingen helseopplysninger inngår, finner personvernombudet at disse dataene må kunne tillates brukt selv om formell oppstartstillatelse ikke var gitt.
6. Data slettes eller anonymiseres ved prosjekt slutt 31.12.2017.
Det skal ved prosjektslutt sendes *sluttmelding* og *bekreftet sletting* til forskningsavdelingen.
7. Prosjektets data skal oppbevares forsvarlig og i henhold til personopplysningsforskriftens kapittel 2. Personopplysninger lagret på mobile enheter må krypteres tilstrekkelig.



Inger H Bleskestad
Personvernombud



Notat

Til:
Brit Sætre Hansen

Fra:
Fagsjef Kirsten Lode

Kopimottakere:
Divisjonsdirektør Svein Skeie, Konst. divisjonsdirektør Anne Ree Jensen,
Divisjonsdirektør Hans Tore Frydnes, Juridisk rådgiver Ina Trane

Dato: 21.12.2015
Arkivref: 2011/1131 - 121730/2015

Godkjennelse masteroppgave (Sigrun Anna Qvindesland) - MA74

Masterprosjektet: «Sykepleieres erfaringer med pasientoverleveringer fra akuttmottak til somatiske avdelinger, en kvalitativ studie, et kvalitetsforbedringsprosjekt (mastergrad)»

Det vises til søknad vedrørende oppstart av ovennevnte masterprosjekt. Prosjektet har vært vurdert av forskningsansvarlig og prosjektet er registrert i vår database med intern id: MA74

Nødvendige tillatelser foreligger. Basert på disse og forskningsprotokoll godkjennes oppstart av masterprosjektet.

Forskningsavdelingen ønsker å minne om at som ved alle forskningsprosjekter gjelder:

- ved endringer må endringsmelding sendes
- dersom innhenting av pasientopplysninger baserer seg på samtykke, må samtykkeskjemaet oppbevares sikkert
- data skal slettes eller anonymiseres ved prosjektslutt

Dersom prosjektet ikke starter og/eller blir avbrutt må melding sendes til Forskningsavdelingen. Likeledes sendes en kort sluttrapport.

Tillatelsen gjelder bruk av data i utarbeidelse av mastergrad. Ved eventuell publisering av prosjektet, ber Forskningsavdelingen om at medforfatterskap fra SUS vurderes i de tilfeller hvor sjukehuset har vært bidragsyter til prosjektet.


Forskningsavdelingen ønsker lykke til med gjennomføring av prosjektet.


9.11.a Attachment 11a: Example of information to division lead at study hospital

Stavanger 06.02.2014

Til Divisjonsdirektør Inger Cathrine Bryne, Kirurgisk og Medisinsk Divisjon



Akuttmottaket ved  ønsker å forbedre pasientrapporteringen internt i avdelingen og opp mot samarbeidende avdelinger. I samarbeid med Aslaug Skauen, leder MOBA, og Øystein Evjen Olsen, medisinsk ansvarlig MOBA, har vi blitt enige om å iverksette et forskningsprosjekt hvor kommunikasjonen ved pasientoverleveringer settes under lupen. Vi ønsker å implementere kommunikasjonsverktøyet SBAR (Situasjon-Bakgrunn-Aktuelt-Råd) til bruk ved pasientoverleveringer. SBAR er allerede innført ved kirurgisk divisjon (MIT) og ved nyfødtintensiv. Det arbeides også med å innføre SBAR på 2M og på Føden. Nyere forskning (DeMeester et al 2013; Manning 2006; Wallin & Thor 2008) viser at kvaliteten på den daglige tverrfaglige kommunikasjonen påvirker pasientsikkerheten, og at SBAR har effekt.

