IDENTIFYING CRITICAL INFORMATION FOR NURSING HANDOVER: DESIGNING A NURSE TO NURSE HANDOVER FORM

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Abstract

Patient handover represents a significant safety risk. At each handover information could be lost, misinterpreted or not well communicated. Patient handover refers to any time responsibility for a patient's care is transferred from one care provider to another. This process requires succinct communication between the care providers, in this case nurses, to ensure continuity and safety of patient care. A significant handover that occurs daily on any nursing unit is the handover that occurs between nursing shifts: the departing nurse reports to the arriving nurse.

The purpose of this research was to use an appreciative inquiry process to answer the question: what is the critical information that should be included in a nurse-to-nurse inter-shift report on an acute medical unit at a tertiary, urban teaching hospital?

A purposive sample of nurses from the study unit worked together over three separate project group meetings to develop, pilot and refine a new handover form. The 4 D process of the appreciative inquiry method was used including: discover, dream, design and deliver. Thematic analysis was used for each cycle of the apprecitive inquiry process and the main themes found are presented. The central findings from this project included developing a handover form that presents succinct, organized, objective and written information that focuses on the critical events or information from the previous twelve hours and what needs to happen in the next twelve hours. To ensure appropriate use of the form the purpose of the form should be emphasized to all staff and connected to patient safety and continuity of care. In addition, the team discussed implementing a formal and informal feedback process to further encourage appropriate use of the form. Finally, developing trust among team members to ensure completion of the handover form and accompanying documentation, such as the kardex and careplans.

Preface

The identification and design of this research project was done in collaboration with Dr. Maura MacPhee, thesis supervisor, and myself. I conducted the three project team meetings, the planned pilot implementation on the study unit and completed the analysis of the research data. Dr. Maura MacPhee was available for questions and guidance throughout this process.

There have been no publications resulting from this research project at this time. I completed all of the writing for this research project with the guidance and comments from my thesis committee.

Ethics was obtained from the UBC Behavioural Research Ethics Board for the project Standardizing nurse-to-nurse inter-shift handover content with certificate number H12-03688. In addition, ethics was also obtained from the Vancouver Coastal Health Research Institute, with the same title and certificate number V12-03688.

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Acknowledgments

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Finally, I would like to express my gratitude to my family for their unending support in my education.

For my dad

Introduction

During the typical patient stay in an acute care hospital there are many handovers that occur. These handovers are a primary source for adverse events due to incomplete or inaccurate information being shared. Patient handover refers to any time when the responsibility for patient care is transferred from one provider to another (Clarke, et al., 2012; Shandell-Falik, Feinson, & Mohr, 2007). This could be from nurse to nurse at the end and beginning of shifts, between arriving and departing physicians, between units within an acute care hospital facility or between the acute care environment and the community as examples. At each handover point there is a potential for important or critical information to be lost, misinterpreted or not communicated effectively at all. This can result in unintended consequences, patient harm or sub-optimal care. Effective communication and critical information handed over from shift to shift between nurses is essential to improving patient safety and ensuring quality health care. As noted in the literature, handovers occur quickly, with nurses sharing what they consider essential information in a short time frame and this sharing of information is variable from nurse to nurse (Shandell-Falik, Feinson, Mohr, 2007). In addition, the literature and patient safety institutions, such as Accreditation Canada or the Canadian Patient Safety Institute recommend standardization of handover to ensure key information is shared between nurses (Accreditation Canada, 2011; The Safety Competencies Steering Committee, 2008). In most cases, a handover form is created for nurses to note information from shift to shift, however, what is unknown is if these forms are filled out correctly, interpreted properly or contain the required critical information to ensure continuity of safe and effective quality care.

Background

The patient handover process represents a potential for a patient safety and quality incident. The terms handover and handoff are used interchangeably in the literature. For the purposes of this project the term handover will be used to ensure consistency. Patient handover refers to any time when the responsibility for patient care is transferred from one provider to another (Clarke, et al., 2012; Shandell-Falik, Feinson, & Mohr, 2007). As patients move between providers, nurse to nurse in this case, accurate, timely and critical information about the patient's condition, care and treatment plan must also be transferred (Clarke, et al., 2012). Leonard, Graham and Bonacum (2004) indicate that "communication failures are the leading causes of inadvertent patient harm" (pg. 85). Missing information can result in significant patient harm, unanticipated delays in care and nursing time to track down this information (Clarke, et al., 2012; Shandell-Falik, Feinson, & Mohr, 2007). Functioning in an acute care hospital environment requires clear, accurate and timely team communications (Miller, Riley, & Davis, 2009). Significant patient injury due to poor communications can occur when care providers do not have the same understanding of what clinical information is vital to the care of the patient (Miller, Riley, & Davis, 2009). The creation of a standardized inter-shift handover report is supported in the literature to ensure consistency in communicating information that is considered vital to the patient's care (Leonard, Graham, & Bonacum, 2004; Miller, Riley, & Davis, 2009; El-Jardali & Legace, 2005; Clarke, et al., 2012).

