# The Supportive and Impeding Nature of Culture in Adverse Event Reporting

An ethnographic research study



Christopher D. Harter Master's Thesis | Techno-Anthropology | Aalborg University 2014



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"Every minute spent in front of a computer is one less minute spent with caring for patient – our actual job!" (Health Care Assistant trainee, Richard)

# Abstract

**Background:** January 2004, marked the commencement date of the *Danish Act on Patient Safety in the Danish Health Care System*, which made it mandatory, by law, for all health care professionals to report (potential) adverse events, by means of the national reporting system. The aim of the act and the national reporting system is to improve patient safety, throughout the Danish health care system, by analyzing adverse event reports in a learning perspective. However, ten years after the official commencement date, media have argued that the Danish health care system, have not been learning from their mistakes, as Danish media reports numbers showing that adverse events are being reported as frequent today, as they were in 2004. This argument, presented by Danish media, led to the discovery that not only do different health care institutions have varying reporting frequencies of adverse events, but the same trend can be found within individual health care institutions, between departments. Initial contact with the North Jutland Region's regional quality committee, confirmed having observed this variance and were curious as to the cause of such discrepancy in reporting. In turn, leading to the design of present study.

**Objective:** To investigate discrepancies in reporting frequencies of (potential) adverse events, at two different yet comparable internal medical wards, within the same hospital organization, in Denmark. As well as to identify parameters both supporting and impeding health care professionals from reporting (potential) adverse events, in said internal medical wards.

**Methods:** Ethnographic study of two internal medical wards. The empirical data collection follow four stages of observations ranging from initial descriptive observations to focused and selective observations. Data was collected through participant observations, participant reports, formal and informal interviews, as well as field notes for recording observations, reports and key areas of interest for further observations.

**Participants and setting:** All health care professionals present at the time of conducted fieldwork, here included; doctors, nurses, health care assistants and associated students. All participants were employed in different departments and wards, within the same hospital organization. The two wards in focus were different, yet comparable internal medical wards with discernable differences in reporting frequencies of adverse events.

**Results:** Three main parameters were discovered throughout the conducted ethnographic fieldwork. *Prioritization of tasks, Evaluation of adverse events' severity-level* and *interpersonal relationships.* Analysis of the three parameters, led to the discovery of several sub-parameters, as underlying supportive and impeding factors to adverse event reporting. The three parameters, as well as corresponding sub-parameters, were seen as both supportive and impeding factors in terms of health care professionals attitudes towards adverse event reporting.

**Conclusions:** Three main parameters, including corresponding sub-parameters, could be seen as a plausible explanation to why the selected wards were showing differing reporting frequencies of (potential) adverse events. Moreover, by contextualizing the results presented in current thesis, with results from international academic literature, indicated a need to focus on *medical culture* as a supportive and impeding factor in health care professionals' attitudes towards adverse event reporting. Present thesis suggests a new perspective, to investigate how the Danish adverse event reporting system could be optimized, to take the parameters presented here, into consideration. This could provide knowledge on how the integration of adverse event reporting in the work routines of Danish health care professionals, could improve the national reporting system.

# Preface

The master's program in Techno-Anthropology was established in September 2012. Present thesis research is one of the pioneering research studies of Techno-Anthropology, conducted between September 2013 and June 2014 at Aalborg University, Denmark. My decision of choosing Techno-Anthropology as my master's degree, thus being among the very first graduates with a Master of Science in Techno-Anthropology, originated in my aspiration of combining qualitative studies with a more technology-centered perspective. In 2012, I graduated with a bachelor's degree in Sociology at Aalborg University, which gave me an in-depth understanding of qualitative and quantitative research methods, relating to the field of sociology. As advertisement for the master's program in Techno-Anthropology began during the final year of my bachelor's degree in sociology, the aspect of using qualitative research methods in a more technical context intrigued me.

Being among the first students within a new field of research has at times proven to be, both motivating and cumbersome. In cooperation with the talented researchers, who initially founded Techno-Anthropology, my fellow graduates and me were able to influence curriculum in terms of our prospects of what a Techno-Anthropologist is. In essence being in control of one's own learning under supervision of the many scholars involved in the design of Techno-Anthropology – designing the future for many students to come. However, being a pioneer also brought along its share of difficulties, as the overall aim of Techno-Anthropology, was perplexing at times. This has brought both a high dropout rate, but also a tight bond with the remaining graduates who persevered throughout the good and the difficult times. Techno-Anthropology has brought with it, a coalescence of students with various academic background. Resulting in a variegated group of students, now standing on the threshold of a business world in need of the expertise Techno-Anthropologists brings with them. Expertise in building bridge between technology and humans from a design, production and consumer perspective.

For me, Techno-Anthropology has also brought new acquaintances in forms of academic affiliates as well as personal connection. Which leads me to the people who have helped me, guided me and stood by me throughout my thesis work and my journey towards becoming a Techno-Anthropologist.

I would like to thank Christian Nøhr and Pernille Bertelsen for supervision and guidance throughout my thesis work. Without them the process of designing and conducting a study of this proportion, as well as writing my thesis, would have been much more difficult than it has. Thanks to the different people in the North Jutland Regional quality committee, local hospital management and participating health care professionals, for enabling me to conduct my thesis research.

I would also like to thank my esteemed friend and colleague, Kristina Tornbjerg for support and laughter when laughter was needed. Lastly, I would like to convey a very special thanks to Louise Holst, for helping me keep on track, both professionally and personally, by providing support and tranquility when it was needed the most.

Aalborg University – 2014 Christopher D. Harter

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## **1** LIST OF ABBREVIATIONS

The following is a list of all abbreviations used throughout present study, in order of appearance.

- DPSD Danish Patient Safety Database
- NAPRC National Agency for Patient's Rights and Complaints
- DR Danish Broadcasting Corporation
- HCP Health Care Professionals
- IoM American Institute of Medicine
- DSP Danish Society for Patient Safety
- EMS Emergency Medical Services
- NBH National Board of Health
- SAC Safety Assessment Code
- AEU Adverse Event Unit
- PAGAE Professional Advisory Group on Adverse Events
- PSO Patient Safety Officers
- AUB Aalborg University Library Database
- PubMed US National Library of Medicine
- HCA Health Care Assistant

# 2 INTRODUCTION

#### 2.1 THE INEVITABILITY OF HUMAN ILLNESS

Sickness is an inevitability of human life and negatively impacts individual's as well as society in a variety of ways. Most people have experienced some level of sickness, be it e.g. the common cold or cancer and those who have can surely agree upon one thing; being sick is annoying! Getting well, even with help from medicine and healthcare related services, is often a long and cumbersome process, but even worse is becoming sicker because of someone's mistake. In 2012, Denmark had approximately 700.000 hospitalized patients (Danmark Statistik 2014) and with such an amount of people moving through the Danish hospital sector, mistakes are bound to happen. Most people can agree that mistakes must be avoided and this is especially the case for health care professionals, where mistakes could potentially mean the difference between life and death.

Field Note | "Our primary task is to care for patients. This is the sole reason for us choosing to become nurses! [...] Committing the "big mistake" is our worst nightmare!" (Nurse at ward X)

Patient safety is the primary concern, of all health care professionals, which becomes clear in the above quote. Patient care is why the quoted nurse (and colleagues) chose to become nurses and being the direct cause of a potentially dangerous error, or adverse event, would be the worst situation imaginable. However, unfortunately they do happen and since the Danish reporting system was implemented in 2004, *The Danish Patient Safety Database* (DPSD) reports upwards of 500,000 reported adverse events as shown in the 2013 DPSD annual report (Patientombuddet 2014). This indicates a high amount of adverse events and no matter how big or small, all adverse events point to patient safety issues. As the nurse above stated, committing the "big mistake", is a health care professional's worst nightmare, which is where adverse event reporting and learning from reported mistakes, could potentially lessen future adverse events. To understand how knowledge sharing is able to contribute to a higher level of patient safety, through analysis of reported adverse events, the following introductory sections will identify the history behind adverse event reporting in Danish health care since its implementation in 2004.

"To err is humane; to forgive, divine." As written by Alexander Pope in his poem An Essay on Criticism in 1711 (Pope 2005), defines the sole purpose of having a learning-based reporting system (Donaldson, Corrigan & Kohn 2000). Not to condemn and sanction those that commit mistakes, but to gain knowledge and understanding of the surrounding circumstances that made the mistake possible.

#### 2.2 2004 – A New Patient Safety Agenda

January 2004, marked the commencement of the *Danish Act on Patient Safety in the Danish Health Care System*, passed by the Danish parliament in June 2003. The act made it mandatory for all health care professionals to report adverse events, to improve patient safety, throughout the Danish health care system (Danish Society for Patient Safety 2003). This lead to the national database of adverse events; DPSD, which has been in use since its creation in January 2004. The *National Agency for Patient's Rights and Complaints* (NAPRC) both supports and governs the DPSD and the adverse event reporting system of the Danish healthcare system, which enables health care professionals and patients – including their primary caregivers, to report adverse events on the DPSD website. After the acts commencement in 2004, reports, connected directly to the analysis of various reported adverse events indicated that changes to organizational procedures on a local and regional level were taking place, which, almost immediately, deemed the Danish adverse events reporting system a success (Lundgaard et al. 2005).

Mette Lundgaard et al. summarized the main points of the Act on Patient Safety in the Danish Health Care System, (Lundgaard et al. 2005). They make it clear that knowledge production is a central point to patient safety. Understanding how reported adverse events are capable of producing knowledge is therefore key, to maximize the benefits of adverse event reporting (Lundgaard et al. 2005). This understanding holds value to all health care professionals involved in adverse events – from hospital management to frontline personnel. Information sharing is vital to facilitate a safety

# Figure 1 Main points of the Act on Patient Safety (Lundgaard et al. 2005)

- The act is learning and system oriented
- It obligates frontline personnel to report adverse events, hospital owners to act on the reports and the Board of Health to communicate the learning
- Reported events are sent to and analyzed by the relevant region/hospital the data is anonymized and sent to the Board of Health. The Board of Health gathers and analyzes the information and distributes knowledge on a national level
- The act protects health care providers from sanctions as a result of reporting

culture everyone adheres to, any lack of understanding of why it is crucial to report and analyze adverse events only hinders the intended learning cycle's fulfillment of its purpose (Lundgaard et al. 2005, Reason, Hobbs 2004).

In connection to the 10-year anniversary of the adverse event reporting initiative in Denmark, various news agencies brought the success of the initiative up for debate. A Google news search on Danish articles on adverse events from 2013 to 2014 quickly reveals a plethora of news articles that all paint a picture of a health care system not learning from its mistakes. Headlines<sup>1</sup> like *"Hospitals are not good enough at learning from their mistakes."* (Schøtt 2014), *"Hospitals keep serious errors for themselves."* (Politiken 2013) and *"Patients experience more errors at overcrowded hospitals."* (Nielsen, Vibjerg 2013) clearly indicate that even though legislation has been in place for 10 years, hospitals are still dealing with the same amount and types of errors. Chief Physician in the NAPRCs learning division, Jørgen Hansen states, in an interview with the Danish Broadcasting Corporation (DR), that hospitals are committing the exact same type of errors as they were 10 years ago and the percentage of errors is exactly the same (Schøtt 2014). He also explains that the NAPRC estimates that only 15 – 20 % of all occurring adverse events are reported (Politiken 2013). As more examples of

<sup>&</sup>lt;sup>1</sup> All headlines have been translated from Danish to English to avoid disruption of the thesis flow. All references are to non-translated news sites from Denmark.

maltreatment and neglect, like the 2014 chemotherapy overdose case (Sørensen, Abildtrup 2014), come to light, focus on the subject increases accordingly. This continuously fuels the heated debate on errors in health care and how hospitals allegedly, are not learning from reported and analyzed adverse events. It is however important to keep an objective view on the number of reported adverse events. If the aforementioned chief physician's estimate is true, then these numbers are not a clear indicator on the amount of errors happening. In reality, the amount of errors occurring could be much less than in 2004, but the number of reported adverse events. Specifically the reporting frequency not only on a national level, but also on a regional and local level.

Setting the above discussion aside, the fact remains that at the time of this study, DPSD reports upwards of 180,000 total reported adverse events on a national level, of which, approximately 50,000 originates from the Danish hospital sector (Patientombuddet 2014). There is however, some disparity in the origins of these reports. Even though DPSD receives an annual 50,000 reports from the Danish hospital sector, these number only indicate a partial picture of reality. When analyzing the success of the reporting system on a national level, the above numbers indicate a clear usage of the reporting system (Lundgaard et al. 2005). If however, perspective is shifted from a national level to an organizational level i.e. looking closer at each individual hospitals' reporting frequency; a great disparity in reporting frequencies among wards is intriguing as this transpires within the same organization – an organization with a detailed quality strategy and continuous initiatives to maintain focus on the importance of adverse event reporting. Present thesis therefore, sets forth a new research agenda, which focusses on the necessity to understand how the many facets of culture affect both the type and the reporting frequency of adverse events.

One of biggest factors in health care professionals' (HCP) culture at work is the ability to prioritize tasks, to best suite their patients. Novice HCPs often times have trouble prioritizing, when faced with overwhelming workloads and on the spot decision making mostly involving general patient care. However, as more administrative tasks are introduced i.e. recording of medicine, patient treatments and adverse event reporting, HCPs are now faced with having to prioritize tasks relating to patient treatment and care related tasks as well as administrative tasks (Gillespie, Paterson 2009). A conflict between *must-do* and *should-do* tasks has arisen (Bowers, Lauring & Jacobson 2001). A constant prioritize of tasks, based on individual HCP professional knowledge, has become the norm and as novice HCPs enter their respective fields, experience HCPs must demonstrate the skills needed to prioritize correctly, when faced with high-stressed situations (Gillespie, Paterson 2009, Bowers, Lauring & Jacobson 2001). In a more philosophical term, established culture, while ever changing, is transferred from experienced HCPs to novice HCPs and when faced with new work procedures, this so-called culture has a tendency to counteract the introduction of new cultures.

Field Note | "I think everyone knows that adverse event reporting is required, we all learned about it in school, but when I work with the experienced nurses, I tend to forget about it because no one else is doing it [...]" (Nursing student at ward X)

## **3 PROBLEM ANALYSIS**

#### 3.1 ADVERSE EVENT REPORTING IN DENMARK

In 1999, the American Institute of Medicine (IoM) published the report: *To Err is Human: Building a Safer Health System* (Donaldson, Corrigan & Kohn 2000). The IoM report showed a sizable number of patient deaths from medication errors in America and set forth a national agenda to improve patient safety (Donaldson, Corrigan & Kohn 2000). As a result, focus on patient safety hit the Danish agenda in around the year 2000 (Lundgaard et al. 2005, Hellebek 2004). Numerous studies on patient safety and risk management in countries like the US, Australia and the UK, resulted in a Danish pilot study called the *Danish Adverse Event Study*, conducted in September 2001 (Schiøler et al. 2001). The findings of the Danish study, showed similar results to those found in the aforementioned countries and recommended an increased amount of research on the subject of patient safety, in health care (Schiøler et al. 2001).

The IoM study also led to the establishment of the Danish Society for Patient Safety (DSP) in December 2001, which included board members from all corners of the Danish health care system (Lundgaard et al. 2005). DSPs function is to operate as an organizational frame for future work with patient safety. Its main goal, as written on the DSP homepage is, among others; to reduce the risk of patients being harmed when encountering the health care sector, as well as providing health care professionals with increased knowledge and skills to manage patient safety issues (Danish Society for Patient Safety 2013). Initial initiatives from the DSP involved the creation of the current national reporting system for adverse events, introduced earlier. With its primary purpose, to act as an administrative system for all reports on adverse events, everyone involved in the initial development, agreed that such a system should be completely anonymous and separate from the, already established, disciplinary system (Lundgaard et al. 2005). The national reporting system was created for learning purposes only and by analyzing adverse event reports, the aim was (and still is) to gain knowledge and understanding of the "why" and "how" of adverse events (Lundgaard et al. 2005, DPSD 2013). This information would form the basis of a national, adverse event learning cycle, which in turn should reduce the number of occurring adverse events (DPSD 2013). Even though adverse events cannot be completely stopped, the DSP aims to prevent as many adverse events as possible by stimulating a just culture (Reason, Hobbs 2004, Dekker 2011, Waring 2005, Catino 2009), which implores everyone implicated, to talk comfortably about the events, without being afraid of disciplinary sanctions (DPSD 2013). Initial focus was to identify, the frequency of adverse events, but was later extended to also include focus on developing preventive measures in high-risk areas, before serious adverse events occur (Hellebek 2004). Studies however, have shown that an unseen culprit could be affecting the reporting frequency of adverse events (Waring 2005). As of now, culture's effect on adverse event reporting, has gone unnoticed in both the debate of and research on the subject, in Denmark.