Vi ønsker å organisere implementering av SBAR som et forskningsprosjekt etter mal fra MIT implementering i Kirurgisk Divisjon. Det spesielle ved denne metoden er at den inkluderer brukererfaringer og resurspersoner, og organiseres som en kontinuerlig aksjonsforskningsprosess. Før intervensjonen foretas i akuttmottaket vil vi lære mer om de aktuelle utfordringer som erfares av de ansatte i en travel hverdag når gode pasientoverleveringer skal sikres. For å gjøre dette på en god måte ønsker vi å invitere de ansatte sykepleiere ved Akuttmottaket og Med/Kir Div  intervju. Vi ønsker å vite mer om de ulike kommunikasjonsmønstre (kvalitet og innhold) som møter dem og hvilke faktorer de opplever påvirker kommunikasjonsprosessene positivt og/eller negativt. Deres tanker og erfaringer er viktige. De vil påvirke forbedringsarbeidet som på denne måten kommer pasienter og kolleger til gode.

Fokusgruppeintervjuene/Intervjuene vil vare i max 1 time og blir tatt opp på lydbånd, som transkriberes og slettes. Ingen personopplysninger vil bli lagret. Vi velger å ivareta forskningsetiske retningslinjer (The World Medical Association Declaration of Helsinki, 2008) ettersom vi ønsker å ha mulighet til å forske på de innsamlede data og eventuelt også publisere. Konfidensialitet, frivillighet og samtykke er sentrale etiske aspekter ved en slik studie og vil bli ivaretatt. Informasjonsskriv vil bli delt ut til aktuelle deltakere, og frivillig informert samtykke vil bli innhentet.

Dersom du ønsker mer informasjon kan en av de undertegnede kontaktes.
Hilsen

Sigrun Anna Qvindesland
Akuttsykepleier, SUS/SAFER
Mobil: 9019XXXX, Mailadr: sigrunanna.qvindesland@safer.net

Britt Sætre Hansen,
Intensivsykepleier, Post doc
SUS/UIS, Mobil 9902XXXX, Mailadresse: habs@sus.no

9.11.b Attachment 11.b: Example of e-mail reply from division lead

e-mail svar m/godkjenning for intervju fra Inger Cathrine Bryne, divisjons direktør



Den 6. feb. 2014 kl. 16:46 skrev "Bryne, Inger Cathrine"



Ser spennende ut. Godkjennes med ønske om lykke til med arbeidet!

Mvh

Inger Cathrine Bryne

Den 6. feb. 2014 kl. 12:45 skrev "Hansen, Britt Sætre" <



Hei Cathrine,

Vedlagt følger forespørsel om godkjenning av forskningsprosjekt ved Kir/Med Divisjon.

Håper på rask avklaring,

Mvh Sigrun og Britt

<Samtykke intervju_Inger Cathrine Bryne.doc>

9.12 Attachment 12: Letter for Informed Consent from participants



Forespørsel om deltakelse i forskningsprosjektet

SYKEPLEIERES ERFARINGER MED PASIENTOVERLEVERINGER MELLOM AKUTTMOTTAK OG SOMATISKE AVDELINGER, EN KVALITATIV STUDIE.

Dette er et spørsmål til deg om å delta i en forskningsprosjekt for å lære mer om på kommunikasjonen ved pasientoverleveringer mellom akuttmottaket og somatiske avdelinger på SUS. Akuttmottaket ved SUS har fått avviksmeldinger om pasientrapporteringer, og ønsker å sette fokus på pasientrapporteringen opp mot samarbeidende avdelinger. Vi ønsker å inkludere brukererfaringer fra **både** avdelingene **og** akuttmottaket for å få kunnskap om hvordan pasientrapporteringene mellom akuttmottaket og avdelingene oppleves. Derfor er det viktig å høre fra dere som er aktive sykepleiere involvert i denne overleveringsprosess som en del av hverdagen. Dette er et samarbeidsprosjekt mellom akuttmottaket og Masters student Sigrun Anna Qvindesland, og veileder Professor Britt Sætre Hansen ved Universitetet i Stavanger.

Hva innebærer PROSJEKTET?