Many regulatory bodies, such as Accreditation Canada, Qmentum Medicine Standards, and the College of Registered Nurses of British Columbia, Professional Standards of Practice, recognize the importance of patient handovers and both communication and documentation of these transfers of care (Accreditation Canada, 2011; College of Registered Nurses of British

Columbia, 2011). According to the Accreditation Canada Qmentum Medicine Standards, it is a required organizational practice to ensure effective communication of patient information between transition points (Accreditation Canada, 2011). More specifically, Accreditation Canada indicates that this transfer of information has been shown as a vital piece to improving patient safety between transition points, such as shift change, and that the healthcare team utilizes established means to transfer information timely and accurately (Accreditation Canada, 2011).

In addition, the Institute for Healthcare Improvement (IHI) and the Canadian Patient Safety Institute (CPSI) have produced documents that further support the need for standardized communication tools between points of transfer, including shift change, to ensure patient safety and quality of care (Institute for Healthcare Improvement, 2009; The Safety Competencies Steering Committee, 2008).

Current context

The Vancouver Coastal Health (VCH) Authority has also recognized the importance of standardized communication tools as a means to address patient quality and safety. Previous work includes the standardizing and implementation of the Surgical Safety Checklist. In addition, the health authority is moving towards standardizing practice and the information or technology systems regionally to improve communications.

At Vancouver General Hospital (VGH) there has been a previous project in conjunction with the Emily Carr School of Art and Design communications students that has looked at methods or modes of communicating nurse to nurse inter-shift report. This included written report, but also use of technologies such as iPhones or Blackberries. In addition, VGH has standardized other reporting and communications, including the operations bed utilization

meetings that occur twice daily. These meetings aid in the planning and assessment of patient flow through the system and the different teams are expected to report on their expected discharges, surgical slates, anticipated staffing challenges and other important planning information in a standardized format. This has been helpful in decreasing variance during the report out and also to ensure all parties are in effect speaking the same language.

Currently at VGH each nursing unit has their own system for nurses to pass along information between shifts. In speaking with the nurses on one acute medical unit, these "shift report forms" are "hit or miss" in terms of being filled out adequately or at all (Personal Communication, November 4, 2012). The nurse to nurse handover forms are often left blank or with information that is not crucial to the patient's care plan and often times critical information is not being shared. In speaking with the nursing educators on this particular unit, they indicated anectdotally that often times the nurses are not sure what information is critical to the patient's care (personal communication, November 4, 2012), which can be an indicator of nurses' not having a shared understanding of what is considered critical information in the handover process.

Problem statement

Currently VGH does not have a standardized handover process for shift change between nurses. The individual nursing units within VGH presumably have a handover process or form to communicate patient care needs and information between nursing shifts. This process or form is not standardized and is potentially missing vital information required for increased quality of care and patient safety. This is not congruent with requirements from Accreditation Canada or recommendations from safety institutions such as IHI or CPSI.

Purpose

The purpose of this project was to use an appreciative inquiry process to develop, pilot and refine a handover form to be used on an acute medical unit at VGH, a tertiary, urban teaching hospital. This handover form was developed with direct care nurses and front line leadership input to ensure that critical information is transferred between care givers at shift change and to ensure a shared understanding between nurses on the unit as to what information is considered vital to the continuity of patient care. This form may then be adapted and used in other departments within VGH, depending on the success of the project.

Research question

The research question was: What is the critical information that should be included in a nurse-to-nurse inter-shift report in an acute medical unit?

Methods

This study used a qualitative approach utilizing the Appreciative Inquiry (AI) process to create a handover form to be utilized by an acute medical unit at a large tertiary, urban teaching hospital. Appreciative Inquiry uses a positive or strength based approach to change by looking at what processes or structures are currently working well within an organization or in this case a unit and trying to replicate this over and over again with each handover (Knibbs, et al., 2012; Sullivan Havens, Wood, & Leeman, 2006; Richer, Ritchie, & Marchionni, 2010). AI has been described as both a methodology and a philosophy that emphasizes positive elements of systems already in place, drawing on the strenghts of what is currently being done and engaging those who are actively involved or effected by the organizational change proposed (Sullivan Havens, Wood, & Leeman, 2006; Knibbs, et al., 2012; Richer, Ritchie, & Marchionni, 2010).