#### 3.2 Adverse Event Legislation

In 2003, the Danish parliament passed the *Act on Patient Safety in the Danish Health Care System*, which in section 198 (4) in *Sundhedsloven* (LBK nr 913, 13/07/2010), defines an adverse event as:

"An adverse event shall mean an event resulting from treatment by or stay in a hospital and not from the illness of a patient, if such event is at the same time either harmful, or could have been harmful had it not been avoided beforehand, or if the event did not occur for other reasons. Adverse event shall comprise events and error known and unknown." (Ministry of Health 2010, Danish Society for Patient Safety 2003)

January 1, 2004 was the official commencement date and all adverse events occurring after this date would apply (Ministry of Health 2010). This act then, was the beginning of a new era in the Danish Patient Safety initiative, which originated from the numerous international reports on patient safety and especially the results of the *Danish Adverse Events Study* (Schiøler et al. 2001). Only HCPs, working in hospitals were affected in the 2004 edition of the act (Ministry of Health 2005), but it was later extended, to also include practitioners, pharmacies, municipalities, emergency medical services (EMS) in 2010, and patients and relatives in 2011 (Ministry of Health 2010).

The official definition aims to be as broad as possible without taking the severity of various events or mistakes into consideration. Hence all events, errors and mistakes that have or could have resulted in patient harm, should be categorically compliant with the Act on Patient Safety in the Danish Health Care System, as written in the Danish Health Care Act 2010 (Danish Society for Patient Safety 2003, Ministry of Health 2010). By having a unified definition under which all such events fall, should give Danish HCPs a clear understanding of when to report adverse events, using the DPSD reporting system. However, the clarity of the official adverse event definition is questionable, as events, which consists of many different and uncontrollable variables, typically refrains from standardization. This, perhaps lack of clarity, could then be negatively affecting the reporting frequency of adverse events, when working in a fast-paced environment like internal medical wards at hospitals. Standardization in health care, which in itself is a fluctuating entity; somewhat resistant to full standardization of all its elements, has earlier proven to be difficult. Having a unified adverse event definition could therefore prove to be overridden by the individual HCPs qualified assessment of the severity of the event. As (potential) adverse events occur, the official definition is purposely open, so that all events should be reported. This leaves HCPs with the task of having to assess the severity of a given situation on the move, which oftentimes could prove to be difficult, taking the workload of HCPs, into consideration (Bowers, Lauring & Jacobson 2001, Waterworth 2003). By doing so, it may be possible to discern how, severity assessment of adverse events and especially potential adverse events affect how the individual HCP prioritizes their workday and the tasks that must be done and should be done (Bowers, Lauring & Jacobson 2001).

#### 3.3 NATIONAL ADVERSE EVENTS REPORTING SYSTEM

Using reports of adverse events as tools for learning requires an intricate information sharing system. This information sharing system involves participants from various institutions, including local hospital risk managers, local hospital quality departments, municipalities, the DPSD, the *National Board of Health* (NBH) and more. Hospital administrations have not been subject to a standardization of the work practices surrounding patient safety, which has allowed them to implement patient safety and adverse event reporting, into the organizations existing structure and practices (Lundgaard et al. 2005). Most commonly, local risk managers receive the initial report, along with the person in charge of the ward in which the event occurred. The local risk manager and quality department then sends an anonymized version of the report to further analysis at the regional quality department and the NBH (see figure 2) (Ministry of Health 2010, Lundgaard et al. 2005). The NBH then conveys the results of their analysis to health care institutions in Denmark and simultaneously makes the results available to the Ministry of Health for further use in improving forthcoming patient safety initiatives (Ministry of Health 2010). For further reference, confer section 198 (1-4) and section 199 (1) in *Sundhedsloven* (LBK nr 913, 13/07/2010) (Ministry of Health 2010).



Figure 2 Reporting System Overview

For initial categorization, most regions have adopted the VA National Center for Patient Safety, *Safety Assessment Code Matrix* (table 1) (VA National Center for Patient Safety 2013). Pairing the severity and probability index' provides a ranked matrix score, with a risk level between three (highest) and one (lowest) (VA National Center for Patient Safety 2013). By analyzing and categorizing events, it is possible for local risk managers, in collaboration with local quality departments, to adjust functioning work routines, or to implement new and safer clinical practices, to eliminate future adverse events in similar categories (Hellebek 2004). To facilitate information sharing across multiple organizations and regions, the DSP and NBH publish their findings in a report on safe clinical practices, which suggests different methods for analyzing high-risk areas, as well as, changing existing work routines to improve patient safety (Lundgaard et al. 2005, Hellebek 2004).

Severity and probability	Catastrophic	Major	Moderate	Minor
Frequent	3	2	2	1
Occasional	3	3	2	1
Uncommon	3	3	2	1
Remote	3	3	2	1

Table 1: Severity Assessment Code (SAC) Matrix (VA National Center for Patient Safety 2013)

#### 3.4 REGIONAL PATIENT SAFETY STRUCTURE

On a regional level, various approaches have been chosen to organize patient safety activities. Specific to the North Jutland Region, is the administration of patient safety activities through the establishment of a regional quality committee (Region Nordjylland 2013). Imbedded in the regional quality committee are different groups, which supervises various patient safety areas. Specific to adverse event reporting are the two groups: the Adverse Event Unit (AEU) and the Professional Advisory Group on Adverse Events (PAGAE). Both the AEU and the PAGAE, consists of representatives from all health care related institutions within the region, including – but not limited to – local risk managers from the regions four hospitals, primary health care, EMS representatives and more (Region Nordjylland 2014, Region Nordjylland 2013). AEU focuses on administrative tasks across the whole region e.g. coordination of DPSD tasks, information sharing through regional material on adverse events i.e. annual reports, initiating regional initiatives and more. Whereas the PAGAE processes reported cross-sectorial adverse events, between the North Jutland region and municipalities herein (Region Nordjylland 2014). All health care sectors have a responsibility to work continuously with improving patient safety, health care sectors e.g. the psychiatric sector and primary health care etc. Specific to this research study is the hospital sector and other health care sectors like those mentioned above, are not included for further study.

The North Jutland region's hospital sector has a standardized organizational structure, in regards to patient safety issues. Each hospital has a quality department connected to the hospital management consisting of at least one risk manager (Region Nordjylland 2014). The risk managers' primary task is to administer all patient safety activities together with the quality department and hospital management. To facilitate patient safety activities on a ward level, the head of each ward (usually the head nurse in internal medical wards) is appointed as patient safety officers (PSO) (Jensen 2013b). These PSOs act as a direct link between front line staff and the quality department/hospital management in regards to adverse events and other patient safety issues (Jensen 2013b). As a part of the patient safety agenda, all personnel should contribute to the development of a patient safety culture, deeply imbedded in the mindset and focus of all staff members (Jensen 2013b).

## 4 THEORETICAL PERSPECTIVE

#### 4.1 THEORETICAL FRAME

To set the theoretical frame, a literature review was conducted in accordance with the main research problem of present thesis. Initial searches were performed in the Aalborg University Library Database (AUB) as this made it possible to gain access to full text versions of selected articles through associated databases like US National Library of Medicine (PubMed), Sage Publications and BMJ Quality and Safety etc. AUB, Aalborg Library and the Danish Library Database (Bibliotek.dk) was also used to locate books and news articles relating to present thesis. The following section, presents the theoretical frame, which will encompass a theoretical perspective on the empirical data collected in present study.

#### 4.2 PRIORITIZATION AS A TIME MANAGEMENT STRATEGY

Prioritization in nursing care has become an integral part of how nurses are able to deliver high quality care to patients (Bowers, Lauring & Jacobson 2001). A study on time management of nurses in long time care facilities, conducted by Barbara J. Bowers, Cathy Lauring and Nora Jacobsen, showed that nurses working under circumstances with limited time and high workloads, needed to develop strategies to keep up or catch up (Bowers, Lauring & Jacobson 2001). Limiting time spent on shoulddo tasks, for which nurses were directly accountable, and redefining work responsibilities, had negative consequences for the quality of care, nurses were able to provide, as well as having to forego should-do tasks completely (Bowers, Lauring & Jacobson 2001). In turn, nurses developed strategies to enable them to sufficiently meet job requirements (should-do tasks) in effect gaining time to keep up and catch up, by managing disruptions through task prioritization and re-prioritization (Bowers, Lauring & Jacobson 2001). Bowers et al. found nurses to organize work routines in two ways – by resident or by task. Nurses organizing by resident thought they met patient needs better when not fragmenting care, they were however less capable of re-focusing their attention on other resident not in their immediate focus (Bowers, Lauring & Jacobson 2001). Conversely, nurses who organized by task, were able to work at maximum efficiency, enabling them to meet regulatory requirements and completing their tasks. However, focusing only on task completion meant that nurses had little time to converse with residents and re-focus their attention on other tasks (Bowers, Lauring & Jacobson 2001). By prioritizing and re-prioritizing tasks, nurses were able to adjust to interruptions in normal work routines, based on the perceived importance and necessity of tasks (Bowers, Lauring & Jacobson 2001). In conclusion, Bowers et al. found *time* to be an important factor in the quality of care nurses were able to provide. Lack of time created a need for task prioritization and re-prioritization, between must-do and should-do work, using routines and time management strategies. If these strategies proved insufficient, Bowers et al. found nurses to reduce time spent on some tasks and often times completely forgoing other tasks (Bowers, Lauring & Jacobson 2001).

The notion of having to prioritize and routinize tasks to manage and organize time was also investigated by Susan Waterworth, who found that nurses used an assortment of time management strategies e.g. prioritization and routinization. The utilization of such strategies were discussed with focus on their implications on nurses in clinical practice (Waterworth 2003). Waterworth found that nurses participating in her study were using routines as temporal plans of work providing time supervision for both individual nurses as well as the team and organization (Waterworth 2003).

Routines brought a sense of predictability and sense of time according to participating nurses in Waterworth's study, relevant to time management. Routines were not only sequences of tasks but also acted as a frame for the allowed duration of each task (Waterworth 2003). Combined with routinization, Waterworth found prioritization as a tool to provide structure to routines and as such, prioritization became an integral part of nurses work routines (Waterworth 2003). Both routinization and prioritization were not only individualistic constructions of time management, but Waterworth found these time management strategies, influenced by others, in this case, team and organization (Waterworth 2003).

The two theoretical perspectives on two specific time management strategies, *prioritization* and both suggested an element of culture, as both strategies were both affected of and dependent on individuals within group settings. In connection to present thesis' research problem, this element of culture was adapted to encompass not only the ubiquitous concept of *culture*, but also that of *safety culture*. The theoretical perspective of culture, specifically safety culture will be reviewed hereafter.

#### 4.3 (PATIENT) SAFETY CULTURE - REPORTING ERRORS AND LEARNING

James Reason, in his own words: "[...] tries to identify general principles and tools that are applicable to all organizations when facing dangers of one sort or another." (Reason 1997), in his book Managing the Risk of Organizational Accidents. Reason's theoretical concept of engineering a safety culture has been the main concept used in present thesis' theoretical perspective. Reason argues that safety culture(s) consists of four main elements all of which are interact directly with one another. These elements or subcomponents of a safety culture are, reporting culture, just culture, flexible culture and learning culture, which together, interact to comprise what Reason calls an informed culture or a safety culture (Reason 1997, Reason, Hobbs 2004).

Engineering a *reporting culture*, is the first step in engineering a safety culture, as any safety information system depends on having employees participate in reporting errors and near-misses (Reason 1997, Reason, Hobbs 2004). Reason lists some of the more powerful disincentives to report errors as extra work and distrust to the potential outcome of such reports. To overcome such disincentives, Reason argues that five factors are crucial to a successful safety information system. The five points are "Indemnity against disciplinary proceedings [...]. Confidentiality and de*identification*. The separation of the agency or department collecting and analyzing the reports from those bodies with the authority to [...] impose sanctions. Rapid, useful, accessible and intelligible feedback to the reporting community. Ease of making the report." (Reason 1997). The five points listed, are based on two successful reporting programs from aviation industry and Reason argues that each individual organization needs to find a format, which fits the intended purpose of having a reporting system (Reason 1997). To properly introduce or engineer a fitting reporting culture, Reason argues that an effective reporting culture is dependent on how organizations handle blame and disciplinary actions and goes on to promote the unnatainable ideal of having a completely just culture (Reason 1997).

Just culture is, as Reason explains, "an atmosphere of trust in which people are encouraged, even rewarded, for providing essential safety-related information [...]" (Reason 1997). Reason goes on to argue that organization need to find a middle ground between, punishing all errors and giving full immunity from sanctions. Instead, organizations should attempt to discriminate between acceptable

and unacceptable actions, which may have led to error, through a set of principles that draw the line between the two (Reason 1997). This should enable all members of the organization to understand the line between acceptable and unacceptable behavior, when it comes to errors (Reason 1997). The three main principles to consider are the main principles of human action, *intention, action* and *consequence* (Reason 1997). Investigating, each principle should aid disciplinary boards in determining suitable punishment, if any (Reason 1997).

*Flexible culture* involves shifting from a hierarchical structure to a more professional structure (Reason 1997). When emergencies arise, decision-making and control is passed from the normal hierarchical structure to that of professional experts, then back to the ordinary structure when the emergency has passed. By being adaptable, organization are able to prepare for crisis', but depends on respect for the skills, experience and abilities of the workforce in particular the front-line supervisors (Reason 1997).

*Learning culture* is the last subcomponent, which needs to be considered, to successfully engineer a safety culture. Reason states that learning culture is the easiest to engineer, but hardest to make work (Reason 1997). He lists four elements, with each their own sub-elements, which are (Reason 1997):

- Observing noticing, attending, heeding and tracking
- Reflecting analyzing, interpreting and diagnosing
- Creating imagining, designing and planning
- Acting implementing, doing and testing

Out of the four, Reason argues that the first three are easy enough to engineer and make work, but the last element, *acting*, is where most complications occur (Reason 1997). Learning culture constitutes a collective attitude towards learning in organizations. Organizations that fail to appreciate the purpose of having a learning culture are often short lived, as Reason states.

Reason ends his review of each subcomponent of safety culture, by arguing that culture is something that organizations *is* and not something organizations *has*, which in turn means that to achieve a state of *is*, organization need to *have* each of the above subcomponent, which in his review, he argues, can be engineered (Reason 1997).

#### 4.4 SAFETY CULTURE IN MEDICINE

Drawing upon Reason's concept of engineering a safety culture and using this within the frame of medicine, poses several problems. Different authors, some of which have been chosen to set the theoretical frame of safety culture in medicine in present thesis, have done exploration of the different barriers to adverse event reporting. Of those authors is R.P. Mahajan, who conducted a study on the problems that occur when implementing incident-reporting systems, from e.g. aviation, in the field of medicine (Mahajan 2010). Mahajan took a human factors approach, by focusing on individuals within the socio-technical systems of organizations, he looked at the organizational factors that made error possible (Mahajan 2010). In conclusion, Mahajan's results pointed to found that especially doctors were hesitant to report adverse events because they feared punitive actions – indicating more deep-seated medical culture aspects of having to report errors (Mahajan 2010). Mahajan also found that doctors felt lack of useful feedback and understanding of how reports would lead to changes in existing systems, were main contributors to the lack of reporting (Mahajan 2010). Anastasius

Moumtzoglou explored the reason for Greek nurses not wanting report adverse event, which showed similar results to those of Mahajan, as Moumtzoglou found that there were five main factors impeding nurses from reporting adverse events (Moumtzoglou 2010). These five factors included, the fear of prosecution, difficulty in handling adverse events, time pressure and confidence in talking about errors and patient complaints (Moumtzoglou 2010). As a result, Moumtzoglou, recommended nurses to establish a blame-free system or culture, where systems are examined as the leading cause of errors and not individuals (Moumtzoglou 2010). Maurizio Catino took a different view in his study on the connection of blame culture and defensive medicine (Catino 2009). Catino argued that health care personnel were taking a defensive approach to treating patients to avoid malpractice lawsuits in the event of errors. Catino draws a line to James Reason's concept of just culture, in which organizations should define the line between acceptable and unacceptable behaviors and which type of behavior does not promote patient safety and therefore merits punitive actions (Catino 2009). Sidney W. A. Dekker studied the concept of just culture, mentioned by both Reason and Catino, further in her study on who draws the line between acceptable and unacceptable behavior (Dekker 2009). Dekker argues that drawing a line between acceptable and unacceptable behavior, does not promote a just culture, as the concept of culpability is socially constructed and not inherent in the act (Dekker 2009). One needs to include *context, language* and *interpretation*, when deciding on the culpability of actions, which leads Dekker to ask the question of who gets to draw the line, instead of where to draw the line (Dekker 2009). Explaining incidents in different languages will inherently result in different accounts of the same incidents, meaning drawing the line is not only inherent in the act, but also in who get to draw such a line (Dekker 2009). Justin J. Waring promotes a shift in focus, from the above barriers to adverse event reporting to, or *blame-culture*, to focus more on the *culture of medicine*, as he argues that one needs to consider other cultural aspects of medicine (Waring 2005). Waring's study on the attitudes of medical physicians towards adverse event reporting and the theories he set forth, relate to that of present thesis' and as such, Waring's study has been subject to an in-depth review in the following section.