Vi ønsker å inkludere brukererfaringer fra **både** avdelingene **og** akuttmottaket for å få kunnskap om hvordan pasientrapporteringene mellom akuttmottaket og avdelingene oppleves og hva skiller den gode fra den dårlige rapporten. Hvordan kan vi på best mulig måte ivareta og videreformidle pasientopplysninger? Deres tanker og erfaringer er viktige. De vil påvirke forbedringsarbeidet som på denne måten kommer pasienter og kolleger til gode.

Vi ønsker å foreta fokusgruppeintervju hos dere for å lære om pasientoverleveringer. Intervjuet vil ta maks. en time. Et fokusgruppeintervju er som en gruppediskusjon. Diskusjonen blir tatt opp på lydband, som transkriberes. Ingen personopplysninger vil bli lagret. Opplysningene fra intervjuet vil bli behandlet konfidensielt og din anonymitet vil bli sikret. Du kan trekke deg når som helst. Ingen opplysninger vil kunne tilbakeføres til deg. Prosjektet er meldt inn til Personvernombudet for forskning ved SUS, og har fått godkjenning hos klinikkdirektørene og avdelingenes ledelse.


I prosjektet vil vi innhente og registrere opplysninger om deg: alder, spesialutdanning, erfaring som sykepleier (år) og erfaring (år) på din avdeling. Det data vil kun brukes for å illustrere demografisk sammensetting av deltagerne som gruppe, og vil ikke knyttes til individuelle utsagn og dermed ikke kunne spores tilbake til dere som individer.

Mulige fordeler og ulemper

I forskningslitteratur kommer det fram at det å delta i et fokusgruppeintervju kan medbringe læring, refleksjon og vekst. Vi kan ikke se noen ulemper med å delta i fokusgruppeintervju. Intensjonen med forskningen er at kunnskap som intervjuene bringer fram vil kunne bidra til kvalitetsforbedring i pasientoverleveringsprosessen på sikt.

Frivillig deltakelse og mulighet for å trekke sitt samtykke

Det er frivillig å delta i prosjektet. Dersom du ønsker å delta, undertegner du samtykkeerklæringen på siste side. Du kan når som helst og uten å oppgi noen grunn trekke ditt samtykke. Dersom du trekker deg fra prosjektet, kan du kreve å få slettet innsamlede opplysninger, med mindre opplysningene allerede er inngått i analyser eller brukt i vitenskapelige publikasjoner. Dersom du senere ønsker å trekke deg eller har spørsmål til prosjektet, kan du kontakte

Britt Sætre Hansen, Professor UiS; Intensiv avdeling,  Mailadresse:

habs@sus.no

og

Sigrun Anna Qvindesland, Sykehuskoordinator SAFER; Akuttsykepleier; Mobil tlf 9019 XXXX; Mail adresse: sigrunanna.qvindesland@safer.net

Hva skjer med informasjonen om deg?

Informasjonen som registreres om deg skal kun brukes slik som beskrevet i hensikten med studien. Du har rett til innsyn i hvilke opplysninger som er registrert om deg og rett til å få korrigert eventuelle feil i de opplysningene som er registrert.

Alle opplysningene vil bli behandlet uten navn og fødselsnummer eller andre direkte gjenkjenningse opplysninger. En kode knytter deg til dine opplysninger gjennom en navneliste

Prosjektleder har ansvar for den daglige driften av forskningsprosjektet og at opplysninger om deg blir behandlet på en sikker måte. Informasjon om deg vil bli anonymisert eller slettet senest fem år etter prosjektslutt.

Godkjenning

Prosjektet er fremlagt for Regional komite for medisinsk og helsefaglig forskningsetikk, **Vår ref. nr.: 2015/1427 og vurdert som ikke fremleggingspliktig.**

Prosjekttittel: "Pasientoverleveringsprosessen mellom akuttmottaket og sengepost: gransking av avviksmeldinger; fokusgruppeintervjuer med sykepleiere".