This study used the AI "4 D" process of discovery, what is already working well? what is the current handover form being used?; dream, what would it look like to have the "perfect" handover every time?; design, the creation of the handover form that will ensure the dream is a reality; and finally, destiny or delivery, to create, implement and refine a standardized inter-shift handover form (Clarke, et al., 2012; Knibbs, et al., 2012; Shandell-Falik, Feinson, & Mohr, 2007; Sullivan Havens, Wood, & Leeman, 2006; Richer, Ritchie, & Marchionni, 2010).

A purposive sample of unit nursing staff and leadership were asked to participate in the design, implementation and refinement of the handover form. The sample consisted of one Patient Care Coordinator, a Clinical Nurse Educator, a delegate from the Patient Quality and Safety department and three front line, direct care staff nurses (Polit & Beck, 2011).

The first meeting for the project group, looked at the first three phases of the AI process, discovery, dream and design. The first phase of the AI process is discovery, the project group were asked questions to uncover what works in the current process, such as "describe a time when you received a handover that was the perfect handover and what made it the perfect handover?" (Clarke, et al., 2012). The questions in this phase illustrated in detail the current process and what elements alread work well. The next phase is the dream phase and questions focused on replicating the "perfect handover" described in the discovery phase. Questions included: "What would it look like if every handover was the perfect handover described? What needs to be in place for this to happen consistently? What would it take for this to happen every time?" (Clarke, et al., 2012). During the design phase, the group focused on the essential elements needed to create a handover form that will capture the critical information consistently. The main question was "what are the core or critical elements needed for a perfect handover?" The project group decided on the information needed on the handover form, also the design,

layout and format that worked on their unit and ensured a shared understanding among all of the frontline nursing staff.

Both the data collection phase and the data analysis phase occurred concurrently (Polit & Beck, 2011). The project group were audio recorded, transcribed verbatim and analyzed by the researcher (Polity & Beck, 2011). Thematic analysis was used to identify critical information required in the nurse to nurse handover process. As a result of this process, a nurse to nurse handover form was created that incorporated the critical information identified by the end-users in the focus groups.

Once the handover form was developed the form was shared with the group for validation and feedback. After validation the form was piloted on the study unit for a period of two weeks. During this implementation period an anonymous, online survey was available to all front line users of the form to give feedback and make recommendations. After the trial implementation period the project group came back together to analyze the feedback given by the staff nurses, make any necessary changes to the form and discuss strategies to support the change process. This represented the fourth phase of the AI process, the delivery phase, where there was a final creation of a new handover form, designed by the end-users (Shandell-Falik, Feinson, & Mohr, 2007). The hope is that this newly created handover form will be utilized for every handover and will contain the information required to achieve a "perfect handover". This form can then be utilized by the unit and potentially adapted and utilized on other units in an attempt to standardize nursing shift handover on a more global scale at Vancouver General Hospital. Using the AI process focused the questioning of the group in a positive way and engaged the key stakeholders and end users in creating a new handover form, which increased the chances of

a successful project (Clarke, et al., 2012; Knibbs, et al., 2012; Shandell-Falik, Feinson, & Mohr, 2007; Sullivan Havens, Wood, & Leeman, 2006

Literature Review

In this chapter I will discuss my process for searching the literature for relevant articles on nursing handover. My definition of nursing handover is described, as well as the themes that have been found while searching the literature. These themes will be described and each of the primary articles will be summarized within the themes. A final summary of the literature will be included and will highlight areas that are missing from the current published literature.

Search process

For this literature review, I searched Google Scholar, CINAHL and PubMed for articles related to nursing handover and any articles that combined the appreciative inquiry with nursing handover. My key words included appreciative inquiry, nursing handover, patient hand off and patient transfers. My exclusion criteria included any articles that were in print for greater than ten years, those published in a language other than English and articles that were not focused on nursing patient handover. From this search I retrieved 38 articles, and after utilizing the exclusion criteria, 14 articles remained that most closely related to my study. I will selectively describe the 14 research studies and findings of those articles that resemble my study setting, an acute care hospital in a large, North American city

The articles included in this review and the purpose of each article are summarized in a table found in Appendix A and described in more detail in the literature review.

Definition

Patient handover refers to any time when the responsibility for patient care is transferred from one provider to another (Clarke, et al., 2012; Shandell-Falik, Feinson, & Mohr, 2007).

Throughout the literature the terms handover and handoff are used interchangeably to refer to the same process of transferring patient responsibility. The working definiton of patient handover used by Patterson & Wears (2010) describes the concept well as "the process of transferring primary authority and responsibility for providing clinical care to a patient from one departing caregiver to one oncoming caregiver" (pg. 53). Examples of patient handover include nurse to nurse at shift change, physician to physician transfers and unit to unit when a patient is transferred from one area to another. I am focusing on handovers that involve nurses and therefore will exclude any physician handover, however, both change of shift handover and unit to unit handover will be included as the content from both of these instances are pertinent and relevant to each other.