#### 4.5 MOVING BEYOND JUST CULTURE AND BLAME CULTURE

The main argument of Waring's study is that *blame culture* is, as seen in the example studies above, certainly a barrier to that of adverse event reporting, but other aspects of culture should also be investigated (Waring 2005). Waring's results are based on a large qualitative research study conducted at a National Health Service, District General Hospital, where interviews comprised the main method of data collection (Waring 2005). The aim of Waring's study was to explore cultural attitudes towards adverse event reporting, acknowledging that using just culture as a counter to blame culture, is the main premise of the success of adverse event reporting. However, Waring goes on to say that, other cultural factors could be just as inhibiting as that of the notion of blame, but have yet to be considered in academic research. The main focus of his study was therefore, to consider the socio-cultural barriers to adverse event reporting and in turn move beyond the concept of blame culture (Waring 2005). The results of Waring study, showed six main points listed below (Waring 2005).

- 1. Fear of blame
- 2. Inevitability of error
- 3. Proliferation of bureaucratic techniques for monitoring performance
- 4. The cultural significance of collegiality
- 5. Protection of the façade of professional competence
- 6. Desire to maintain in-house and collegial control of quality issues

As seen in the six points above, the first *fear of blame* was also prevalent in Waring's research, but point's two to six indicate other more deep-seated aspects of medical culture (Waring 2005). Waring found *inevitability of error* to be a general opinion of many participating physicians, who stated not only that error was inevitable, but also sometimes a "beneficial dimension of their work." (Waring 2005). The same general opinion was seen with physicians' attitudes towards the proliferation of bureaucratic techniques for monitoring performance, as Waring gave examples of physicians who saw adverse event reporting as another means of monitoring performance as well as taking too much time, removing physicians from meaningful tasks (Waring 2005). The cultural significance of collegiality was found to be central to medical reporting and self-regulation within the medical profession. Doctors often saw nurses as them and us, according to Waring (Waring 2005), with medical reporting being more of a nursing form of securing patient safety, as doctors saw nursing culture more familiar with paperwork and regulatory tasks (Waring 2005). Whereas doctors were more prone to using selfregulatory ways of occupational control, based on individual expertise, knowledge and autonomy (Waring 2005). Concerning the fear of blame, physicians also had an overwhelming desire to protect the facade of professional competence, which was seen as much of an inhibiting factor as the fear of blame and sanctions (Waring 2005). The desire to protect the facade of professional competence was further explained by the desire to maintain an in-house and collegial control of quality issues, as Waring's results showed that physicians wanted to deny non-professional groups the opportunity to scrutinize any issues regarding patient safety and the quality of care that physicians were providing (Waring 2005).

In conclusion, Waring's study showed that instead of keeping to the concept of blame culture, his results pointed towards other cultural factors within the medical field, acting as a cultural barrier to that of adverse event reporting (Waring 2005). Waring proposes that one should move beyond the concepts of blame culture and just culture and instead look closer at other cultural factors impeding doctors from participating in adverse event reporting (Waring 2005).

#### 4.6 SUMMARY OF THEORETICAL POSITIONS

The theoretical perspectives on different aspect of adverse event reporting were reviewed to be used as a theoretical frame for present thesis. In the review of the two time management strategies set forth by Bowers et al. and Waterworth, it was found that routinization and prioritization of workloads in nursing were essential to provide adequate patient care (Bowers, Lauring & Jacobson 2001, Waterworth 2003). It was also found that the two time management strategies involved an element of culture, which needed to be explored further. Drawing on Reason's conceptualization of engineering a safety culture, entailed a review of four main subcomponents namely, *reporting culture*, *just culture, flexible culture* and *learning culture*. By engineering each separate subcomponent, Reason argued that organization would be able to implement a successful safety culture (Reason 1997). Reason's theoretical concept of safety culture was then put into a health care context in the review of five separate authors' studies on the barriers of adverse event reporting in medical care. Mahajan, Moumtzoglou, Catino, Dekker and Waring all found similar results, in which fear of blame and different elements of medical culture, were especially prevalent barriers to adverse event reporting (Mahajan 2010, Moumtzoglou 2010, Catino 2009, Dekker 2009, Waring 2005). Waring however, took another perspective on the aforementioned barriers of adverse event reporting, concluding his study with promoting a shift in focus, from the notions of blame culture and just culture, to that of the more deep-seated elements of medical culture (Waring 2005). Waring found six main points, five of which pointed to factors outside of the notions of blame culture and just culture, but within the complex culture of medical doctors, which in turn might be more impeding to doctors participating in adverse event reporting (Waring 2005).

## 5 RESEARCH PROBLEM

Denmark has come a long way since 2001 when patient safety hit the national agenda. Nevertheless, the establishment of national and regional structures supporting patient safety activities and a national reporting system to facilitate learning based on analyses of adverse events poses new problems, relating to the creation of a national patient safety culture. Reduced hospitalization times, lack of time and increased workloads are just some factors impeding health care professionals from reporting adverse events, as was found in similar studies (Mahajan 2010, Moumtzoglou 2010, Catino 2009, Waring 2005). For the purpose of present thesis, HCP tasks are divided into two categories, must-do and should-do, corresponding to the concepts presented in the study conducted by Bowers et al. (Bowers, Lauring & Jacobson 2001). As it is mandatory, by law, for all HCPs, to report all adverse events they encounter, one might think adverse event reporting belongs to the must-do category and any inconsistency in reporting numbers, must be contributed to other none-legislative parameters. However, actual patient care has always been top priority for most HCPs, which in acute situations, downgrades all should-do tasks as those listed above, including the reporting of adverse events (Bowers, Lauring & Jacobson 2001).

Especially adverse events, not resulting in patient harm, have a low priority. Even though legislation dictates that, these "near-misses" are just as important as serious adverse events most of them are not reported (Kingston et al. 2004). The official definition of an adverse event shows two distinct categories: Adverse events in which patients <u>have</u> been subject to harm and events where patients <u>could have</u> been subject to harm if the event had not been avoided (Ministry of Health 2010, Danish Society for Patient Safety 2003). For the purpose of this thesis, these categories have been redefined as, *Adverse Event* and *Potential Adverse Event*.

An annual report published in 2013 at a hospital within the North Jutland Region shows a reporting frequency spanning between one and 191 filed reports from the hospitals 18 wards (Jensen 2013a). This displays a hospital, where patient safety and adverse event reporting plays a major part in the hospitals' quality approach. Patient safety and treatment quality is embedded in both management as well as all employees. Furthermore, less than 5% of all reported events were potential adverse events, whereas most reported adverse events had resulted in some degree of patient harm, indicating that HCPs are prioritizing actual adverse events higher than potential adverse events. The potential adverse events, which are reported, are of such a high severity level that had they occurred, the result would have been catastrophic. One hypothesis of why this discrepancy is occurring could be that hospital managements' patient safety agenda is not visible enough. This however, can be disproven by the numerous plans of action set forth in regards to all issues of patient safety and the continued work to maintain a functional patient safety culture, by the local quality department and risk manager<sup>2</sup>.

<sup>&</sup>lt;sup>2</sup> For anonymity purposes, the hospitals identity and therefore all references to reports, quality strategies and the like will remain undisclosed. If disclosure of references is needed for documentation purposes, contact the thesis author for more information.

The hypothesis is then that ward culture must be a factor in the inconsistency of reported adverse events especially when it comes to potential adverse events and the aim of this study is therefore to:

Provide an accurate account of normal work routines at two medical wards, specifically how health care professionals prioritize tasks. Investigating how and why this prioritization occurs, should give an understanding of how culture affects the prioritization of adverse event reporting and therefore the reporting frequency of health care professionals. In light of this, it should be possible to determine why different medical wards show different reporting frequencies and why potential adverse events, unlike actual adverse events, are most likely not reported.

The following research questions form the basis of how present study aims to explore the above:

- Which parameters affect the prioritization of tasks regarding both patient care and treatment in two different, yet comparable medical wards, within the same hospital organization?
- How does this prioritization affect health care professionals' severity evaluation of potential adverse events and their reporting frequency of both categories of adverse events?
- How does the concept (*patient*) *safety culture* factor in to the prioritization of adverse event reporting, in turn affecting the reporting frequency of adverse events?

#### 5.1 RESEARCH FIELD AND PARTICIPANT SELECTION

Selecting a research filed, in accordance with the thesis hypothesis and research question, took place in collaboration with the North Jutland Regional, Quality and Patient Safety department. At the time, most hospitals were going through an accreditation process in accordance with the Danish Quality Model (Stevnhøj 2013). Choosing a hospital, which had already completed this accreditation process, was therefore natural, as this process involves a large amount of additional work for all hospitals going through accreditation. However, a completed accreditation process was not the only requirement – albeit the most important as it directly affected hospital availability – the cooperating hospital also had to meet a set of general criteria. There had to be two different wards, within the same hospital organization. These wards had to have a significant difference in reporting frequency and needed to be generally comparable.

Below are the criteria for comparison, which facilitated a general comparison of two wards; ward specialty, number of beds, organization of patient care, number of health care professionals, number of patients, average patient age group and average hospitalization time.

Based on the above hospital and ward requirements, one hospital fulfilled all the requirements and the North Jutland Regional, Quality and Patient Safety department facilitated the initial contact. After initial contact with the chosen hospital and having met with the hospitals local risk manager, two internal medical wards stood out as being both comparable and having different reporting frequencies. The local risk manager was acting as my gatekeeper to the field, as she facilitated the initial contact with each ward (Spradley 1980). Figure 3 is a direct comparison of the two wards, *Ward X* and *Ward Y* based on the above criteria for comparison. All numbers are from 2012, as newer numbers were not available at the time of research field selection.

Slight discrepancies were evident when comparing the two medical wards X and Y. These discrepancies were however, negligible as wards will ever be completely alike and the slight differences between ward X and Y were therefore disregarded. Both wards specialized in internal medicine with the slight difference that Ward X mainly treated cardiology patients. Overall, both wards were comparable nonetheless, the most significant differences, which subsequently formed the basis of selection, were the discrepancies in reporting frequency. In 2012, 469 adverse events were reported at the selected hospital, of which ward X and Y correspondingly reported 15 (X) and 35 (Y) adverse events out of the total 469. This shows that both wards chosen for further study had low reporting frequencies, but Ward Y reported more than double the amount of Ward X. The general comparability of Ward X and Y, with the exception of the difference in reporting frequency, indicates that other factors could have been affecting reporting frequencies.

Figure 3: Comparisor	of Medical	Ward X and Y
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Medical Ward X	Medical Ward Y
Specialty: Cardiology and internal medicine	Specialty: Internal medicine
Beds: <b>20 (+2)</b>	Beds: <b>26</b>
Organization of care: Two nursing groups	Organization of care: Two nursing groups
HCPs: 25 nurses and 6 Health Care Assistants	HCPs: 18 nurses and 12 Health Care Assistants
Patients: <b>1338</b>	Patients: <b>1007</b>
Patient age group: 83% between ages 47 and 90	Patient age group: 85% between ages 47 and 90
Average hospitalization time: 117 hours in average	Average hospitalization time: 156 hours in average
Reporting frequency: 15 reported adverse events	Reporting frequency: 35 reported adverse events

All localities, HCP names and other identifying elements have been changed, throughout present thesis, transcriptions of interviews and field note excerpts for anonymity purposes. Names used throughout present thesis are not the real names of participants, but were changed to avoid disruption of the thesis flow.

## 6 RESEARCH METHODOLOGY

#### 6.1 METHODOLOGY

The chosen research methodology is field research with methods taken from the ethnographic traditions of anthropology. Collection and processing of empirical data took place by means of participant observations, participant reports, field notes and interviews. Additionally, the selection of two different, yet comparable fields of research draws upon elements of a more quantitative nature to ensure sufficient comparability. Figure 4 is an overview of the chosen research strategy, which was decisive for the entire research study. Figure 4 also acts as a guide for the following in-depth review of each individual element of the research strategy.

Field research as seen in social science traditions enables researchers to explore the real life mechanisms of groups and people in their natural settings (Spradley 1980, Hammersley, Atkinson 2007). As the aim of this thesis, among other things, was to provide an accurate account of the daily operations in two internal medical wards, field research seemed appropriate as a methodological frame. This frame served as a general guide for studying the field at hand, a field, which turned out to be an, at times, chaotic and complex field of research (Blommeart, Jie 2010).



#### 6.2 METHODS

Ethnography aims to understand how individual people perceive their vision of their world. Instead of studying people from afar, researchers who have adopted the ethnographic research approach, seek to learn from people, through their own accounts of their perception of reality (Hammersley, Atkinson 2007, Spradley 1980). In the case of present study, ethnography seemed as an adequate research method to gain an understanding attitudes and perception of working in a hospital of HCPs. In essence, ethnography was chosen to understand the culture at work in hospital wards through the eyes of staff. Furthermore, understanding the decision-making process, health care professionals go through, when prioritizing tasks in regards to patient needs, was possible by participating and observing HCPs in their natural environment (Spradley 1980). Observations fell into James Spradley's three forms of observation; *descriptive observations, focused observations* and *selective observations*, where each consecutive observational form led to the next, based on previously identified areas of interest (Spradley 1980).

Ethnography has earlier been found applicable in other research studies on health care professionals and culture at work in a hospital setting (Sørensen 2011) as seen in section 4 *Theoretical Perspective*.

#### 6.3 EMPIRICAL DATA COLLECTION AND PROCESSING

The empirical data needed to conduct the present study, was collected by means of participant observations and reports, field notes and interviews, in accordance with the chosen methodology and methods. Specific to doing participant observations, inspiration was drawn from Buford H. Junker's four theoretical social roles in fieldwork (see figure 5), ranging from complete observer to complete participant (Junker 1968). The red line shows the role, adopted in present study, as data was collected by means of *observer as participant*.



HCPs, in the selected field of study, were observed in their daily routines with special emphasis on their decision-making process' and how prioritization of tasks occurred. Moreover, unforeseen circumstances, which required acute attention, were especially interesting as these situations often were accompanied by a degree of re-prioritization of other tasks, like reporting of adverse events. To gain an understanding of the thought-process' involved, participant reports were applied to further investigate, how HCPs handled acute re-prioritization and decision-making in events that could not be directly observed. Participant reports were also applicable in proving or dismissing hypotheses, developed based on observations, by means of informal interviews for detailed explanations. A continuous writing of field notes helped to keep track of observations, experiences, specific (and sometimes peculiar) situations, participant reports and to develop hypotheses to act as guides for further observations. To keep the observations and field notes in order, the following features were taken into consideration: space, actor, activity, object, act, event, time, goal and feeling (Spradley 1980), purpose being to remember and understand situations throughout the analysis of collected data. Both formal and informal interviews were conducted when needed. Informal interviews were used to get an accurate account or detailed explanations of situations, observations and thoughtprocess' etc. whereas formal interviews were held with key people from the hospital management, more specifically the local risk manager and the clinical director and the chief nurses of each ward. The reasoning behind interviewing managerial staff within different parts of the hospital organization, was to further clarify how focus on adverse event reporting and maintaining a patient safety culture was done from a managerial point of view.

As data collection had to take place in a limited amount of time – two weeks at each ward, my conducted fieldwork was divided into four stages and most of my observations took place on the day shift. Inspiration for dividing my fieldwork into stages was drawn from Jan Blommaert's illustration on contextualizing object for study in relation to the surrounding macro and micro-contexts (Blommeart, Jie 2010)

*First stage* dealt with understanding the chaos or in other words getting to know the context, together with general observations on HCP work practices. I made detailed descriptions and drawings of the physical surroundings and was introduced to the HCPs present at the time of arrival. I allocated between one and three days to do this, but depending on various factors like how well I was received by personnel and my ability to understand my surroundings, my timeframe was subject to change accordingly.

Second stage focused on observing HCPs in their normal routine as well as participating in this routine. I did this mainly to gain an understanding of the different must-do and should-do tasks HCPs were faced with and to observe how work routines and physical work conditions were associated. The second stage also involved acute situations and how these were handled in connection to task prioritization – further investigated in the third stage of my fieldwork.

*Third stage* consisted of mostly observations, informal interviews and participant reports on how prioritization of tasks and decision-making, combined with observations of situations where such prioritization and decision-making was directly observable. This stage also consisted of my initial investigation of the prioritization of adverse event reporting, relative to must-do and should-do tasks, with particular focus on how potential adverse events were being evaluated.

*Fourth stage* focused on the interpersonal relationships between HCPs and the effect of which on the prioritization of tasks, specifically focusing on adverse event reporting. This was mostly done by observing staff during breaks, and in situations where the general atmosphere went from professional to personal to understand how work culture was affected by HCP relationships.