Samtykke til deltakelse i PROSJEKTET

Jeg er villig til å delta i prosjektet

Sted og dato

Deltakers signatur

Deltakers navn med trykte bokstaver

Jeg bekrefter å ha gitt informasjon om prosjektet:

Sted og dato

Signatur

Rolle i prosjektet

Prosedyre for pasientflyt

Dokumentadministrator: Øyvind J. Jørgensen

Versjon: 1.2

Godkjent av:

ID: 23743

Gyldig fra: 19.12.2014

Revisjonsfrist: 19.12.2016

Prosedyre for pasientflyt**Hensikt**

Å sikre at pasientflyt fra akuttmottak til sengepost skjer på en medisinsk faglig forsvarlig måte. Sikre at oppholdstiden i akuttmottaket er faglig forsvarlig. Å bedre kommunikasjon og samhandling mellom involverte aktører.

Omfang

Gjelder alle pasienter som ankommer gjennom akuttmottaket, som skal videreføres til sengepost.

Ansvar

Divisjonsledelsen har ansvaret for implementering. Avdelingsledere, vaktlegene i mottak og flyt koordinatør funksjonen har ansvar for å følge rutinen.

Definisjoner

Sengeplass betegner plass til pasient på en egen sengepost, slik definert av divisjonen.

Fortrukket post indikerer sengepost definert etter medisinsk årsak.

Rutiner**A. Flytprinsipper**

Pasientflyt / beleggs koordinatorene har ansvar for å tildele sengepost for nye pasienter fra akuttmottaket. Pasientene skal videreføres til sengepost etter ferdigstilling av lege og sykepleier til forventet frigjort sengeplass. Divisjonen er ansvarlig for fortløpende fremdrift for å skape plass til pasienten i egen divisjon og hindre opphopning av pasienter i Akuttmottaket.

Vaktlege teamet i akuttmottaket har ansvar for at pasienten plasseres på rett post etter medisinsk faglig årsak. Innliggende pasienter skal omplasseres slik at beredskap sikres og effektiv bruk av spesialposter og medisinsk kompetanse utnyttes.

B. Plassering etter medisinsk faglig årsak (se vedlegg under RELATERT)

- i. Forhåndsdefinerte pasientgrupper (f.eks. PCI) plasseres etter gjeldende godkjente prosedyrer (må defineres av hver enkelt divisjon).
- ii. Vaktlege teamet beslutter post for pasienten etter medisinske retningslinjer.
- iii. Ved tilfelle der spesialisert behandling er medisinsk nødvendig (f.eks. telemetri) på en spesiell post som er definert full, skal vaktlege teamet prioritere pasienter på denne posten (i samarbeid med postoverlege på dagtid).

Rapportering

Dokumentasjon mellom lege og pasientflyt / beleggs koordinatør via Akutt databasen med fortrukket post ut fra medisinsk faglig begrunnelse og per telefon.

Daglige rapporter ukedager mellom pasientflyt koordinatør Kir/Med og beleggs koordinatør akuttmottak.

Daglige møter mellom vaktlege team Kir/Med og beleggs koordinatør ved vakt skiftet for leger.

Rapporterings mal utkast i ePhorte.

(Sett inn mal evt link til mal. Skjema slik det brukes idag).