I arranged the 14 articles in sections that emphasize the primary purpose or focus of the articles included in my literature review. The following sections are: patient safety and the handover process, nursing and the handover process, and appreciative inquiry process. Finally, the chapter will conclude with a brief summary of the key findings and identified gaps in the literature.

Patient safety and the handover process

The articles in this section dealt with the handover process in relation to patient safety. The individuals conducting handovers, such as physicians or nurses, was less important than whether or not the handover process influences patient safety outcomes. As patients move between providers, nurse to nurse in this case, accurate, timely and critical information about the patient's condition, care and treatment plan must also be transferred (Clarke, et al., 2012). Leonard, Graham and Bonacum (2004) indicate that "communication failures are the leading causes of inadvertent patient harm" (pg. 85). Missing information can result in significant

patient harm, unanticipated delays in care and nursing time to track down this information (Clarke, et al., 2012; Shandell-Falik, et. al., 2007). The discontinuity in patient care resulting from patient handovers has resulted in much attention from regulatory and other organizations such as the British and Australian Medical Associations, the World Health Organization, The Joint Commission in the USA and Accreditation Canada (Accreditation Canada, 2011; Patterson & Wears, 2010; Cohen & Hilligoss, 2010; Riesenberg, Leitzsch, & Cunningham, 2010). Two articles and two literature reviews focus on the importance of the handover process in patient safety and quality and point out potential process deficiencies.

The first article I will review is by Kerr, Lu, McKinlay & Fuller (2011). The purpose of this article was to describe the nursing handover practices that were currently being used at one organization and to explore the nurses' opinions about the quality of the handover process (Kerr, et. al., 2011).

The study was approved as a quality assurance audit and involved all acute care units within one Australian healthcare organization with three acute hospital campuses. Specialty areas, such as the emergency department and critical care were excluded due to differing shift patterns (Kerr, et. al., 2011). The study focused on handovers in the medical and surgical areas and was conducted with a survey and direct observation over a period of six weeks.

A convenience sample included all casual, full time and part time registered nurses working the afternoon shift who volunteered to participate in the study (Kerr, et. al., 2011). The study sample included 153 participants from 23 different units. The authors utilized the 'Clinical Handover Staff Survey' created and validated by O'Connell, Macdonald & Kelly (2008) and was modified for use with the authors' approval and the modifications validated by an expert panel. The survey consisted of three parts: part one collected demographic data, part two included

open-ended questions about the current handover process and nurses' preferred handover structure and method and part three was a Likert scale asking agreement questions about the handover process. For the direct observation component the research assistant observed information regarding "the style and structure of handover for each participating ward including duration, location and delivery" (Kerr, et. al., 2011, pg 344).

Researchers' observations discovered that all handovers were completed verbally and all units utilized a written handover sheet, which included basic information for all the patients on the unit. This sheet was handed out prior to the verbal handover commencing and allowed nurses to write notes and augment the sheet (Kerr, et. al., 2011). Kerr, et. al. found that there was vast variation across the same organization with regards to the structure and process of nursing handover, with variation in styles from unit to unit. For example, some units conducted morning to afternoon handover as a group, while other units gave nurse-to nurse handover reports or a charge nurse gave report for all the nurses. In addition, report occurred in a variety of locations with significant variation across units. Handover occurred for instance, at the nurses' station, the charge nurse's office, in the hallway, the supply room, break room and on only one unit at the patient bedside. The survey Likert scale findings indicated that nurses who completed the survey preferred both a verbal and written handover (68%); and their preferred location for handover was the staff room (67.3%). Over 80% felt that no change was necessary to their unit's current handover process. Although a majority felt that no change was necessary, some comments to open-ended questions, indicated concern with interruptions (32%), relevancy of information provided (27.5%) and the length of time handover took to complete (25.5%).

The findings of this study illustrate how there are large variations in handover process and structure, even within one organization. The authors discussed how handover could result in

patient safety incidents from a lack of continuity of care. Standardization, or implementation of guidelines or checklists, of the process and structure of this high-risk activity could be of benefit. Finally, this study highlights other critical aspects of handover such as interruptions, subjective information, missing information, relevancy and time constraints as major weaknesses of the current handover process (Kerr, et. al., 2011). Although 80% of the nurses surveyed did not feel that changes were needed to the handover process, the results of this study might serve to convince the nursing staff otherwise.

The second article focusing on handover and patient safety that I will review is by Patterson & Wears (2010) and is a literature review from the Joint Commission on Quality and Patient Safety. The purpose of this literature review was to focus on the importance of standardizing handover for patient safety. The authors focused on the "primary functions" of the patient handover process. They focused on identifying themes, which they refer to as framings and each framing has a primary function (Patterson & Wears, 2010, pg. 52).