The aim of each consecutive stage was defined based on observations and hypotheses developed in the previous stages and were not defined beforehand. Therefore, stages two through four, happened continuously throughout my fieldwork as the analysis of collected data directly affected any future observations done. Dividing my fieldwork into stages was done afterwards to clarify my thought processes throughout my fieldwork. Table 2 shows an overview of the different stages and accompanying activities, all of which will be subject to a subsequent in-depth review.

Table 2 Overvier	v of the f	our stages	of observation
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	Stage 1	Stage 2	Stage 3	Stage 4
Time frame	1 – 2 days	Continuously	Continuously	Continuously
Activities	Detailed descriptions and drawings of surroundings. General observations of HCP work routines	Observations of work routines. Focus on clarifying must-do and should-do tasks. Experiencing/observing acute situations.	Observations, informal interviews and participant reports on prioritization and decision-making	Observation of interpersonal relationships, both professional and personal. Inquiries on cultural phenomena
Reason	Familiarization with surroundings and participating HCPs. Introduction of thesis and researcher.	Gain an initial understanding on task prioritization and execution of must- do/should-do tasks	Detailed explanation and understanding of prioritization and decision-making, with focus on adverse event reporting and potential adverse events	Understanding the interpersonal relationships of HCPs and the effects on work culture and prioritization of tasks, specific to adverse event reporting.
Observational form	Descriptive observations	Descriptive observations	Focused observations	Selective observations

Each stage was then placed within Jan Blommaert's illustration on contextualizing objects for study in relation to the surrounding macro and micro-contexts (Blommeart, Jie 2010).

figure 6, shows how stage one and two try to explain the macro-contexts of the specific study. field of Detailed descriptions of localities, work routines, tasks and staff fall into the macro-context category, as understanding HCPs physical work space(s), routines and tasks, enables more specific areas of observation to be identified. Understanding the different contexts in which an object can and/or will occur; will reduce the sense of



confusion and chaotic-ness, as more situations will become recognizable and therefore easier to process (Blommeart, Jie 2010). Risks of asking the wrong questions, acting unnatural and behaving wrong will decrease accordingly. However, Jan Blommaert promptly notes that these risks cannot be eliminated, but depend on the specific area under study (Blommeart, Jie 2010).

#### 6.3.1 Stage 1

Before entering the field of health care at internal medical wards, I had made an overall plan of action for my fieldwork and acquainted myself with what I was going to be observing, namely adverse event reporting. As this was my first encounter with the inner workings of internal medicine, I knew my initial introduction would be chaotic and confusing and to sidestep being too overwhelmed I planned to spend at least two days, doing only descriptive observations on localities and staff. Furthermore, I wanted to introduce my master thesis topic and myself properly, to alleviate any confusion staff might have in relation to my presence. The head nurses of each ward, who also acted as a gatekeeper to each ward, had already informed staff that I would be conducting my fieldwork at each ward, but even so, my presence still felt odd for the majority of staff until I explained, in detail, why I was observing them.

Familiarization with both the localities and personnel at each ward was done by means of general observations, detailed drawings of the physical surroundings and talking/listening to HCPs. All information acquired in stage one were used as guidelines for further observations in stages two through four and specific areas of interest were noted in my field journal along with the aforementioned detailed descriptions and drawings. It did not take long for me to develop an interest in exploring the differences between the two task categories, must-do and should-do tasks, which became one of my main areas for observation for the remainder of my stay.

#### 6.3.2 Stage 2

After the initial familiarization with localities and HCPs in addition to my interest in the differences between must-do and should-do tasks, in stage one, I initiated stage two of my fieldwork. Based on the general descriptions in stage one, it was apparent that I needed to observe HCP work routines and explore the differences between must-do and should-do tasks. I did this by participating in all steps in the daily routine, asking questions to gain a better understanding of tasks and observing the execution of different tasks within these routines. Through observation and statements from participating HCPs, I quickly discovered that prioritization of must-do tasks in relation to should-do tasks was crucial to the HCP decision-making processes and providing high-quality treatment and care. Therefore, stage two went on continuously throughout my stay, as more must-do and should-do tasks became apparent each day. Specific scenarios and acute situations became of interest as HCPs displayed a high level of adaptability in high-pressure situations when immediate re-prioritization of tasks and decision-making became necessary.

#### 6.3.3 Stage 3

Concurrently to my descriptive observations on the different tasks in stage two, I also began my focused observations on HCP task prioritization and decision-making processes. Experiencing several situations where immediate adaption was necessary, made me wonder how HCPs were able to reprioritize and adapt to acute situations without major issues. As acute situations were unpredictable, I focused my attention to how adverse event reporting was prioritized in relation to other must-do and should-do tasks. I had noticed that most of the potential adverse events I had witnessed, were not being reported and I started to inquire how the task of reporting adverse events, factored into the HCPs decision-making process when having to prioritize their workload. After gathering preliminary data on this particular subject through informal interviews, participant reports and observations of HCP decision-making processes, I discovered a correlation between the task of reporting adverse events that the lack

of adverse event reporting was due to adverse event reporting being prioritized much lower than all other tasks were. Hereinafter, the correlation between task prioritization in regards to must-do and should-do tasks as well as the task of reporting adverse events became yet another area of interest. Throughout stage three, other areas of interest also became known. Interpersonal relationships' effect on work culture and task prioritization was an intriguing element I had not yet explored, but it was clear that differences in professional and private relationships of various staff groupings were affecting how the ward functioned in regards to asking for help and outsourcing different tasks.

#### 6.3.4 Stage 4

While continuing to collect data in accordance to stage two and three, I wanted to explore how interpersonal relationships were affecting ward and work culture. There were two distinct settings in which either professional or private relations could be directly observed. Compared to observing HCPs when working, where the overall atmosphere was professional, the atmosphere became more personal as soon as HCPs went on break. It was clear that the staff room was a more personal setting where different social groupings became directly observable. I performed numerous informal interviews, both with individuals and in groups to explore their views upon the differences between professional and private relationships. As well as observing how the private relationships and groupings observed in the staff room, carried on into the professional work setting. When having to re-prioritize tasks and needing help, HCPs quickly turned to those within their own social groupings. However, professionalism also became a deciding factor, as HCPs not only turned to friends, but also to those with a higher status within the overall ward hierarchy. Therefore, stage four of my fieldwork focused on exploring how underlying professional and private relationships were affecting how HCPs performed the different must-do and should-do tasks. All information gathered, was noted in my field journal for further processing and hypotheses continuously developed, based on the data collected from all four stages.

# 7 FINDINGS

#### 7.1 INTRODUCTION

Throughout the presentation of my findings, I will conduct an ongoing comparison of ward X and Y, while using a mixture of narratives and actual data collected throughout my fieldwork and subsequent interviews. The findings section will follow an overall structure correlating with the four stages of observation in *table 2*, starting with the presentation of my findings regarding my understanding of localities, work routines and prioritization between must-do and should-do tasks. Hereafter I will present my findings in regards to how potential adverse events were evaluated according to severity, which leads to my findings on how interpersonal relationships were affecting my previously presented findings. Lastly, I will be summarizing the correlation between all three parts of my finding, which acts as a transition to my discussion.

#### 7.2 TASK PRIORITIZATION

#### 7.2.1 Work Routines

As I first stepped through the automatic doors leading to ward X, the assistant head nurse greeted me, gave me a tour of the ward and introduced me to the HCPs present in the nursing office at the time of my arrival. While showing me around she explained how patient care was organized into three shifts (day, evening and night) and that they had adopted the team-based nursing model of care (Fernandez et al. 2012). She went on to explain how each shift had a scheduled work routine, starting at 7am with handover and ending at 3pm, again with handover. The overall structuring of nursing care recurred when I visited ward Y. Overall, both wards were organized in the same *three shifts, two groups* structure and both wards followed the same day shift work routine, depicted in figure 7. To conserve space I have consolidated both the separate work routines of group leaders (G.L.) and the remaining HCPs into one timeline.





While structuring my fieldwork, I decided early on to focus on observing HCPs during the day shift. My preliminary meetings with key people from the hospitals management had suggested this would be the opportune time, to collect the data I needed for my thesis. The reason being that day shifts featured more activity than evening and night shifts, in regards to patient treatment, rounds and HCPs overall workload. As a result, I conducted the majority of my observations between 7am and 3pm the normal day shift working hours (see figure 7).

Work routines i.e. must-do tasks were directly Figure 8 Must-do Task Categorizations observable at each ward, by observing every day practice. Should-do tasks however, were harder to observe as these were carried out simultaneously with must-do tasks and I realized that I would need to focus on separating should-do tasks from must-do tasks as HCPs often times, were doing both at the same time. I divided the must-do tasks into two categories; patient centered and non-patient centered tasks (see figure 8). Contrary to must-do tasks, which featured both patient centered and non-patient centered tasks, Should-do tasks involved having direct contact with patients and/or relatives. Dividing must-do tasks into two categories enabled me to be selective of which



tasks I had to observe. This allowed me to identify when and where should-do tasks were performed and how prioritization of the tasks in the two categories was done accordingly. Most of the patient centered tasks were taking place alongside with doing general patient care, rounds etc. Associated with the use of team-based nursing, which will be reviewed later, it became evident that group leaders focused on rounds-related tasks together with attending doctors, whereas the remaining HCPs were handling the patient treatment and care activities, such as serving food, medication passes and helping with hygienic matters. I noticed that by committing staff to general patient care, most of the should-do tasks were handled by HCPs, not focused on conducting rounds, but who instead had more time to care for patients.

Field Note | Day 3 – 08.01.14 (Ward X): At approximately 9.30am, I asked the group leader from group 2 if I could observe her doing rounds. At the time, a nursing student called Kate, on her last internship, was responsible for half of group 2's patient and I was invited to follow her around during rounds. While observing Kate during rounds I noticed how group leaders were tasked with most of the administrative tasks like doing paperwork and discussing treatment plans with resident doctors, while the remaining nurses and health care assistants were doing actual patient care. Some rooms were closed while nurses and health care assistants were helping with hygienic matters and others were doing medication passes while taking time to talk to patients. There's a clear difference in pace between group leaders and other employees when doing rounds.

Acute situations were in a category of their own must-do category. If an acute situation arose, everyone present would leave what they were doing and rush to the aid of other HCPs according to the situation. As acute situations occurred mostly without warning, HCPs needed to be at a constant ready should something go wrong, requiring constant adaptability. Even with safety systems in place to warn HCPs of impending complications, like heart-monitoring devices at ward X and the use of TOKS screening, acute situation, could still occurre without warning. When such situations occurred, prioritization became directly observable. Below is an example from my field notes, which occurred at ward Y:

Field Note | Day 19 – 23.1.14 (ward Y): After an ordinary round with the blue group leader Inga and the attending, substitute doctor Karl a call came through that a male patient (age 90) was scheduled for an acute pacemaker operation. When the call came through Inga and Karl were visiting another patient, but had to stop to initiate the transfer procedures from ward Y to the cardiology department in nearby large city. Meanwhile Inga told some the other HCPs to ready the patient for the operation by doing fluid and infection screenings, ordering blood tests and more. The entire pace and feel of the ward changed in a matter of seconds because of one phone call, but the entire situation was handled in an orderly fashion although very hectic.

Ward Y was an internal medicine ward, specialized in treating a wide range of illnesses and patients. Ward X on the other hand, had mostly cardiology patients, which meant that most of the patients at ward X wore heart-monitoring devices. Because of this, alarms were continuously sounding throughout the day, all of which were used as indicators of patients' heart-rhythms. I could not stop noticing these alarms, but for the HCPs who were used to this, nothing seemed out of the ordinary, unless two distinct alarms went off – alarms that meant a patient's heart had stopped or was beating irregularly. I only heard these alarms twice times while conducting my fieldwork at ward X, but when they sounded, the entire HCP staff went running towards the patient, from whom the alarm had sounded. This was however, yet another clear sign of how, prioritization occurred when acute situations arose. No matter what HCPs were doing, they dropped everything and initiated corresponding protocols, as they were trained to do.

Field Note | Day 4 – 09.01.14 (ward X): I can't stop focusing on the alarms that go off all the time. One of the health care assistants have told me the difference and meaning of the alarms I keep hearing and apparently all of the are only there as early warning signs of something more serious. The alarms don't seem to be causing a stir unless the loud one starts. It happened earlier, but apparently, it was a false alarm because a nurse forgot to turn off the heart-monitoring device before removing it from the patient. They laugh about it, but it's clear that when that alarm goes off, the atmosphere turn from easy-going to 100% serious as all HCPs run towards the patient.

I was able to discern the different must-do and should-do tasks that occurred while I was conducting my fieldwork, but as mentioned, most of the should-do tasks were handled while doing must-do tasks. Should-do tasks comprised the psychosocial care of patient's, mostly handled by HCPs not acting as group leader. While caring for patients, TOKS screenings etc. HCPs would also talk to patients, give comfort and help with matters not directly connected to the treatment of patients' illnesses. However, time was still limited, which meant that TOKS screenings and the patient care felt somewhat rushed as HCPs needed to do other things as well. Administrative tasks (paperwork) was always a pressing issue taking up most of HCPs time throughout their shift. As soon as anything in regards to the treatment and care of patient was done, HCP' were required to record and register what had been done and how. Doing so was usually a time consuming and tedious task that forced HCPs to spend time in front of computers instead of caring for patients (should-do tasks).
Field Note | Day 19 – 23.1.14 (ward Y): "Every minute spent in front of a computer is one less minute spent with caring for patient – our actual job!" (Health Care Assistant trainee, Richard)

I asked Richard to elaborate on his statement (above), and he told me that, everyone understands the importance of doing the administrative work required, but sometimes they would wish that they could focus on caring for patient, which "[...] is the reason why we became e.g. nurses, health care assistants etc. in the first place! It sometimes feel like we spend most of our time registering patients' treatment instead of focusing on the actual treatment of patients." (Health Care Assistant trainee, Richard – ward Y).

The local risk manager pointed out the same issue in my interview with the hospital management:

"There is going to be more and more registration practice because it has been found [...] especially in Scotland that it promotes patient safety. Nevertheless, it can be difficult to get the message across [...]. Because the counter-argument is: "give me my profession back! I want to be with my patients, I don't want to sit in front of the computer and I don't see any sense in how this can be good for my patient"." (Appendix 3 – Local risk manager)

It became evident that all HCPs I was able to observe in their normal work routine were under considerable time pressure. To alleviate some of this time pressure both wards were organized according to the team-based nursing model. Team-based nursing was clearly affecting how group leaders and the remaining HCPs were conducting their work and the amount of time pressure each HCPs were subjected to. Group leaders were continuously on the move, walking between patients, to the nurses' office to do paperwork and then back to other patients. At the same time, other HCPs were able to spend more time with patients, talking, helping and doing other must-do and should-do tasks simultaneously.

### 7.2.2 Team-based Nursing Model

Team-based nursing is a model of nursing care, where HCPs (nurses, health care assistants and accompanying students for each profession) are divided into groups, each responsible for a certain amount of beds (Fernandez et al. 2012). Opposed to organizing care based on *Primary Nursing* and *Hybrid Model of Care* (Fernandez et al. 2012). In the case of ward X and Y, there were two groups at



#### Figure 9 Ward X Layout

each ward responsible for approximately 50% of the wards beds each. Ward X had 20 beds in rooms with between one and four beds, and two extra beds, which were used only if the ward was overcrowded, as these were situated in the hallway (see figure 9). How ward X was divided between the two groups is shown in figure 9, where group one is marked with a blue square and group two is marked with an orange square. Contrariwise, ward Y had 26 beds, all in rooms of one to four beds per room (see figure 11). There were two groups – red group and green group as shown in figure 11.

Based on a rotating shift schedule, nurses took turns being assigned the role of group leader. Group leaders acted as middle managers and were responsible for organizing the remaining HCPs in each group and doing rounds together with resident doctors. Observing the work routine of group leaders made it clear that group leaders were under a high level of stress. Below are two examples of my observations of how group leaders were experiencing high paced work routines on particularly busy days:

Field Note | Day 11 – 15.1.14 (ward X): Todays rounds took from 9.30am to 2.30pm, which meant tasks, normally done after rounds, were, postponed in turn causing Nurse Liz to be overburdened with work. She even missed lunch because of it. She never sat still for more than a moment, mostly while doing administrative tasks at the computer, rushing to complete the registration tasks needed before moving on to the next patient.

Field Note | Day 19 – 23.1.14 (ward Y): Because of the acute pacemaker operation from earlier today, rounds have taken much longer than usual as both group leader Inga and the attending doctor have had to focus all their time on one patient, which leaves the remaining patients and rounds at a standstill. It's clear that Inga is stressed about finishing rounds before the day shift is over and not only that, she also needs to finish all the administrative tasks as well.