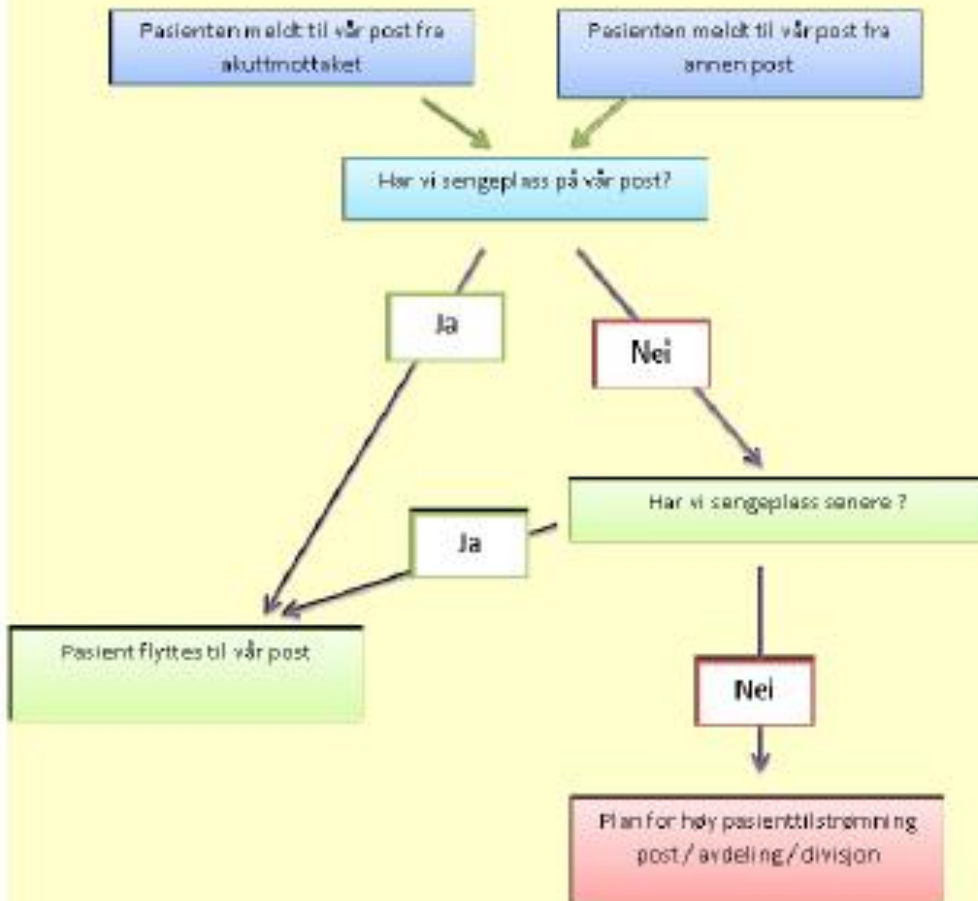
Vedlegg

Flyt diagram som illustrerer prosedyren fra Akuttmottaket.
 Flyt diagram som illustrerer prosedyren fra Sengepost.