The literature review examined articles that included nurse and physician handovers, and the review, conducted between 2008 to 2009, yielded 400 relevant articles (Patterson & Wears, 2010, pg. 53). The researchers synthesized the available literature and identified seven "primary framings" for patient handovers including information processing, stereotypical narratives, resilience, accountability, social interaction, distributed cognition and cultural norms (Patterson & Wears, 2010, pg. 55). I will discuss briefly each conceptual framing and the primary purpose of the framing.

Information processing is the first framing and is the one most commonly found within the literature (Patterson & Wears, 2010). The main purpose of this framing is information transfer. This transfer of information is generally done within a busy environment with

interruptions, non-standardized language and background noise which open this process up to risk that information may not be correct or complete. The second framing is referred to as stereotypical narratives, which refers to reporting by exception. Highlighting what goes against the norm or the "deviations from the typical narratives", discussing the abnormal results or situations such as allergies, is the primary function of handover in this framing (Patterson & Wears, 2010, pg. 56). Thirdly is resilience, which is taking a fresh set of eyes and looking at the information provided to make sure that it makes sense and that any assumptions have data to support them clinically. Accountability is the forth framing patient handover, and refers to the primary function of transfer of responsibility from one provider to another. The fifth framing is social interaction referring to how a handover is a construction of both caregivers, the departing and arriving caregiver and how they interpret the information together. Distributed cognition is the six framing. In this framing the primary function of handover is the transfer of care from one provider to another and how this affects the entire interdisciplinary team. For example, a change of attending physician can affect the interdisciplinary team caring for a patient who are not changing over. The entire team needs to be informed of this change of provider and also of any changes in the care plan or strategy. Finally, the last framing is cultural norms and how the group of care providers' values are defined and how the unit or team culture is created and maintained.

The authors of the review identified several primary functions for the handover process. For each framing, they indicated how standardization could improve handover process outcomes. They also discussed how standardization can be influenced by factors, such as culture. Each unit, therefore, should develop aa unique standardized process based on its practice environment, team dynamics, unit culture and patient population.

The third article I will discuss is a literature review from Cohen and Hilligoss (2010). The purpose of this systematic review was to provide guidance to hospitals and policy makers with respect to standardization of the handover process. This review included 545 articles and related documents on hospital handovers involving medical personnel (Cohen & Hilligoss, 2010, pg. 493). Based on their review of the literature, the authors identified four main deficiencies that impact organizations' attempts to improve the handover process. I will summarize each of the four deficiencies below.

The first deficiency noted from the literature was a clear or concise definition of handover (Cohen & Hilligoss, 2010; Patterson & Wears, 2010). The published literature is lacking a discussion around what activities are or should be included in the definition of handover (Cohen & Hilligoss, 2010). As a result, standardization of the handover process and interventions or plans to improve the process becomes challenging with no clear idea of what activities should be included. Cohen and Hilligoss (2010) focus solely on the transfer of information and responsibility between health providers to produce a precise definition. This allows for targeted improvements to the process, rather than trying to encompass all patient communication that occurs within a hospital stay.

The second deficiency noted is the lack of consensus and concrete meaning of standardization (Cohen & Hilligoss, 2010). There is limited research on how to standardize, what to standardize and what standardization of handover actually means, therefore there is little in the way of examples or studies that could be replicated. Cohen and Hilligoss (2010), note that the majority of the work around standardization has been conducted on the unit level rather than organization-wide. If the standardization has been attempted across an organization it has been

done so electronically or using a standardized mnemonic protocol, such as SBAR (Situtation – Background – Assessment – Recommendations).

Thirdly, the review found that handover is not only used to transfer data between responsible healthcare providers, but handovers serve other functions that have not been tested or evaluated (Cohen & Hilligoss, 2010). These other functions of handover include continuing education or training.

Finally, the last deficiency described is that there is no evidence to support an increase in patient safety and quality with a standardized handover process (Cohen & Hilligoss, 2010). The authors used patient outcomes such as number of falls, length of stay and number of adverse events as indicators of safety and quality. None of the literature reviewed could reliably show any evidence that standardization of patient handover had a positive impact on the above mentioned patient safety and quality indicators, leaving organizations with minimal guidance.

In summary, this article points out a lack of a concise definition of patient handover, lack of meaning around standardization of handover, multiple functions of handover and limited evidence to support that standardization does in fact improve patient outcomes (Cohen & Hilligoss, 2010).

The final article that I will describe is a literature review that focuses specifically on nursing handover by Riesenberg, Leitzsch & Cunningham (2010). The purpose of this systematic review was to identify those factors that act as barriers or facilitators during the nursing handover process. This review yielded 95 articles published between 1987 and 2008. Of the 95 articles that described nursing handover, the majority were published between 2006 and 2008. Five abstracts were excluded as they were not full articles, another 59 were excluded because they were anectdotal in nature and finally another 11 were eliminated because they

werer commentaries, letters or editorials The remaining 20 articles were independently reviewed in depth by two researchers to ensure overall agreement of the scoring. Content analysis was utilized to discover the barriers and strategies for handovers in nursing independently by both reviewers.