Having adopted the team-based nursing models allows HCPs to divide the workload, thereby giving non-group leader HCPs more time to focus on patient centered tasks including both must-do and should-do tasks. This does not mean that task prioritization is less frequent. On the contrary, I observed group leaders to be overworked, preparing for and doing rounds, while the remaining HCPs were busy with the daily work routine, treating patients, assorted administrative tasks and caring for patients. Group leaders in particular, show certain signs of being overworked, as they need to prepare and conduct rounds, while also organizing patient care and treatment in their respective groups. Having to remember most of their patients past and present treatments as well as planning for future treatment courses, require large amount of mental focus from group leaders. As Liz from ward X

states: "It isn't really physically hard being the group leader of ward X, but you do have a high mental workload with things to remember, plan and organize. Planning ahead is certainly a key task when it comes to being group leader." (Nurse Liz, ward X)

My observations of group leaders and the remaining HCPs work routines, made me aware that even though both wards have set work routines (see figure 7) these can be divided into two separate work routines. Everyone gathers at 7am to do handover, but afterwards group leader start to prepare for rounds, before the attending doctor shows up at around 9 - 9.30am. In the meantime, remaining HCPs start TOKS screening patients and preparing patients' breakfast. After breakfast, rounds would normally start unless the doctor was delayed, which would result in the entire time-schedule being moved forward. If this were to happen, the end result would be the less time for the remaining tasks, seriously affecting all HCPs as this would create more time pressure than they face already. Staff hierarchies are shown in figure 11 and 12, with one slight variance being that ward X had an assistant head nurse, whereas ward Y did not.



### 7.2.3 Detailed review of must-do tasks

To understand what each task entailed and how time was factor, I reviewed each separate task in detail. This allowed me to describe how HCPs prioritize and rank each task accordingly as some tasks were considered more important than others are. It also made it possible for me to understand which tasks were given more time as a method used by HCPs to fit the different should-do tasks in to an otherwise hectic schedule.

### 7.2.3.1 Handover

Handover is the practice of *handing over* clinical information between shifts and HCPs when the responsibility for patient care is transferred from one person or group to another (British Medical Association 2005). As mentioned, handover typically started at around 7am and it usually took about 30 minutes to do. Depending on the situation and what had happened on the last shift, handover could take less or more than 30 minutes.





However, this seemed to be the approximate time HCPs would spend doing handover. The reason for performing handover was to eliminate the potential for error as both formal and informal information could be transferred. Each HCP would receive a printed list with each patient and their corresponding name, civil registration number (CPR), age and an overview of illnesses (see figure 13). This list would then be reviewed rigorously by all HCPs attending handover as HCPs typically added information to each patient, throughout their shift. Handover was also used to inform the HCPs taking over of any adverse events that needed to be taken a closer look at.

### 7.2.3.2 TOKS screening

TOKS screening is a Rapid Response System that entails measuring patients' vital signs in an attempt to discover any signs of deterioration in patients' health preemptively (Simmes et al. 2013). TOKS screening was done primarily by HCPs who were not acting as group leader, directly after handover at 7.30am. TOKS screening measured *systolic blood pressure, pulse, respiration, blood oxygen saturation, temperature and awareness* of each individual patient (see figure 14). Each measurement had a corresponding score, the sum of which resulted in a total score. The total score could then be used to decide the necessary treatment according to the Course of Action Algorithm depicted in table 3.

	3	2	1	0	1	2	3	score
Systolisk- BT	<70	70- 79	80-100	101- 200		>200		
Puls	<40		40-49	50-90	91-110	111-130	>130	
Respiration	<5		6-9	10-16	17-20	21-25	>26	
Saturation	<85	85- 89	90-92	<u>&gt;93</u>				
Temperatur (målt rektalt)	<33	33- 35,9		36-38	38,1-39	39,1-40	>40	
Bevidsthed			agiteret	vågen	reagerer på stemmer	reagerer på smerte	reagerer ikke	
				and all the			Score i alt	1 Sala

#### Figure 14 Vitals measured when TOKS screening patients

Table 3 Course of Action Algorithm used for TOKS Screening

Total Score	Observation Frequency	Course of Action
0	Vitals are measured 1 time a day	
1	Vitals are measured 3 times a day – or follow the doctor's ordination	HCPs optimizes the patient's condition by means of ABCDE <sup>3</sup>
2	Vitals are measured 1 time every hour for 3 hours – or follow the doctor's ordination	HCPs optimizes the patient's condition by means of ABCDE
3 or single	Doctor states observation frequency and permissible score in	Confer with / summon medical
score of 2	Clinical Suite <sup>4</sup>	doctor
Δ	Doctor states observation frequency and permissible score in	Summon medical doctor
4	Clinical Suite	
≥ 5 or single	Doctor states observation frequency and permissible score in	MAT (Mobile Acute Team) is
score of 3	Clinical Suite	summoned

<sup>&</sup>lt;sup>3</sup> ABCDE optimization of patients means optimization of *Airways, Breathing, Circulation, Disability* and *Exposure* 

 $<sup>^4</sup>$  Clinical Suite is the electronic patient record system used at the hospital in which ward X and Y are located (CSC Scandihealth 2011)

The TOKS screening process began with preparing the necessary devices needed to measure the specific vitals. Nurses and Health Care Assistants (HCA) would then proceed to measure blood pressure, blood oxygen saturation and pulse as these required devices to be directly attached to patients. Meanwhile, HCPs would measure respiration and awareness by carefully looking at how patients were breathing and their overall level of awareness. Lastly, thermometers were prepared for use and patients were given a choice of doing it themselves or having the HCP do it. The entire process would take an average of 30 to 45 minutes depending on the patient and every measurement was written down in a table as seen in figure 14. I went participated in a TOKS screening so that I could give a concrete example of how individual measurements translated into a specific course of action.

Figure 15 Example of TOKS values

				Concerner of	-			154					
	TOKS – værdi - skema		a lour										
St.	Patient label	RF	SAT	BT	Р	CGS	TP	Højde	Vægt	U-stix	Andet	TOKS	Lægelig vurdering
	Christopher Harter	16	98%	142/80	57	15						0	N/A
-			1000	and the second s	19.00							1 2 3 4	

Comparing the values above to those of figure 14, I had a total score of zero resulting in no immediate action.

TOKS screening was a big part of the daily work routine, but was mostly viewed as redundant in the eyes of HCPs at both ward X and Y. The argument was that if a patient's health would begin to deteriorate, someone would notice right away. The idea of having a Rapid Response System is good, but most of the HCPs I spoke with viewed TOKS screening as a must-do task that had to be done as fast as possible.

Field Note | Day 9 - 14.01.14 (ward X): TOKS is apparently viewed as a waste of time as it isn't used as it should. Based on the total TOKS scores of patients, corresponding courses of action should be done – but they aren't. The nurses I've spoken with on the subject state that if a patient's health should deteriorate, someone would notice and take action. If this was to happen, then they also would know that a specific patient's health had deteriorated and there wouldn't be any need of continuous measurements.

	E C	Besluti	ningsal	goritme	TOKS		
Score	3			0			3
Respiration	<8		8-9	10-20	21-25	26-30	>30
Saturation	<85	85-89	90-92	≥93			
Systolisk BT	<70	70-89	90-100	101-200	-	>200	
Puls	<40		40-49	50-90	91-110	111-129	≥130
Bevidsthed GCS omregningstabel	≤8	9-13	14	15			
Temperatur			≤35	35,1-37,9	38-38,9	39-39,9	≥40
Diurese	<50 ml/ 4 timer			≤50 ml/ 4 timer			

#### Figure 16 Decision Algorithm - TOKS

#### Figure 17 Course of Action Algorithm - TOKS

Handlingsalgoritme for TOKS				
Totalscore	Observationshyppighed	Handling		
0	Vitalværdier måles 1 gang i døgnet	e minten		
1	Vitalværdier måles 3 gange i døgnet Eller følg lægens ordination	Plejepersonalet ABCDE optimerer		
2	Vitalværdier måles en gang i timen i 3 timer Eller følg lægens ordination	Plejepersonalet ABCDE optimer		
3 eller enkelt- score på 2	Læge anfører OBS hyppighed og til- ladelig score i Clinical Suite	Der konfereres med/ tilkaldes medicinsk læge		
4	Læge anfører OBS hyppighed og tilla- delig score i den elektroniske patient- journal	Der tilkaldes medicinsk læge		
≥ 5 eller enkeltscore på 3	Læge anfører hyppighed og tilladelig score i den elektroniske patientjournal	MAT tilkaldes		

Even though HCPs had a generally negative view upon TOKS screening, the task was done every morning and to help ease the process, HCPs had small plastic cards with all the information they needed regarding TOKS scores and courses of action, to carry around in their pocket (see figure 16 and 17).

# 7.2.3.3 General Patient Care

General patient care, as included in the daily work routine at ward X and Y (figure 7), was mainly done by HCPs not acting as group leader, since patient care was done simultaneously to rounds. Patient care comprised all tasks connected to that of direct patient care e.g. serving food, hygienic matters, helping patients put on clothes, administering ordinated medicine, as well as many of the psychosocial aspects of nursing care – comforting, talking and listening. This was especially the time where patient centered should-do tasks were taking place, as HCPs were able to dedicate time to care for patients instead of having to focus primarily on treating them. However, as rounds were done simultaneously, other tasks started to arise along with the many administrative tasks, which often times meant shoulddo tasks were put aside to "keep up" with the rigid schedule.

### 7.2.3.4 Rounds

Rounds were conducted every day alongside of the general patient care. Rounds began with the group leader of each group updating the attending doctor about each patient, their individual illnesses and treatments that had already been done. I observed two distinct ways of doing rounds, while visiting each ward. Group leader and doctors at ward X usually reviewed all patients before visiting them one by one, whereas group leaders and doctors at ward Y reviewed and visited each patient individually (see figure 18 and 19).



The difference in how ward X and Y organized rounds had interesting outcomes. Using the *Multiple Patient Review and Visit* method (1), meant that group leaders and doctors were able to conduct rounds in a shorter timeframe, while using the *Individual Patient Review and Visit* method (2) took longer. However, utilizing method 2 resulted in rounds that more focused on the individual patient instead of focusing on all patients as part of a whole (method 1). While observing both methods I noticed that the overall ward pace slowed down, when group leaders and doctors were using method 2, while the pace felt faster with method 1. Method 1 also put more mental pressure on especially the group leaders, as they had to remember details on each patient at the same time, where method 2 allowed them to focus on one patient before moving on to the next, resulting in less frantic behavior. There were pros and cons with both methods, but keeping prioritization and time in mind, method 2 allowed some degree of breathing room while conducting rounds, the backside being that rounds took longer resulting more work having to be done in a shorter period of time after rounds had been completed.

### 7.2.3.5 Administrative Tasks

As registration procedures are becoming more predominate in the field of medicine and health care, to ensure patient safety and proper high-quality patient treatment/care, administrative tasks have become a major part of HCPs daily work routine. There was a natural alternation between treating patients and registering past, present and future treatment courses, writing up epicrisis', ordination and discontinuation of medicine, all of which took place alongside of the normal work routine. HCPs often mentioned their dislike towards administrative tasks, as these tasks were not seen as contributing to patient treatment and care. Most of the registration practice I witnessed was done in the nursing office by means of computers, through Clinical Suite (see figure 33 in appendix 1) and the associated medication module, OPUS medicine (figure 34 in appendix 1). A large portion of the registration was also done by hand on the aforementioned patient list (figure 13) and note blocks.

Administrative tasks also included adverse event reporting, diagnosing illnesses and handling patient admissions and discharges. In short, I called the many different administrative tasks for paperwork (and computer work). However, I singled out adverse event reporting, as I wanted to keep focusing on how adverse event reporting was prioritized compared to other tasks. According to HCPs paperwork accounted for more than 50% of their everyday work. Every time HCPs treated patients, this had to be registered in Clinical Suite, medication passes had to be documented in OPUS medicine and they were constantly writing new information on their patient lists.

Field Note | Day 23 – 27.1.14 (ward Y): Green group leader Kimberly and the attending doctor Tracy, told me that paperwork had become such a huge part of their workday, that they spend around 4-5 hours in front of computers diagnosing new patients, registering treatment courses, ordination and discontinuation of medication - doing paperwork. They cannot really argue with the reason behind having to do paperwork, but it's too much some times. The result is that other tasks are rushed in order to do paperwork and some tasks, especially adverse event reporting, is neglected.

In the above excerpt from my field notes, green group leader and the attending doctor mentioned a clear prioritization of adverse event reporting – "adverse event reporting is neglected". I should note that the perceived four to five hours of paperwork was their perception of reality, I did not measure the actual amount of time it took for them (Westbrook et al. 2007). Taking a closer look at how hospital management have tried to maintain focus on adverse event reporting and initiatives to facilitate quick and easy adverse event reporting I found what both wards had called S.P.O.T cards (see figure 20). These cards were used as a tool to help HCPs remember adverse events for reporting at a later time, if they were incapable of doing it right after the event occurred. The only time I observed a HCP use one of these S.P.O.T. cards was when she used it as a note block for writing down patient information, nothing in relation to adverse event reporting. I asked why they never use them, but no one gave me any definite answer, maybe they did not need them. S.P.O.T. cards were positioned in the middle of each wards' nursing office, which meant they were directly accessible if anyone needed one. It was clear to me that adverse event reporting was prioritized very low in the overall must-do, administrative task hierarchy as I have so few examples of any actual adverse event occurrences.

Administrative tasks therefore play a major role in the everyday Figure 20 S.P.O.T. Card work routine at each ward, most of which are must-do. However, some are prioritized much lower than the rest – as was seen in the case of adverse event reporting. On my last day at ward Y, one of the nurse said:

Field Note | "[...] the difference between adverse event reporting and e.g. discontinuation of medication is that if someone does not report an adverse event, people will not ask why, but if you forget to discontinue medication as instructed, than someone will definitely ask why as this could cause problems, potentially leading to an adverse event." (Nurse at ward Y)





At the time I was talking to a group of HCPs from different wards in their shared break room. I think there was a grain of truth in this as many of the tasks that were either rushed or neglected, were those that had no supervision. Adverse event reporting is the responsible of the individual HCP, whereas updating treatment courses in Clinical Suite affects both the patients as well as the surrounding HCPs.

#### 7.2.4 Summary of Task Prioritization

In view of my observations on everyday work routines, team-based nursing and the in-depth review of each must-do task, I found prioritization to be an integral part of how HCPs conduct their work. Having a rigid work schedule, resulted in considerable time pressure when HCPs were alternating between patient centered and non-patient centered tasks. Must-do tasks were part of the two work routines in figure 8 and were not subject to prioritization as these were rigidly scheduled at each ward. Combined with having to balance must-do and should-do tasks simultaneously resulted in mentally demanding work routines, especially for group leaders as HCPs were required to remember patient information as well as taking time to treat and care for patients.

The use of team-based nursing meant that HCPs were able to divide certain tasks between group leaders and the remaining HCPs. Each team handled approximately 50% of the ward's patients allowing HCPs to focus on fewer patient resulting in more time for patient care and should-do tasks. However, even though team-based nursing lowered the number of patients in each group, must-do tasks, took up most of HCPs time. Should-do tasks however, were done in conjunction with most of the patient centered must-do tasks like general patient care. Administrative tasks took up most of HCPs time and prioritization was directly observable as some tasks, like adverse event reporting, was prioritized much lower than other important tasks, directly relating to the treatment of patients. Especially potential adverse events were prioritized so low that I had trouble observing the reporting process of such events.

Therefore, the second part my results section is an in-depth review of adverse events reporting at each ward. Specifically I wanted to examine the reason why potential adverse events were not being reported as was mandatory, although such events frequently were occurring. Based on these findings, I initiated stage 3 of my fieldwork, in attempt to understand how task prioritization was affecting (potential) adverse event reporting.

# 7.3 EVALUATION OF (POTENTIAL) ADVERSE EVENTS' SEVERITY LEVEL.

Adverse events come in two form as explained in section 5. While conducting my fieldwork at ward X and Y, I was not able to observe any actual adverse events and neither did HCPs mention any events having occurred on the evening and night shifts. However, HCPs made it quite clear that all actual adverse events, where patients were harmed, were reported. On my first day at ward X, the assistant head nurse told me that they were aware of the lack of reported potential adverse events, but that actual adverse events were always reported. This was later on confirmed by other HCPs both at ward X and Y and even though I was not able to observe this directly, the actual reported adverse events were made available to me. Reviewing the reported adverse events confirmed that adverse events involving patient were reported. Some potential adverse events were also reported, but in light of the amount of potential adverse events that took place while I was conducting my fieldwork it became clear that the majority of potential adverse events were never reported as mandatory.

Field Note | Day 4 – 09.01.14 (ward X): While observing during lunch, I asked the HCPs present at the time, if they could elaborate on the reporting frequency of adverse events at ward X. One nurse told me that they were aware of not reporting as much as they probably should, but if severe adverse events were to happen, they were always reported.