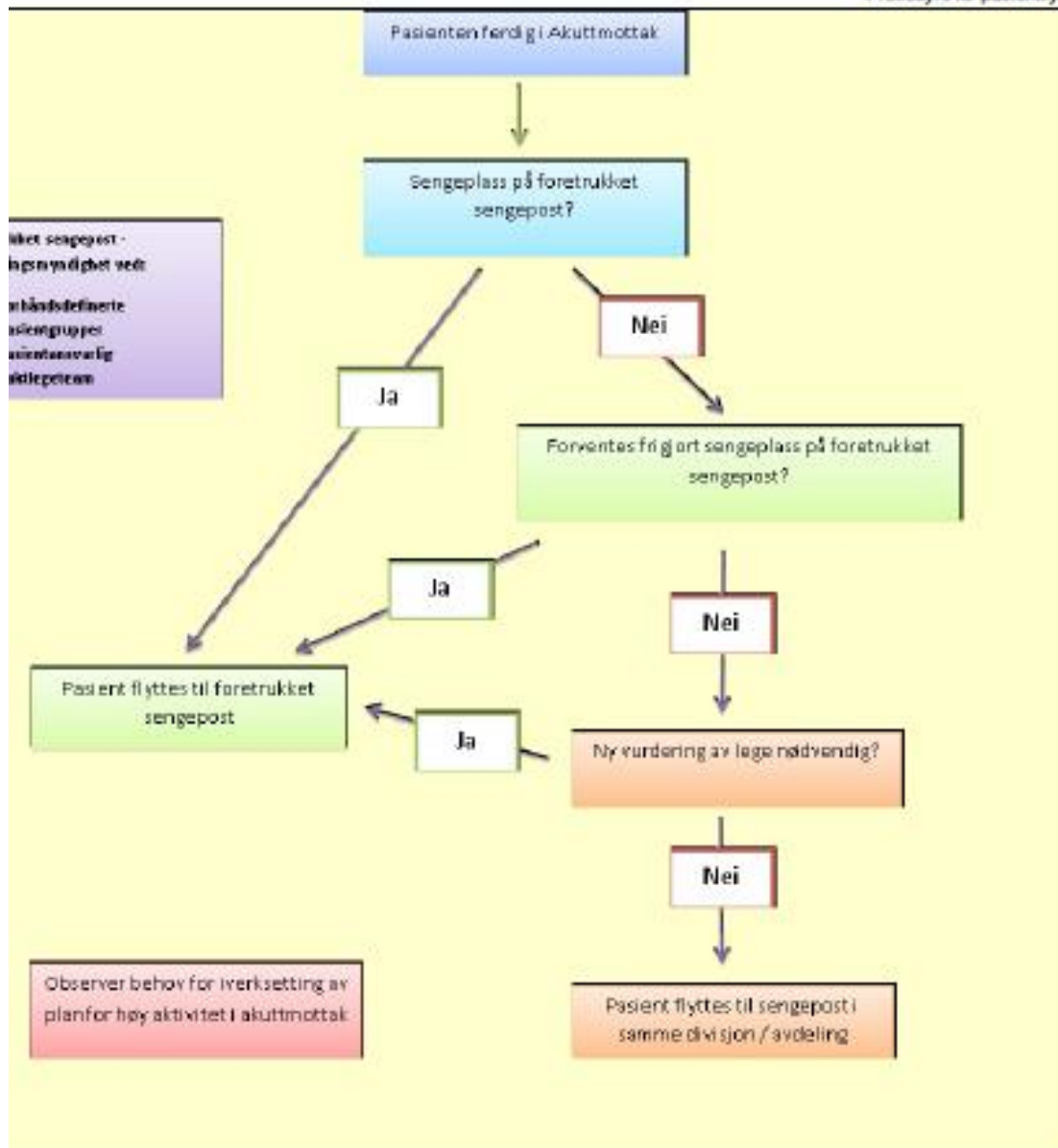
Avvik

Avvik meldes i Synergi.

Overordnet pasientflyt for sengeposter



Overordnet pasientflyt for Akuttmottak



Vedlegg

- Plassering etter medisinsk faglig årsak

9.14 Attachment 14: ED Handover procedure for admitting patients

Melding av pasienter fra MOBA til sengepost

Forfatter: Helga ...	Gyldig fra: 31.05.2010	Versjon: 1.0
Godkjent av: Helga ...	Revisjonsfrist: 01.11.2010	ID: 3448

1. HENSIKT

Sikre at relevante opplysninger om pasienten blir formidlet videre til mottakene sengepost.

2. ANSVAR

Avdelingsledelsen har ansvar for å utarbeiderutiner og å gjøre disse kjent. Den enkelte ansatte er ansvarlig for å følge rutinene.

3. RUTINE

Pasientansvarlig sykepleier har ansvar for å melde pasienten til mottakene avdeling etter følgende rutiner:

- Muntlig rapport pr. telefon til avdelingene
- Utfylt sykepleiedokumentasjon på eget skjema og i DIPS.
- Muntlig rapport til mottakene sykepleier om pasienten følges av sykepleier.