The barriers included: communication elements (errors, omissions, role confusion and language barriers), problems specifically associated with standardization (non global understanding of the information required), equipment issues, environmental issues (interruptions or lack of dedicated space), lack of or misuse of time, difficulty with the complexity of cases, lack of training around the how to handover and finally human factors (non-engagment in the process) (Riesenberg, et. al., 2010).

The facilitators focused on training and communication skills that addressed the barriers. For example, training around how to be clear and concise and manage time to include time for preparation manage; and communication skills to ensue the receiving RN understands the content being handed over (Riesenberg, et. al., 2010). Other strategies include standardization goals, including processes with guidelines and tools to ensure that essential information is included consistently, technologic solutions, environment solutions, training and education. In addition, the authors recommended that staff be involved in the development of these processes to increase buy in and that leadership be involved to ensure consistency. This finding supports my study utilizing an Appreciative Inquiry methodology which relies heavily on frontline staff involvement in the process.

The barriers and strategies to effective handover described in this literature review illustrate the importance of communication and the use of tools to ensure that critical information is transferred consistently between health care providers (Riesenberg, et. al., 2010). In addition,

the environmental factors, method of handover and form taken, written, verbal, electronic are highlighted as important considerations for the handover process.

To summarize key findings from the four articles that focused on patient safety and handover, the author's describe how every patient handover represents a significant opportunity for communication failure that could easily result in adverse patient events. Increasing the safety of these handovers is the focus of many researchers, regulatory bodies and patient safety organizations. The primary challenge in improving the safety of patient handovers is a lack of a concise definition of handover and the activities that it does and does not include (Patterson & Wears, 2010; Cohen & Hilligoss, 2010). Although there are many functions of handover, without a concise definition implementing strategies for improvement are difficult. In addition without a concise definition it is difficult to determine in what way and how to standardize the process (Patterson & Wears, 2010; Cohen & Hilligoss, 2010). This could be a contributing factor to the lack of research evidence to suggest that standardization improves patient outcomes (Patterson & Wears, 2010; Cohen & Hilligoss, 2010).

Nursing and handover

The following articles referred specifically to nurse-to-nurse handovers. Several times throughout a patient stay nursing staff hand over patient information to each other. This occurs at shift change, when going for a break, at times when assignments are rearranged mid-shift, when transferring a patient from one unit to another, or even when discharging a patient home to community nursing care. The focus of my project is on nursing inter-shift handover. This occurs when the departing nurse hands over patient care to the arriving nurse. Not only is information transmitted, but the responsibility of care for this patient is also transferred.

There are many references to nursing handover in the published literature and many of the articles and researchers describe the handover process and attempt to illustrate areas for improvement. In doing so, I have identified three main ingredients to nursing handover, including format or type of handover (verbal, written or taped), location of handover and finally content of handover, which is the focus of my study.

Format. Format of nursing handover refers to the way in which information is passed between nurses, either verbally, face-to-face, written on a handover form, or audiotaped and listened to by the arriving nurse. Recently there have been indications of electronic handovers that utilize the electronic health record and nurse's handover notes (Staggers & Blaz, 2012). Although the two studies described below included discussion on all of the main ingredients for handover, their findings, discussion and recommendations related directly to the format of nursing handover, which is why they are located within this sub heading.

The first article I will review that focuses on the format of nursing handover is by Welsh, Flanagan and Ebright (2010). The purpose of their study was to look at nursing end of shift report and describe the factors that facilitate handover and those that act as barriers. This study used a grounded theory approach and was conducted at a United States veteran's administration medical center where the staff utilized two different formats of shift report, taped and written.

A convenience sample of twenty nurses were recruited and consisted of a cross section of three shifts of both Registered Nurses and Licensed Practical Nurses from three different inpatient units (Welsh, et. al., 2010). The authors used short, semi-structured interviews with nurses where they asked them to describe the handover process and any ideas for improvement. The participating nurses were interviewed in a semi-private room and other nurses came in and out of the room during the interview process. The two researchers coded the data using a 3-

category coding book that was developed prior to the data collection and defined what was considered a barrier, a facilitator or other.

The researchers developed six barriers and four facilitators (Welsh, et. al., 2010). The barriers consisted of too little information being shared, too much irrelevant information, inconsistent quality of the report and information given, limited opportunity to ask questions, equipment malfunction (mentioned from the nurses using a tape recorder method) and interruptions (Welsh, et. al., 2010).