I considered the possibility of HCPs being afraid of disciplinary sanctions, but instead made it clear how HCPs acknowledged the importance of adverse events reporting as a tool for learning, as is seen in the field note excerpts below:

Field Note | Day 19 - 23.01.14 (ward Y): I was told that everyone understands the necessity of adverse event reporting as a tool for learning and not to be used as a means of punishing those that make mistakes.

More prominent is the fact that HCPs describe adverse event reporting as taking too long, hindering HCPs from doing *"their actual job"*:

Field Note | Day 5 - 10.01.14 (ward X): HCPs are not worried about disciplinary sanctions, but state that adverse event reporting simply takes too much time compared to the impact it has on actual patient treatments and care.

Field Note | Day 19 – 23.1.14 (ward Y): "Every minute spent in front of a computer is one less minute spent with caring for patient – our actual job!" (Health Care Assistant trainee, Richard)

On the second day of my fieldwork I was observing rounds practice, more specific how group leaders and doctors reviewed patients leading up to their actual visitation. This was my first encounter with what I considered a potential adverse event and I have illustrated this event in figure 21. I asked the HCPs present at the time of this observation and asked them if the potential adverse event was to be reported, but at the time, they did not have an answer. After exploring this issue throughout my stay at ward X, I received a tangible answer from another attending doctor:

Field Note | "In this particular case I wouldn't have reported anything. The two types of medicine are antibiotics, the end result would have been harmless if the patient would have taken both types. If you become really sick in a hospital we can give up to of 10 million units of antibiotics, whereas your own doctor will give you 2 million units. [...] we don't want to waste time on trivial things". (Doctor Theo, ward X)

"Wasting time on something trivial" struck me as a very important statement as this related back to how HCPs were required to prioritize tasks because of time pressure and high workloads. I drew a parallel from prioritizing tasks to that of prioritizing, which adverse events should be reported, more specifically the potential adverse events, as actual adverse events were always reported.

To investigate how potential adverse events were prioritized relative to each other, I began to ask HCPs how they prioritized potential adverse events and the answer was clear – they did not.

Field Note | Day 26 – 30.01.14 (ward Y): "It all comes down to consequences, how severe would the potential outcome be. In this particular case, the patient could've gone into anaphylactic shock, which potentially could've resulted in death. But in cases as you mention with double dosages of antibiotics, the consequences are so negligible that it would be pointless to report" (Doctor Tracy, ward Y).

The above excerpt from my field notes was a transcription of the only encounter I had with an actual adverse event being reported. The details on what had happened can be seen in figure 22 and the end result was evaluated as potentially severe, which was why this particular event was being reported.

Field Note | Day 23 – 27.01.14 (ward Y): Red group leader Kim and Doctor Tracy both state that if a potential adverse event as severe consequences, but are prevented, they should be reported. It comes down to the word – CONSEQUENCE. Also, when is something considered a trifle and when is are potential adverse events severe enough to be reported? This is very subjective and there is no definitions of trifle vs. potential adverse event.

#### Figure 21 Event 1

According to the prescription system – OPUS medicine – Patient M. was to receive two types of medicine, Vepicombin and Cefuroxim, which is the same type of medication. This would have resulted in a double dosage of medicine. A nurse on the evening shift noticed this error and proceeded not to administer both medications. Nurses however cannot discontinue medicine in OPUS medicine, which resulted in the misinformation, still being present the day after.

#### Figure 22 Event 2

Newly admitted patient (female) was allergic to penicillin, which was told to the admitting doctor during admittance. Because of external circumstances the doctor forgot to update this allergy in the patient's medical journal. After admittance the patient showed signs of infections and the doctor proceeded to ordinate penicillin as was the standard procedure in such a case, forgetting that the person was allergic. The penicillin was never administered, but the potential outcome could have been lethal.

Severity is key and after numerous informal interviews about why potential adverse events were never being reported, resulted in a coherent answer. Most potential adverse events were perceived as trifles and those that were evaluated as potentially fatal or very serious were reported. To illustrate this evaluation I created a severity scale (see figure 23). My initial depiction of this severity scale was drawn in my field notes and I have since changed the wording to correspond with the aforementioned *Safety Assessment Code Matrix* (see table 1 on page 8). This severity scale was used implicitly by HCPs every time a potential adverse event was seen. As was seen with the prioritization of tasks, this evaluation was done to weigh the importance of each tasks relative to each other. In the case of potential adverse event reporting, HCPs weighed (evaluated) the severity level of the potential outcome of a given situation and if these events were perceived as trifles, other tasks were prioritized

higher, thus neglecting adverse event reporting. Drawing upon the two aforementioned examples of potential adverse events, the following evaluation had occurred:

The potential outcome of *Event 1* (figure 21) was evaluated as low on the above severity scale and was therefore not reported, whereas the potential outcome of *Event 2* (figure 22), was evaluated as potentially catastrophic, resulting in the event being reported. I should note however, that each individual HCP had different views upon the severity of potential adverse events. When I asked the nursing students about the severity of *Event 1* most of them acknowledge that it should have been reported, whereas most of the experienced nurses all saw the event as a trifle.



Time was always a factor and spending time on meaningless tasks (in the eyes of HCPs), meant that other, more important tasks had to be rushed. The head nurse of ward X and the Clinical manager both stated, in my interviews:

"[...] If people don't see any sense in what they are supposed to do and the end result is meaningless, then reporting just for the sake of reporting, is pointless I would say. (Appendix 3 – Clinical Manager)

"I think it comes down to culture, very much so and you would like to see something meaningfulness in reporting it." (Appendix 3 – Head Nurse – Ward X)

HCPs stated on numerous occasions that they simply did not have time to report all the occurring potential adverse events, without sacrificing other tasks that need to be done. To support this statement, I was introduced to a person, whom the other HCPs called the *Adverse Event Guru*. Nurse Hailey normally worked the afternoon shift and apparently witnessed high amount of potential adverse events. When I spoke with her, she stated: *"I wouldn't be able to do anything else if I had to report all the potential adverse events or trifles as I call them, I see every single day."* (Nurse Hailey, *ward X*). Another indicator of how lack of time directly affects how tasks are prioritized and how potential adverse event reporting often times was neglected completely.

The implicitness of evaluating the severity level of potential adverse events was intriguing and made me wonder, where this implicitness was stemming from. HCPs were witnessing potential adverse events and consequently evaluating them as trifles automatically, which made me wonder if ward culture could be the root of this evaluation. A doctor at ward Y told me: *"Culture is the main factor in the number of adverse events that get reported. It has nothing to do with the how many adverse events are occurring."* (Doctor Horton, ward Y). This made me turn to how culture could be the deciding factor in how severity levels were being evaluated implicitly between HCPs. I was also told that trifles were kind of the norm, which further indicated some kind of cultural influence on the reporting frequency of potential adverse events.

Field Note | Day 9 - 14.01.14 (ward X): Kate seems as though she knows the lack of adverse event reporting is wrong but she seems to be more and more schooled to think as everyone else - that potential adverse events are trifles and it's a waste of time to report them. Kate also stated that some nurses/HCA's are afraid of sanctions and being "told off", which sometimes affect the work culture.

I based the third part of my results sections on the notion that culture was underlying factor, affecting how tasks were prioritized as well as how HCPs were evaluating potential adverse events, implicitly in a together with other their fellow colleagues. Specifically I wanted to explore the connection and/or difference between professional and personal relationships.

### 7.3.1 Summary of Evaluation of (Potential) Adverse Events Severity Level

The resulting key points, in regards to how the severity level of (Potential) adverse events are evaluated, were that due to large workloads and time pressure, HCPs were required to prioritize between meaningful tasks and pointless tasks. In the case of potential adverse events, HCPs often viewed these as trifles and as such did not report them, as this would be pointless. There were so many potential adverse events (trifles) occurring that some HCPs directly stated that they did not have time to report them all and if they were to do so, they would have to sacrifice other more important tasks. Deciding which potential adverse events should be reported; HCPs evaluated the severity level of each event implicitly, based on their expertise and professional knowledge. Subsequently, if a potential adverse event were evaluated as a trifle the event would not be reported. However, if the event could have led to a potentially catastrophic outcome, these would be subject to a report. I illustrated this severity scale in figure 23, which was based on the explanation, given by HCPs, of the severity levels of similar potential adverse events, to those in figures 21 and 22. The implicitness of this evaluation led me to believe that maybe ward culture and collegiality could be affecting how prioritization and the evaluation of severity levels was done. As such, I initiated stage 4 of my fieldwork, which focused mainly on the interpersonal relationships at each ward and how these were affecting my research problem.

### 7.4 INTERPERSONAL RELATIONSHIPS

HCPs were constantly moving between two social spheres, a private sphere and a professional sphere. Within these social spheres, professional and private relationships unfolded in their respective social arena. Both wards were divided into two arenas – work related areas of the ward and the break room. Since many of the daily tasks involved paperwork, HCPs spent much of their time in the nursing office, while also moving between patients, medication rooms and storage areas. Therefore, I spent my time observing the interaction between HCPs while they were working together in the nursing office, as









well as their interaction while on break. To understand the four social arenas (two at each ward), I drew them in my field notes as depicted in figures 24 to 27. It was interesting to see the difference in how HCPs at each ward were using these arenas. *Figure 26 Ward Y Break Room* 

Field Note | Day 4 – 09.01.14 (ward X): I am moving to the nursing office, where most of the paperwork is done. The nursing office is purely used as a workspace, more than anywhere else in the ward. There's a real feeling of professionalism in this room – unlike the break room where HCPs joke around with having different colored uniforms according to the hierarchy e.g. head nurses = red, nurses = green, HCA's = blue and students = white. The also talk about more private matters.

Field Note | Day 18 – 22.01.14 (ward Y): The staff at ward Y try to keep the nurses office as professional as possible and try to keep personal talk/matters in the break room. The reason for this is so that patients (and their friends/families) perceive staff as professional when they move around the ward. It's not always like this and I see a difference between ward X and Y – The atmosphere at ward Y seems more relaxed/personal, which results in more personal talk outside of the break room.



Figure 27 Ward Y Nursing Office



Management had a general rule that personal talk should be held within the confines of the break room. Everywhere else, HCPs should keep to professional matters only. However, as both break rooms

were used as provisional offices for meetings and miscellaneous paperwork, I viewed the break rooms as a combination of both professional and personal matters. I observed numerous meetings taking place in ward X's break room, while the break room at ward Y, had seven workstations used mainly for administrative tasks (highlighted in figure 26). Information boards, situated in both break rooms, were used to communicate a combination of personal and professional information e.g. promoting the annual skiing trip and first-aid course signups etc. Contrary to the mixed atmosphere of the break rooms, was the two nursing offices, which had a much more professional atmosphere. Ward X usually kept all personal matters out of the nursing office except on very slow days, but even then, personal matters were mostly discussed between students. Whereas, ward Y had a more permissive relationship to personal talk outside of the wards' break room. Evenso, the head nurse of ward Y stated: *"We try to keep all personal matters confined to the break room" (Appendix 3 Head Nurse – Ward Y*). My personal observations however, showed otherwise.

Field Note | Day 20 – 24.01.14 (ward Y): Head nurse Rose stated that they try to keep the nursing office work related only, and all personal matters confined to the break room. This is however not the case, but there is a slight difference between the break room and the nursing office in the amount of personal talk. Differentiating between work and personal life is necessary, but as stated by ward staff, the overall personal connection between HCPs across both professions and wards, means that personal life cannot be completely separated from professional life. This is probably the biggest cultural difference between ward X and Y.

HCPs at ward Y shared their break room with different wards, which meant personal and professional cross-ward affiliation was high. Ward X however, was situated on the top floor of the hospital, which meant HCPs were more "cut off" from the other wards, resulting in less cross-ward affiliation. As HCPs are dependant on sharing professional knowledge and expertise between each other, the higher level of cross-ward affiliation at ward Y, meant that a larger number of professions, specialties and experts were able to share knowledge. Sharing a break room also resulted in different wards having a deeper understanding of each other. I observed a mutual dependance between all the different profession that were connected to each ward. This mutual dependance on sharing knowledge and expertise as well as helping each other was affected by the different personal and professional relationsships that unfolded as I continued to observe HCPs.

Field Note | Day 24 – 28.01.14 (ward Y): The close relationships between staff is clearly affecting the professional relationships I see outside of the break room. If a person needs help with something, someone is always willing to help – if time permits of cause. Even though everyone seems to like each other, professional relationships seem to reflect the personal relationships I'm seeing in the break room.

Field Note | Day 5 - 10.01.14 (ward X): Nurses need to keep an overview of all patient, something that doctors often rely on, whereas nurses need the medical expertise of doctors to deliver accurate treatment to patients.

Field Note | Day 24 – 28.01.14 (ward Y): Both wards show clear signs of high levels of collegiality and solidarity.

I observed a difference in the level of cross-ward solidarity and collegiality between ward X and Y, mainly due to another factor, which had a clear effect on ward Y. The overall hospital organization was facing impending organizational structure changes. The main points of this structural change were the possible relocation of different wards within the two hospital localities. At the time of my fieldwork, rumors were that ward Y would be closed or moved to another locality in the same city as ward X, meaning staff at ward Y would either need to move or commute aproximately 40km farther, as many of the HCPs were living in the vicinity of ward Y.

Field Note | Day 20 - 24.01.14 (ward Y): The biggest difference in atmosphere comes from the pending organizational restructuring, which has a large effect on the conversational topics at ward Y. Thus affecting how staff acts towards each other. I've noticed a large degree of solidarity between all HCPs across the different wards who share break room with ward Y – it's as though staff has gathered against a common enemy in the form of politicians and the hospital management [...]. It's apparent that everyone is preparing for the worst and some staff members have already begun searching for new jobs at other hospitals. The rest are clearly affected by not knowing what will happen. However, this has had an impact on collegiality and solidarity across professions and wards. They all seem very close on a personal as well as professional level.

The main conversional topic at ward Y, both on a personal and professional level, was that of the impending organizational restructuring. This restructuring was also mentioned at ward X, but they were not affected by the situation in the same way as ward Y and beyond mentioning the subject once

in a while, work at ward X, continued as usual. Ward Y on the other hand, followed the situation closely and as a result solidarity was very apparent.

While visiting ward Y, I learned that hospital management had recently conducted a satisfaction study on the psychological work environment. By reviewing the individual reports for ward X and Y, I discovered that the results presented in each report were in accordance with my observations. As I had observed different attitudes towards management and the overall levels of satisfaction at each ward, I took these into consideration when comparing the cultural differences between the two wards. I was looking for results in the two separate satisfaction reports, showing the attitudes towards management and fellow staff members as well as the overall statisfaction levels at each ward. Ward Y had a below average attitude towards management, mainly due to the impending restructuring of the hospital organization (Appendix 2, section 2.1 – Figure 35). Ward X however showed an above average attitude to management (Appendix 2, section 2.1 – Figure 39). Looking at attitudes towards cooperation, showed that, eventhough ward Y disliked management, they still evaluated the level of cooperation between colleagues in and outside of ward Y, above average (Appendix 2, section 2.1 -Figure 36). The same was seen when looking at the results from ward X. They too scored above average in the evaluation of the level of cooperation (Appendix 2, section 2.1 – Figure 40). However, ward X scored slightly less when looking at cooperation between them and other wards (Appendix 2, section 2.1 – Figure 40). Reviewing the level of trust, showed high levels of trust between staff members, slightly higher at ward Y than at ward X (Appendix 2, section 2.1 – Figure 37 & 41). Looking at the overall picture, ward Y evaluated the three factors, cooperation, trust and justice, lower than ward X, indicating that ward Y had a lower level of satisfaction overall, compared to ward X (Appendix 2, section 2.1 – Figure 35 & 39).

Comparing the results of the satisfaction reports with my own observation confirmed that while ward Y, was facing insecure times, spirits were still high, although not as high as was seen at ward X. However, ward Y was still above average, compared to the rest of the wards who had participated in the study, in terms of cooperation within and outside of their respective wards, just as I observed while visiting ward Y. Focussing on the level of trust between ward staff showed that both wards had high levels of trust (Appendix 2, section 2.1 – Figure 37 & 41) and were able to discuss both personal and professional matters, without having to fear judgement. Being able to discuss both personal and professional matters in a trustful environment, was directly linked to how HCPs were able to openly discuss errors.

Field Note | Day 3 - 08.01.14 (ward X): Potential adverse events are not getting reported because staff members help each other to remember how, why and where the event occurred and therefore help each other to understand how not to get into the same situation. The talk openly about these events, which means potential adverse events are handled "in-house" instead of being reported, as this takes much less time.

As seen in the fieldnote excerpt above, the lack of potential adverse event reporting was directly linked to how HCPs were able to discuss such matters, wihtout fear of judgement. The co-dependance and high levels of trust and cooperation between HCPs meant that potential adverse events were handled in-house to ensure that such events would not happen again. This meant that HCPs could prioritize other tasks higher, instead of spending time on tasks that were less important, like reporting potential adverse events with a low severity.