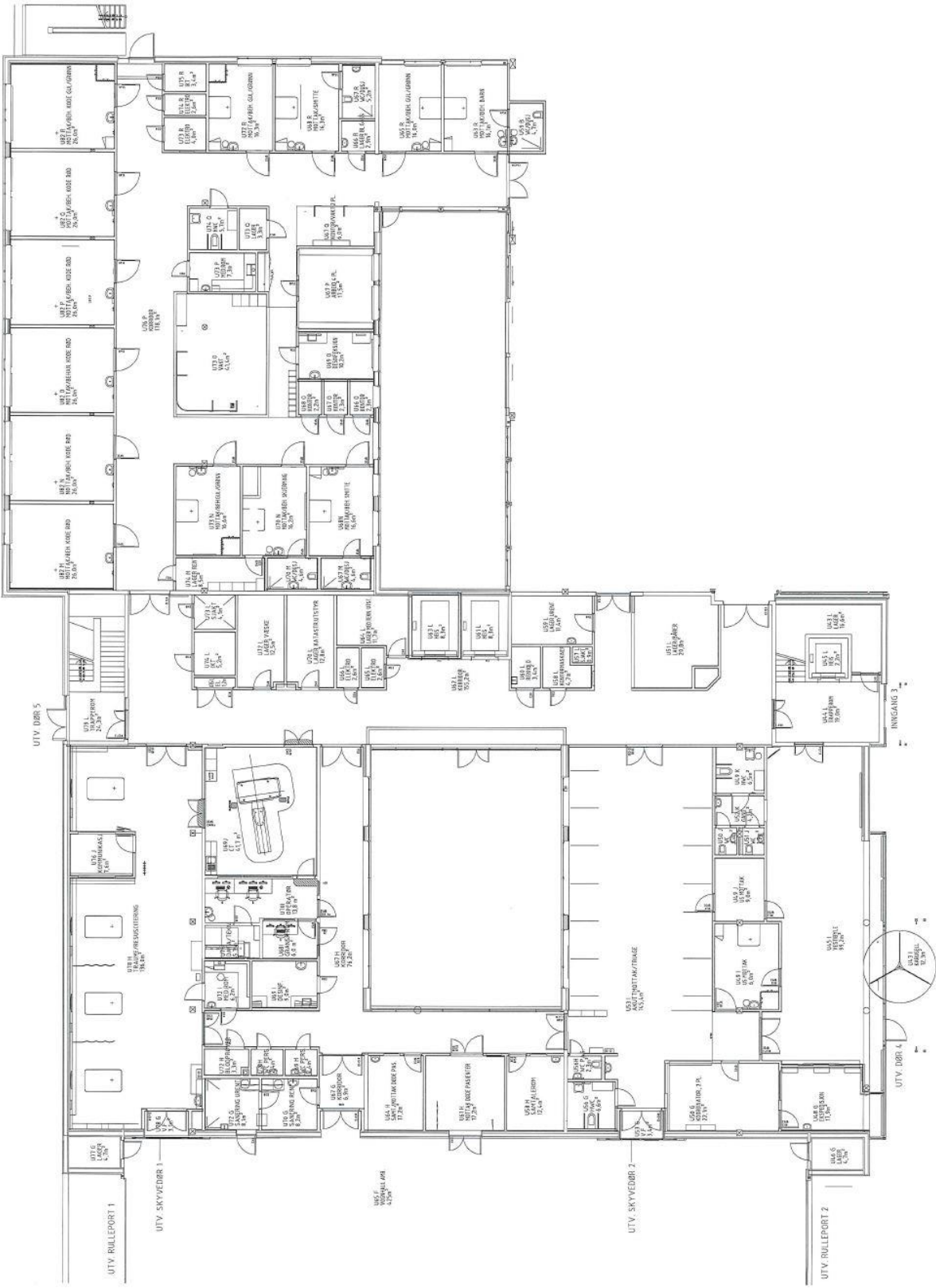
4. AVVIK

Jmf. HMS-håndboken kap 1.7.