The facilitators were receiving relevant report content, ability to write notes while receiving report and to write notes during the shift to remember when giving report (a designated sheet for this purpose was discussed by some of the nurses), face-to-face report with ability to ask questions and a structured form or checklist for giving report to remember the content required (Welsh, et. al., 2010).

Two other themes or findings were discussed by the researchers. Firstly that a large majority of nurses accessed the patient's electronic record to verify report or to add to the report and secondly, 55% of nurses agreed that an effective report assisted with their care planning for the shift (Welsh, et. al., 2010).

The importance of the format of nursing handover was emphasized in the results of this study (Welsh, et. al., 2010). Relevant information is required for nurses to plan their shift and this could be increased by implementing structure to the report format and including a face-to-face component with the ability to ask questions of the departing nurse. The author's recommendation was to use a combination of written and face-to-face handover, to allow for questions and to signal a clear transfer of responsibility. The written component would be a structured form, including a checklist to ensure that tasks have been completed and given to the

arriving nurse to make notes on during verbal handover. Once questions have been answered, the handover is complete and a transfer of responsibility is also completed.

The second study that I will review was written by Staggers and Blaz (2012) and was an integrative review of the outcomes of nursing handover research in medical and surgical areas (pg. 3). The purpose of the study was to utilize this previous research to guide the potential future computerization of handover on medical and surgical units. An integrative review was used to summarize past research and included all study designs. Exclusion criteria eliminated those articles focusing on handover education, nurses perceptions of handovers and any research that was not focused on shift handover. The search revealed a total of 247 articles. Utilizing a rating system for relevancy, the authors were able to indicate relevant, not relevant and potentially relevant, which left 30 articles to review.

Findings from this review focused on three categories. First of all, the effective and efficient transfer of information, emphasizing the importance of complete, concise and accurate handover information (Staggers & Blaz, 2012). The researchers found that in the descriptive studies reviewed the results indicated that written handovers had more complete information than did verbal handovers. They found that bedside report was not appropriate in all areas depending on the sensitive nature of the area and information (such as Palliative Care) and that no one format was definitively more effective or acurate for handover. The authors found that solutions to incomplete and inaccurate information included structured, consistent formats that forced completeness of information. The ideal format was a combination of verbal report with a written sheet that included specific content elements which forced the most accurate and complete information.

Secondly, the authors suggest that there are several other purposes for handover other than information transfer, which is in agreement with other articles discussed previously. The functions of handover included patient information transfer, teambuilding, social elements, education with teaching moments, group cohesion and emotional support (Staggers & Blaz, 2012).

The final category discussed the content of shift handover report. The authors found that although this was researched there was no clear indication or guidance of what the content should encompass and indicated that more work in this area was needed, especially in terms of key information for nurses receiving handovers (Staggers & Blaz, 2012).

The findings in these studies indicate that the format of inter-shift handover varies widely; however, the preference was for a combination of both written and verbal handover (Welsh, et. al., 2010). Inconsistent and inaccurate information was noted to be an issue in both formats of handover and the combination could help to decrease this impact. Interruptions and lack of time were also listed as reasons for inaccurate information and common barriers, with all types of formats (Welsh, et. al., 2010). A written handover form with a handover checklist to ensure consistency increased the planning ability of the arriving nurse and allowed the nurse to write notes during the verbal component of handover (Welsh, et. al., 2010; Staggers & Blaz, 2012). The verbal component of handover is important to allow questions and clarification of the departing nurse to ensure that the arriving nurse has interpreted the information in the same way and continuity of care is maintained (Welsh, et. al., 2010; Staggers & Blaz, 2012). In addition, teaching and learning and teambuilding can occur during the face to face interactions which was noted as an additional function of handover in other articles (Cohen & Hilligoss, 2010; Patterson & Wears, 2010; Staggers & Blaz, 2012).

Location. The specific location of the nursing inter-shift handover is another of the main ingrediants impacting the handover process. The location component refers to where the handover takes place, for example, in a report designated room, at the nurses' station, in the back hallway or even at the patient bedside. As one of the major identified barriers to effective and efficient handover is interruptions, the location of the report has a large impact on the accuracy of the information (Welsh, et. al., 2010). Three articles discovered in my search process discussed the location of the shift handover report and the implications of each location.

The first article I will review was written by Athwal, Fields and Wagnell (2009). This article describes a nurse-led initiative to design a standardized shift report thereby creating a more time efficient process that also increased the quality of the report.

The study describes the nurse-led project which occurred at a large, non-profit, magnet hospital in a United States suburban tertiary hosiptal (Athwal, et. al., 2009). Nurses voiced their concerns regarding inter-shift report and the lack of formal guidelines or structure at a unit staff meeting and were encouraged to present these concerns to the unit practice council from which a working group was created to address the concerns. The current shift handover report was studied for two months to identify the length of time handover consumed, as well as, staff thoughts regarding the process and ideas for improvements. The current process involved all nurses at change of shift meeting in the conference room for up to an hour for handover.