### 7.4.1 Summary of Interpersonal Relationships

Throughout my fieldwork, especially in stage 4, I found that HCPs were alternating between two different social spheres, the personal sphere and the professional sphere. Each sphere had two distinct social arenas, where the social sphere mainly took place in the wards' break rooms, whereas the professional spheres consisted of all other work related arenas. Both wards tried to confine all personal conversations and interactions within the break room. However, my observations of each ward showed that staff, especially at ward Y, tended to be more permissive of personal conversations outside of the break room, whereas staff at ward X found it to be more natural to keep all personal matters confined to the break room.

The reason for ward Y being more permissive about personal matters outside of their break room, could be contributed to the fact that ward Y shared its break room with many different wards and profession. Combined with the impending restructuring, ward Y and the surrounding wards showed a large degree of solidarity and collegiality as well as seeming closer on a personal level. Ward Y, along with the surrounding wards, also affected by the impending restructuring, seemed to stand together against the outside world. As such, personal matters were hard to separate from professional matters as staff members were continuously discussing their future, both in regards to their professional lives and their personal lives. The same level of solidarity was not apparent at ward X.

Lastly, I took a closer look at a satisfaction study, which had been conducted across the entire hospital organization. I was able to review the results from both wards and used these to support my own observations. The two satisfaction reports showed that staff at ward Y had a below average view on the hospital management, but despite this, staff were generally satisfied with working at ward Y. Staff at ward X, on the other hand, did not have the same negative view upon the hospital management and they too were satisfied with working at ward X. The two satisfaction reports also showed a slight difference in how well they perceived themselves at cooperating with surrounding wards. Ward Y scored above average, which was consistent with my personal observation, while ward X scored close to average. The same trend was seen in the level of trust at each ward, however this time, ward X scored above average and ward Y scored below average.

I used these findings to support my personal observations, as I was observing a slight difference in the interpersonal relationships at each ward. The atmosphere at ward Y, despite possibly being closed or relocated, was more personal across both social spheres. Whereas Ward X, was more professional except during breaks where conversations of a more personal nature took place. HCPs at ward Y seemed more open and honest, compared to ward X. This led me to believe that being open and honest on both a professional level as well as on a personal level could be contributing to the reporting frequency of each ward. Combined with HCPs being co-dependent on each other's level of expertise and professional knowledge, this directly affected how most potential adverse events were handled, especially in regards to evaluation of severity levels and how they were prioritized accordingly.

# 7.5 CORRELATION OF FINDINGS

Each section of my findings correspond to the four stages illustrated in table 2 and the correlation between each is shown in figure 28.

HCPs were continuously prioritizing must-do and should-do tasks according to the importance of each task. Most must-do tasks made up the normal work routine and as such had to be done. Shoulddo tasks, were performed while doing must-do tasks and were often time rushed due to lack of time. As prioritization of must-do and should-do tasks were a necessity because of lack of time, so was prioritizing the task of reporting adverse events. HCPs stated that all actual adverse events were being reported, but when it came to potential



adverse events, HCPs implicitly evaluated the severity-levels on the potential outcomes. If potential adverse events were evaluated as trifles, HCPs would prioritize accordingly as a report was seen as pointless. Instead, HCPs would move on to more important tasks in their work routine and as most of the potential adverse events were viewed as trifles, most of them were not being reported. As potential adverse events were in abundance most HCPs saw them as inevitable and in collaboration, such events were handled in-house instead. The interpersonal relationships affected both task prioritization and the evaluation of potential adverse events' severity level, as HCPs were co-dependent on each other's level of expertise and professional knowledge. By utilizing each other, based on both professional and personal relationships, HCPs were able to distribute tasks according to individual workloads and help each other to prioritize tasks accordingly. This showed an overlap of the two social spheres I observed throughout my fieldwork, as personal relationships carried over into professional relationships.

# 8 DISCUSSION

The results presented, revealed three parameters possibly explaining why reporting frequencies at ward X and Y differed. *Task prioritization i.e. must-do versus should-do, evaluation of potential adverse events' level of severity* and *differences in interpersonal relationships*. The effect of each parameter and the correlation between them made it possible to identify sub-parameters, which were either supporting or impeding HCPs ability and disposition to report adverse events. These sub-parameters have been listed in figure 29.

Figure 29 Supporting and Impeding Sub-parameters

# Supporting sub-parameters

• No apparent fear of blame - Understanding that the objective of AER is to learn from mistakes

- •Clear understanding of the importance of adverse event reporting
- •Just culture healthy interpersonal relationships, meaning high levels of trust

# Impeding sub-parameters

•Low priority - Less important than other tasks, directly affecting patient treatment and care

- (Potential) adverse events often viewed as trifles not necessary to report
- •In-house control of adverse events much faster and easier, than official channels

Fear of blame was only slightly apparent at both wards, but was not seen as one of the primary reasons of HCPs not reporting adverse events. On the contrary, my results point to HCPs having a clear understanding that adverse event reporting is used as a tool for learning. As fear of blame was never mentioned directly, the lack of mention could be contributed to that fact that HCPs perception of having an outsider enter their territory. As such, fear of blame, might have been a major impeding sub-parameter, which simply was not made visible throughout the conducted fieldwork. However, the same understanding was apparent when the inquiring about the perceived importance of adverse event reporting, where most HCPs had a clear understanding of how analyzed reports of adverse events could result in improved patient safety. Nevertheless, some of the more prevalent sub-parameters impeding HCPs from reporting adverse events, was their perception of lacking time and how HCPs were prioritizing adverse event reporting, much lower than more meaningful tasks i.e. tasks directly affecting patient treatment and care.

This seemingly paradoxical result reveals a situation where; awareness of the importance of adverse event reporting, contradicts its placement within the task hierarchy, constructed by HCPs. When asked directly, HCPs would always answer something similar to "yes, adverse event reporting is important". However, when task prioritization was observed, adverse event reporting would always be the lowest priority, except under rare circumstances, as was seen with "*event 2*" (see figure 22). A possible explanation to why this paradoxical situation was occurring could be that the majority of all (potential) adverse events were considered trifles. When (potential) adverse events were considered a trifle, HCPs deemed such events unnecessary to report as other tasks were much more important. The evaluation of severity-level, which determined, if (potential) adverse events were to be reported, was done in accordance with the severity-scale in figure 23. It is possible to draw a parallel between this severity-scale used implicitly by HCPs to the SAC matrix, which is used for categorizing adverse events for further analysis. HCP were implicitly using a customized version of the SAC matrix for use in their subjective evaluation of potential adverse events.

Reporting trifles was considered a waste of time and since the majority of all (potential) adverse event were perceived to be trifles, not reporting them had become the norm. The norm of not reporting trifles caused HCPs to adopt an in-house control of (potential) adverse events. Collegial control over medical issues was seen as an easier and faster way of handling adverse events, instead of having to rely on official channels. Collegiality however, also supported HCPs in reporting adverse events, as healthy relationships both professionally and personally, resulted in a high level of trust, which meant HCPs were able to discuss mistakes committed without fear of blame from colleagues. The perceptible level of trust between HCPs of all professions on both a personal and professional level, related to adverse event reporting in an ambiguous manner. On one side, trust meant that HCPs were able to discuss their mistakes without fear of blame. On the other hand, trust also impeded HCPs from reporting adverse events, as collegial control of mistakes meant that HCPs saw it as normal to handle such event in-house. Therefore, trust could be seen as a "double-edged sword", both supporting and impeding the reporting of adverse events. A possible explanation as to why the reporting frequency between ward X and Y differed. My results indicate that collegiality and solidarity was more prevalent at ward Y, due to the impending restructuring of the hospital organization as such, mutual trust between HCPs was very evident. The same level of solidarity was not as visible at ward X, collegiality was however, still very apparent, but HCP relationships seemed more professional than personal, contrary to ward Y, where personal relationships were very evident.

If the above sub-parameters are placed within the correlation of the three main parameters, it is possible to identify, which of the three main parameters are more supporting than impeding and vice versa. Figure 30 shows each sub-parameter within the corresponding main parameter.

Figure 30 Three Main Parameters with Associated Su	ub-parameters
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As becomes evident from figure 30, *task prioritization* and *the evaluation of potential adverse events' level of severity* are impeding parameters in relation to adverse event reporting, whereas *interpersonal relationships* are mostly supportive, keeping the ambiguous concept of *trust* in mind. Linking HCPs evaluation of (potential) adverse events to their understanding of the importance of reporting adverse event shows that HCPs develop local strategies of handling time constraint through e.g. prioritization, excluding the bigger picture – the importance of adverse event reporting on a

national level. Especially in periods with large workloads and under significant levels of time constraint, HCPs focused solely on local issues and situations, whereas national perspectives were excluded. However, it also becomes evident that, the majority of all sub-parameters fall within the parameter of *interpersonal relationships*, suggesting that the decision of reporting adverse events is highly influenced by cultural factors within the field of medicine. Interpersonal relationships, both professionally and personally are contributing to both the support and impediment of adverse event reporting, calling for future investigations of the cultural effects on adverse event reporting in a Danish context.

# 8.1 THEORETICAL DISCUSSION OF THESIS RESULTS

In international research on barriers to adverse event reporting, are numerous. To explore the results presented in present thesis further, three papers have been chosen to facilitate a comparison of results presented here with those of other research studies in an international perspective. Table 4 summarizes the results of the three studies chosen for comparison, while presenting the corresponding results from present thesis. Lastly, a general comparison of results stands as a guide for further discussion.

Author(s)	Literature Results	My Results	General Comparison
Anastasius Moumtzoglou (Moumtzoglou 2010)	Fear of blame. Difficulty in handling adverse events. Lack of confidence in talking about adverse events. Patient complaints.	No apparent fear of blame. No mention of difficulty in hand- ling adverse events, instead HCPs state that it takes too long. High level of trust to discuss adverse events.	Moumtzoglou's results point towards the ubiqui- tous fear of blame as the most prevalent barrier to adverse event reporting. Results from present thesis point towards a more cultural perspective on barriers to adverse event reporting.
Marilyn J. Kingston et al. (Kingston et al. 2004)	Cultural differences under- pinning the attitudes of nurses and doctors towards adverse event reporting. Common barriers include, but are not limited to; time constraints, cultural norms, inadequate feedback, lack of value in the process.	Cultural differences between nurses and doctors is non- applicable as present study focused on nurses and HCAs. Similar results to common barriers; Lack of time, cultural norms and slow feedback.	Kingston et al. suggests time constraints, cultural norms, inadequate feed- back and lack of value in the process as more prevalent. Similar results have been presented in present thesis.
Just J. Waring (Waring 2005)	Fear of blame is an inhibiting factor, but cultural issues were also important; Inevitability of error, meaning adverse event reporting is pointless, rejection of more administrative duties, adverse event reports to be used by management, to regulate medical quality. Need to focus on the culture of medicine instead of the fear of blame in future research.	Fear of blame not apparent, cultural issues very important, pointlessness of adverse event reporting and rejection of more administrative duties apparent. No discernable fear of management using adverse events to regulate medical quality. Culture is the most prevalent factor both sup- porting and impeding adverse event reporting.	Waring acknowledges fear of blame as an inhibiting factor, but suggests a need to focus on other cultural issues in future research, as these cultural issues were significant in his study. Present thesis showed similar results, as the majority of supportive and impeding parameters to adverse event reporting, were of a cultural nature.

#### Table 4 Summary of Chosen International Study Results

The results presented in Anastasius Moumtzoglou's study on the barriers to adverse event reporting, suggest that especially fear of blame was impeding nurses from reporting adverse events (Moumtzoglou 2010). As was mentioned earlier, the same ubiquitous fear of blame did not become evident throughout this research study. Mentions of culture were only relating to the differences in culture between nurses and doctors, nonetheless suggesting that culture in some way or form was a supportive or impeding factor to adverse event reporting (Moumtzoglou 2010). Statements from the conducted fieldwork in present study suggests, that rather than fearing blame, HCPs had a clear understanding of the purpose of reporting adverse events. HCPs knew that such reports would be used as a tool for learning, not only within the ward or organization, but on a regional and national level as well. Instead, HCP statements, revealed that adverse event reporting simply takes too long:

Field Note | Day 5 - 10.01.14 (ward X): HCPs are not worried about disciplinary sanctions, but state that adverse event reporting simply takes too much time compared to the impact it has on actual patient treatments and care.

Instead of fearing blame, HCPs contribute their lack of adverse event reporting to the fact that it is too time consuming, hindering them from providing sufficient care to patients. Somewhat consistent with Moumtzoglou's results of nurses considering adverse event reporting as difficult (Moumtzoglou 2010). Lack of time was also a prevalent barrier to adverse event reporting in a study conducted by Marilyn J. Kingston et al. who reports that, doctors and nurses, participating in the study, wanted adverse event reporting to be simplified as it was too time consuming (Kingston et al. 2004). Not only was adverse event reporting found to be too time consuming, but also lacked value in the process and feedback was seen as inadequate (Kingston et al. 2004). The results present by Kingston et al. point towards a problem with the entire process of adverse event reporting, as was seen in the results presented in this study. Kingston et al. however, reports that both doctors and nurses were able to perceive the possibilities in using adverse event reporting as a tool for learning, but both groups feared blame (Kingston et al. 2004). Although, HCPs, in present study, did not precisely express that the process of adverse event reporting was problematic, general conclusions could point towards such a problem. HCPs participating in present study, expressed that lack of time was a major deterrent, as other tasks were considered more important to patient care and treatment. HCPs also mentioned that in-house control of mistakes compelled HCPs to discuss adverse events instead of reporting them. This was both faster and easier for immediate learning, instead of having to wait for reports to be analyzed and feedback to be returned through official channels. Indicating that various problems with the adverse event reporting system, used in Danish health care, were present in the eyes of HCPs. The negative attitudes towards the process of adverse event reporting, found in present study, could suggest an inadequate integration of adverse event reporting in the everyday work routines of HCPs. The use of various time management strategies, to keep up and catch up (Bowers, Lauring & Jacobson 2001, Waterworth 2003), causes HCPs to develop task priority hierarchies. Based on the individual and combined expertise of HCPs, these task hierarchies formed the basis of all task prioritization of staff. Prioritizing adverse event reporting low was normal at both wards, suggesting an element of cultural norms, wherein adverse event reporting was mostly perceived as less important as it did not affect patients directly. Kingston et al. also presented cultural norms as a barrier to adverse event reporting, suggesting that implementations of adverse event reporting systems require cultural change (Kingston et al. 2004).

A need to move beyond the ubiquitous concept *"fear of blame"*, is the main argument presented by Justin J. Waring (Waring 2005). In his study on doctors' attitudes towards adverse event reporting, Waring found that fear of blame was a clear barrier to adverse event reporting (Waring 2005). However, other cultural issues were just as significant, as Waring found deep-seated perceptions of the *inevitability of errors* and *unmanageable features of adverse events*, to mean adverse event reporting was "*pointless"* (Waring 2005). The same attitudes were expressed by HCPs, throughout the conducted fieldwork at ward X and Y. Many HCPs stated that (potential) adverse events were inevitable and as such were normal. HCPs considered most (potential) adverse events as trifles i.e. trivial and not worth reporting. However, when asked, HCPs were aware that the frequent occurrence of trifles could be an indicator of underlying procedural problems. One nurse, working the evening shift, even stated:

Field Note | "[...] all these small errors and misunderstandings could potentially lead to serious complications if not looked at [...] they're a disaster waiting to happen!" (Nurse Hailey – ward X)

A certain ambiguousness is inherent to adverse event reporting. HCPs were aware that even small trifles, often viewed as negligible misunderstandings, could potentially result in disaster if not handled correctly. Even so, most (potential) adverse events were not reported as the task of doing so, was perceived as less important. Waring found that common attitudes against adverse event reporting also entailed a rejection of added administrative duties (Waring 2005). The same result was found in present study, as HCPs were often times, frustrated with the amount of tasks that had to be done within the timeframe of a shift. Especially administrative tasks were the cause of this frustration as HCPs often argued that administrative tasks were hindering sufficient patient care. HCPs not only, prioritized tasks according to necessity in regards to patient needs, but also according to the meaningfulness attributed to each task.

Field Note | "[...] is the reason why we became e.g. nurses, health care assistants etc. in the first place! It sometimes feel like we spend most of our time registering patients' treatment instead of focusing on the actual treatment of patients." (Health Care Assistant trainee, Richard – ward Y).