5. FORANDRINGSOVERSIKT

12.12.04, 03.11.06, 02.04.2009

9.15 Attachment 15: Study Site ED floor plan



9.16 Attachment 16: Study Site Protocol: 3-hour breach in AD

Flytting av pasienter fra akuttmottak innen 3 timer

Flytting av pasienter fra akuttmottak innen 3 timer

Dokumentadministrator:  Versjon: 1.1
Godkjent av: ID: 18600
Gyldig fra: 16.05.2012 Revisjonstid: 01.12.2012

FLYTTING AV PASIENTER FRA AKUTTMOTTAK INNEN 3 TIMER

OVERORDNET MÅL

Reduksjon av identifisert risiko ved lang liggetid i Akuttmottak skal løses med følgende tiltak vedtatt i ledergruppen sak 227/12:

Fra 1. mai og ut august skal liggetid i Akuttmottak, fredager fra kl. 15.00 mandag kl. 07.00, være maks 3 timer. Ordningen evalueres senest 01.09. 2012.

Prosedyren tar utgangspunkt i at forebyggende tiltak og tiltak som skal iverksettes dersom makstid på 3 timer i Akuttmottak ikke kan overholdes utarbeides av Kirurgisk og Medisinsk divisjon. Prosedyren beskriver mottak av pasienter, tilsyn av lege og flytting av pasienter fra mottak til sengepost, og inneholder varslingsrutiner, logistikk, ansvar og gjennomføring.

I en prøveperiode skal ordningen kontinuerlig evalueres og en ny gjennomgang vil skje primo juni.

1. HENSIKT

- Beskrive rutiner for mottak og flytting av pasienter - Akuttmottak
- Sikre optimal pasientflyt og unngå at pasienter ligger mer enn 3 timer etter innkomst i Akutt mottak
- Gi pasienter som innlegges som øyeblikkelig hjelp, en kvalitativt bedre medisinsk forsvarlig og raskere behandling.
- Tilstrebe at pasienter blir plassert på riktig avdeling/sengepost.
- Iverksette tiltak som reduserer identifisert risiko beskrevet etter tilsyn fra fylkeslegen.

2. ANSVAR

- Divisjonsdirektørene inne somatisk virksomhet har ansvar for gjennomføring av rutinen.
- Divisjonen (med underliggende enheter) som pasienten er primært tilknyttet, har ansvar for at pasienten er undersøkt av lege og klar for utflytting innen makstid på 3 timer i Akuttmottak.

3. PREMISER

- Prosedyren gjelder fra fredager kl. 15.00 mandag kl. 07.00
- Øyeblikkelig hjelp pasienter skal ikke sendes direkte fra Akuttmottak uten legeundersøkelse
- Sykepleier i Akuttmottak skal sørge for at pasienter er klar for legetilsyn så raskt som mulig (15-30 minutter) se pkt. 2 Ansvar for Akuttmottak. Leger varsles innen 15-30 minutter.
- Det er en forutsetning at det er god kommunikasjon mellom vakthavende lege som skal tilse pasienten, vakthavende sykepleier, behandlende sykepleier i Akutt mottak om prioritering og tidspunkt for tilsyn fra lege.
- Pasientflytkoordinator skal så raskt som mulig etter at pasienten er innskrevet i Akutt databasen, avklare hvor pasienten kan ligge. Hvis det er fullt på sengepost hvor pasienten naturlig hører hjemme, skal dette med kommuniseres vakthavende lege.
- Når behandlingsrommene er opptatt og det er ledig legekapasitet, kan Triage rommet benyttes til undersøkelse dersom pasientens tilstand tillater det. *Prinsippet gjelder hele uken.*
- I OBA Tun 1, benyttes ett 4-mann rom fra kl. 12-20 alle dager i uken til pasienter som er tilsett av lege, men venter på undersøkelser før evt. innleggelse, behandling eller hjemreise. Sengene går av Medisinsk divisjon sin kvote av senger. Sykepleier i OBA varsler ansvarlig lege umiddelbart når avklaringer har kommet (eks: us, lab, tilsyn)