As explained by HCA trainee, Richard above, HCPs attributed meaning to tasks relating to why they became HCPs. This meaningfulness attributed to tasks played a large role in HCPs decision-making process when prioritizing tasks, especially in regards to adverse event reporting. Adverse event reporting was often time considered meaningless, as the task of reporting adverse events had no immediate consequence for patients. Not to be misunderstood with the actual occurrence of adverse events. This was also apparent for the head nurses of each ward, who both stated that it comes down to making sense of the work being done. If tasks do not make sense, than what is the point, they argue. This relates back to the results from Waring's study, as adverse event reporting being viewed ad pointless (Waring 2005). The main argument of Waring's study is that, there is a need in academic research to move beyond the ubiquitous *fear of blame*", research should instead attempt to explore the more deep-seated cultures present in the field of medicine (Waring 2005).

# 8.2 SAFETY CULTURE AND ADVERSE EVENT REPORTING

As was found by reviewing theoretical perspectives on adverse event reporting in section 4, as well as throughout the above discussion of three specific research studies; fear of blame, among others, is prevalent barrier to adverse event reporting. However, as the results by Waring (Waring 2005) and the results presented in current thesis suggests, culture in medicine could be a more prevalent barrier to adverse event reporting (Waring 2005). Both as a supportive as well as impeding factor, culture directly correlates with the attitudes of HCPs in regards to adverse event reporting. Thus requiring indepth investigations on how the different cultures present in the field of medicine, affects adverse event reporting.

In connection to how culture affects adverse event reporting, it is possible to draw a parallel to the theoretical concept of engineering a safety culture, presented by James Reason in his book Managing The Risks of Organizational Accidents (Reason 1997). By successfully engineering the four main subcomponents that comprise a safety culture, organizations should be able to implement an organization-wide safety culture successfully (Reason 1997). Reason's four subcomponents are reporting culture, just culture, flexible culture and learning culture, all of which are reviewed in the Theoretical Perspective, in section 4 (Reason 1997). Looking at the results presented throughout this study, keeping each of the subcomponents above in mind, supports the idea of culture both supporting and impeding HCPs from reporting adverse events at ward x and Y. When placing ward X and Y within the theoretical concept of having a reporting culture, it was found that HCPs were impeded by especially lack of time and large workloads. Supporting the argument that Reasons first subcomponent, reporting culture, had not been engineered correctly. Contrary to the perceived lack of having a reporting culture, present study argues that ward X and Y, were adhering to Reason's three subcomponents; just culture, flexible culture and learning culture (Reason 1997). HCPs at both wards displayed high levels of trust, which is one of key elements in having a just culture. This became apparent by means of both observations and through actual HCP statements, as HCPs appeared to be able to talk openly about both professional and personal matters, here included mistakes that had been made. The same was seen in regards to Reason's flexible culture, as HCPs showed high levels of adaptability when faced with acute situations, moving responsibility according to individual expertise. Lastly, HCPs showed a clear understanding of the primary purpose of adverse event reporting, relating to Reason's last subcomponent; *learning culture*.

This however, does not mean that ward X and Y were displaying what Reason would call a *safety culture*, as both wards were lacking the crucial subcomponent *reporting culture*, which depends on HCPs wanting to participate in adverse event reporting. Given the negative view upon the process of reporting adverse events, HCPs could be perceived as unable to participate in adverse event reporting, not due to unwillingness, but because of procedural barriers. When asked directly, HCPs would say that lack of time and the importance of tasks directly regarding patient care and treatment was the main reason for prioritizing adverse event reporting low, in the task hierarchy. Few HCPs would directly state that they did not want to report adverse events. As a result, it could be argued that Reason's four subcomponents were not present as a whole, therefore inhibiting the successfulness of having a *safety culture* – subsequently impeding adverse event reporting.

# 8.3 STRENGTHS AND LIMITATIONS OF RESEARCH METHODOLOGY

The results presented throughout this thesis, were collected by means of an ethnographic research approach. The next section will cover some of the main strengths and limitations of this particular research methodology, when studying how culture affects the reporting of adverse events. Three strengths and the corresponding limitations of the chosen research methodology has been listed in figure 31 below.



Strengths	Limitations
<ul> <li>Ability to access backstage culture</li> <li>Detailed descriptions from firsthand accounts</li> <li>Ability to focus future observations based on continuously developed hypotheses</li> </ul>	<ul> <li>Short timeframe in which to conduct fieldwork and collect data</li> <li>Being perceived as a stranger, as well as being a male in a female dominated workplace</li> <li>Limitation of reliability becuase of very specfic research field</li> </ul>

In accordance with the research problem of current thesis, the use of ethnographic fieldwork proved to be a sufficient method for investigating cultures effect on adverse event reporting. Highlighted above are three strengths to why the ethnographic research approach was applicable in the investigation of culture at two internal medical wards, in Denmark. Firstly, ethnography provided the ability to gain access to the backstage cultures present in the field, through observations and detailed accounts from participants (Kawulich 2005). Secondly, detailed descriptions and accounts from participants made it possible to gain insight into participants own perception of reality (Kawulich 2005). Lastly, ethnography gave the ability to develop new hypotheses continuously, based on past observations, in turn shaping the focus of future observations (Spradley 1980, Kawulich 2005). By conducting ethnographic fieldwork, I was able to immerse myself in the chosen field – two different, yet comparable internal medical wards. Being able to observe HCPs in their daily routines, following the basic principles of *observer as participant* (see figure 5), enabled me to describe the everyday lives of HCPs in the field chosen for study (Junker 1968, Kawulich 2005). Combining my own observations with detailed descriptions, the use of field notes, participant reports and informal interviews with HCPs, enabled me to describe and understand HCPs perceived reality, based on firsthand accounts. Also enabling me to base future observations and data collection on hypotheses I developed continuously throughout my fieldwork. By using developed hypotheses, I was able to re-define key areas of interest that were not apparent before having started my fieldwork. As such, I was able to re-define my own perception of HCPs reality based on past observations and noteworthy participant reports, resulting in the ability to do focused and selective observations.

There were however, limitations to the chosen research methodology (see figure 31). In the case of present study, fieldwork had to be conducted within a limited timeframe. Thus hindering the ability to establish sufficient rapport (Kawulich 2005), which could reduce the validity of the results presented. HCPs could have been apprehensive in being honest about matters discussed, while conducting my fieldwork. As well as, HCPs perceiving me as a stranger, not understanding the true reason for me observing them. I was mindful of this issue before initiating my fieldwork, which made

me focus on explaining my true intentions if I observed any apprehension from HCPs. Contributing to the fact that results presented here, could have been skewed based on me being an outsider – a stranger – was that I was conducting fieldwork in a female dominated workplace. As explained by Barbara Kawulich, researchers who adopt the ethnographic research approach need to be mindful of one's appearance, ethnicity, age, gender and class (Kawulich 2005). In my case, gender could be a factor hindering specific information being shared by HCPs, resulting in my results being somewhat skewed. Lastly, concerning the reliability of the results presented herein, it is necessary to reflect on the limitations of having conducted ethnographic fieldwork within a very specific research field. As fieldwork was conducted in two specific internal medical wards, within the same hospital organization, the general reliability of results is limited. However, by comparing two different, yet generally comparable internal medical wards adds to reliability of the results presented. Also, by comparing the results of present thesis, with those of similar research studies, it is possible to contextualize what has been found here within existing literature. Thus supporting the general reliability of present thesis' results and the relating discussion and conclusion.

# 8.4 TECHNOLOGIES ROLE IN ADVERSE EVENT REPORTING

Reporting adverse events is done by means of forms on the DPSD website e.g. the technology behind adverse event reporting, optimization of this technology could pose as a possible fix for the low reporting frequency of adverse events. The following will show and example of one particular area which could be optimized to enable a faster and more fluent reporting process. When observing the actual adverse event reporting process, one nurse suggested the possibility of having an automatic process of selecting the localities in which the reported adverse event. Figure 32 shows how selecting the locality of an event could be perceived, as a cumbersome process as selecting a specific ward, within a specific hospital in one of the Danish regions require a significant amount of mouse-clicks, and attention from HCPs. The highlighted area of figure 32 shows that having to choose a specific ward or department, requires HCPs to sort through numerous pages.

The suggested improvement would be to integrate HCPs individal login details to the adverse event reporting form on the DPSD website. In turn selecting the specific region, health care institution and department or ward, corresponding to the information provided in the login credentials of the HCP who is reporting an adverse event. Observations of adverse event reporting in present thesis showed that the process of selecting localities and patient details took nearly as long as writing the actual adverse event information. As such, by implementing a degree of automatization in the process, could potential lead to a more fluent reporting process, increasing the reporting frequency of adverse events. Based on the results presented in current thesis, time constraints and tasks prioritization was a significant factor impeding HCPs from reporting adverse events. By reducing the amount of time the reporting process would take, could lead to an improvement in attitude of HCPs on the reporting process.





# 9 CONCLUSION AND NEW PERSPECTIVES

Present study found that, even though the Danish health care system has made it mandatory for all HCPs to report all (potential) adverse event, three main parameters were impeding HCPs from doing so:

- 1. Task prioritization
- 2. Evaluation of the severity-levels of potential adverse events
- 3. The interpersonal relationships of health care professionals

Task prioritization was most prevalent on days with high workload, as HCPs often turned to colleagues for help in prioritizing tasks. As such, prioritization was done implicitly in collaboration with colleagues in a complicit manor. Both wards had organized patient treatment and care by means of the teambased nursing model, which divided HCPs into two separate groups, therefore, halving the number of patients, for which, each group was responsible. By halving the number of patient, HCPs in each group were able to focus their attention on a smaller group of patients, lessening the workload of each group. However, the results of present study showed that, even though HCPs were responsible for treating and caring for less patients, they were still under considerable time pressure. This time pressure meant that each HCP would need to utilize different time management strategies e.g. prioritization and re-prioritization of tasks, in order to complete must-do tasks within the scheduled work routine. Should-do tasks, mostly consisting of providing psychosocial care to patients, was done parallel to must-do tasks. When doing patient centered must-do tasks like medication passes or rounds, HCPs tried to fit most of the should-do tasks in whenever they could, resulting in even more prioritization. By prioritizing tasks, HCPs were able focus their attention on tasks perceived as most important to the treatment and care of patients, resulting in less important tasks e.g. TOKS screening and adverse event reporting being rushed or neglected. Because of the need to prioritize, HCPs considered (potential) adverse event reporting less important than all other tasks, in order to focus on more important tasks.

*Evaluating the severity-level of potential adverse events*, was used to differentiate between events that could have had serious consequences for patients and events that were perceived as trifles. It was observed that HCPs considered the task of reporting most (potential) adverse events as pointless, as such events occurred frequently and to report them, HCPs would need to spend all their time doing nothing but. Instead, most HCPs perceived such events as trifles, based on the evaluated severity-level of each event. If however, the outcomes of potential adverse events were evaluated as catastrophic (should such an event have happened) HCPs would report them as if they were actual adverse events. The evaluation of potential adverse events' severity-level was not directly observable as this was done implicitly. As with the prioritization of tasks, evaluating the severity of such events was done with a form of complicity between HCPs. A non-vocal complicity where HCPs did not have to voice their individual views upon the severity of a particular potential adverse event, but instead acknowledged the surrounding HCPs' expertise on such evaluations.

Interpersonal relationships were an underlying parameter, which affected how HCPs prioritized tasks and evaluated potential adverse events. The complicity of how HCPs were prioritizing tasks and evaluating potential adverse events, hinted that effective collaboration between HCPs and collegiality was indeed due to both healthy professional and personal interpersonal relationships. Healthy professional relationships between each HCPs was of mutual importance to ensure quality health care. In connection to prioritizing tasks, doctors depended on nurses and HCAs to convey accurate patient information and sudden changes in health, whereas e.g. nurses were in need of the medical expertise of doctors when faced with acute situations or when prioritizing different tasks in relation to the needs of patients. This mutual dependence exuded throughout most of the situations observed while conducting fieldwork. Professional trust was a necessity and came to light in situations ranging from the acute to the evaluation of potential adverse events. However, collegiality and solidarity between HCPs was also apparent, particularly when observing the personal relationships that unfolded when HCPs were on break. It was evident that having healthy personal relationships meant that both professional and personal trust, between HCPs, was important for cooperation and the ability to provide high quality treatment and care for patients.

In conclusion, present study argues that the correlation between these three parameters and the corresponding sub-parameters (see figure 29) could be affecting HCP reporting frequencies at ward X and Y. By contextualizing the results presented here, in existing literature, showed that different cultural factors are impeding HCPs from reporting adverse events. Similar studies suggests that one of the most ubiquitous barriers to adverse event reporting, is the fear of blame and that successful adverse event reporting, relies greatly on having a just culture (Dekker 2009, Waring 2005, Reason 1997, Catino 2009). However, as present study has shown, the fear of blame was nearly non-existing with only slight mentions of HCPs being afraid of disciplinary sanctions. Instead, ward X and Y showed close professional and personal relationships with high levels of trust, which indicates a just culture, corresponding to the theoretical concepts presented by James Reason (Reason 1997). Subsequently, the high level of trust between HCPs meant that instead of reporting (potential) adverse events, such events were handled in-house. In terms of learning from mistakes, HCPs used each other instead of relying on feedback from official channels, subsequently negating the overall purpose of having an adverse event reporting system. Resulting in a somewhat paradoxical scenario, where common understanding of the importance of adverse event reporting, contradicted its placement within the constructed task hierarchy. Because of lack of time and how adverse event reporting was perceived by HCPs, learning came from collaboration based on healthy interpersonal relationships, solidarity and collegiality. Therefore, trust, was both supporting and impeding HCPs from reporting adverse events, subsequently acting as a "double-edged sword". Nevertheless, present study showed similar results to those of other studies on the subject, as lack of time and the perceived inevitability of adverse events were also affecting the reporting frequencies at each ward (Moumtzoglou 2010, Kingston et al. 2004, Waring 2005). While ward X and Y were part of the same hospital organization, thus following the same official work procedures as well as being comparable on a formal level, differences in culture and unofficial work procedures were apparent. These slight differences could be some of the main reasons for having different reporting frequencies. Even so, the correlation between the three parameters, found in present study, suggests that a complex web of parameters affected adverse event reporting frequencies.

Adverse event reporting in Denmark is only one of many methods of using adverse events as a tool for learning, to improve patient safety. Other countries use different methods of analyzing adverse events (Magrabi et al. 2013), one of the shortcomings of the Danish method however, could be that responsibility is shifted to the individual, not taking into consideration, among others, the parameters presented here. High workloads, reduced lengths of stay and lack of time creates a need for HCPs to

prioritize, what they perceive to be of outmost importance to patient treatment and care. Thus leaving little space to focus on the overall purpose of reporting adverse event, specifically *learning* on a national level in relation to the improvement of patient safety. 10 years have passed since the initial implementation of a national reporting system in Denmark. Danish news agencies have pointed towards the failure of the Danish reporting system, stating that reports of adverse events are not resulting in less mistakes in the Danish health care system. The results presented in present thesis however, argues that HCPs are in fact learning from mistakes, but outside of official channels, as most (potential) adverse events are handled in-house. There are however some limitations to the general reliability of present study, as results presented are based on a specific case of two wards placed within the same hospital organization in the North Jutland Region. As such, a new perspective could be to investigate how the national reporting system of adverse events is being used in other areas of the Danish health care system. Investigating how the Danish adverse event reporting system could be optimized, to take the parameters presented here, into consideration, could also prove to be educational. One example of how the technology behind the adverse event reporting process could be improved was suggested in the discussion above. This could provide knowledge on how the integration of adverse event reporting in the work routines of health care professionals in the Danish health care system, could improve the national reporting system.

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# 1 APPENDIX 1 – CLINICAL SUITE AND OPUS MEDICINE

Figure 33 and 34 are examples of Clinical Suite and OPUS Medicine as seen at ward X and Y during fieldwork.









# 2 APPENDIX 2 - SATISFACTION REPORT RESULTS

# 2.1 WARD Y SATISFACTION REPORT RESULTS

Ward Y's scores are seen as the light-grey pillar to the left, while the dark-grey pillar to the right is the hospitals average score.



Figure 35 Overall Evaluation - Ward Y (Specific Focus on Management)

Figure 36 Evaluation of Cooperation - Ward Y





Figure 38 Evaluation of Trust - Ward Y

Figure 37 Evaluation of Justice - Ward Y


## 2.2 WARD X SATISFACTION REPORT RESULTS

Ward X's scores are seen as the light-grey pillar to the left, while the dark-grey pillar to the right is the hospitals average score.



Figure 40 Overall Evaluation - Ward X (Specific Focus on Management)

## Figure 39 Evaluation of Cooperation - Ward X



Figure 41 Evaluation of Trust - Ward X



Figure 42 Evaluation of Justice - Ward X



## 3 APPENDIX 3 – INTERVIEW TRANSCRIPTIONS ON CD-ROM

All interview transcriptions can be found on the enclosed CD-ROM. When inserted, the CD-ROM should auto run showing a menu with buttons linked to each transcriptions. Transcriptions are listed in the following order:

- Local Risk Manager
- Clinical Manager
- Head Nurse Ward X
- Head Nurse Ward Y
- Medical Doctor