The working group decided on a new shift report incorporating a written report with a one on one verbal handover occurring at the patient's bedside (Athwal, et. al., 2009). The new process had the arriving nurse reviewing the written update, meeting with the departing nurse to ask questions and then the two nurses going to the patient's bedside to finish report and introduce the new arriving nurse to the patient. The working group had challenges with implementing this

new process and changing the previous practice of report in the conference room; however, because this change came from the staff themselves there was more buy in and support. The process was trialed for one month and after this minor modifications were made.

The new process was evaluated based on the amount of time that shift report took, overtime related to report and patient satisfaction (Athwal, et. al., 2009). The major result was related to the amount of time report took, this was reduced from 30-60 minutes in the conference room, to no time in the conference room and 10-15 minutes at the patients' bedsides.

Although this project also looked at creating a standardized handover form attempting to capture specific content, the process of report was the more significantly impacted element (Athwal, et. al., 2009). The amount of time and the location of the report were drastically changed for this particular unit, resulting in less time, less interruptions and less unanswered call bells as the nurses were on the unit and not in the conference room. Very little was mentioned in the article regarding the changes to the written shift report and the impact of standardizing this form, instead the time savings based on the location of the report were highlighted.

The second article I will review discussing the location of handover report was written by Street, et. al. (2011) and focuses on handover occurring at the patient's bedside. The purpose of this study was to identify the strengths and limitations in current handover practices and implement a new process of handover at the patient's bedside.

The study was conducted in multiple phases in a public Australian hospital (Street, et. al., 2011). The first phase involved a cross-sectional survey of nurses on 18 units at change of three shifts on a particular day. The Staff Clinical Handover Survey was utilized, this survey was previously utilized and validated by O'Connell, Macdonald and Kelly (2008) and was expanded and modified for this study. The modifications occurred in consultation with nurses considered

experts, piloted by members of the team and then refined based on the test results. The second phase of the study occurred following pilot implementation of the new bedside handover process (Street, et. al., 2011). This included an audit of patient involvement in the handover process, the use of the Situation-Background-Assessment-Recommendation (SBAR) structure for handover and documentation reviews.

The authors found that the majority of nurses received handover from the departing nurse, but a large portion of the nurses received a second report which was a team based report from the in-charge nurse (Street, et. al., 2011). The average time for sole handover was 21 minutes and up to 90 minutes when two handovers were involved. The majority of handovers were conducted with a combination of written and verbal handover. Handover occurred in a variety of locations, including the nurses'station (24%), dedicated handover space (22%), patient's bedside (21%) and any other available space (21%). However, the authors found that although a large portion of handovers occurred at the patient's bedside there was minimal patient involvement in the handover process. The authors' indicate that bedside handover is a feature of patient-centered care, however, patients were found to be minimally involved in the process and the role of the patient remains under-researched. Again the preference for a combination of verbal and written report was found in this study also.

The third article reviewed related to the location of handover was written by Thomas and Donahue-Porter (2012) and sought to describe a pilot implementation project of a redesigned handover process that attempted to involve the patient and family members and described the lessons learned. The project was conducted in eight hospitals within a group of 15 hospitals in the United States and utilized frameworks of change, communication and caring through dialogue to guide the design.

The project originated with the health system's vice president for nursing who brought together a team for redesigning inter-shift handover report (Thomas & Donahue-Porter, 2012). The original project group consisted of the vice president, an academic member from the research council of the hospital-system and representatives from the eight participating sites that volunteered for the project. The goals of the project were threefold, standardize the format of inter-shift handover report, standardize the process and invite the patient and the family to be involved and participate in the handover process.

Standardizing the format of inter-shift handover report involved identifying a standardized tool to be used with all handovers, such as SBAR or "I PASS the BATON", evidence-based tools utilized to ensure handover information is not missed (Thomas & Donahue-Porter, 2012). The process was to conduct handover at the bedside, with the patient at the center of the process and a deliberate attempt to involved the patient in that process. Finally, inviting the patient and family to participate included a written, formal invitation to participate and to not simply be present when the handover was occurring.

Project teams and handover champions were identified at each participating site, these teams included the project leader, unit champions for both day and night shifts, nurse educators and nurse managers of the pilot units (Thomas & Donahue-Porter, 2012). These teams came together to create the lesson plans for the education sessions for the nursing staff on the new format, process and deliberate involvement of patients and families. During the pilot the goal was to identify facilitators and barriers with the handover process and both nurse and patient satisfaction was measured.

Nurse satisfaction was assessed before the start of the pilot project and educational sessions were set up for a two week period, with all sites getting close to 100% participation

(Thomas & Donahue-Porter, 2012). Initially the staff feedback was unfavorable with nurses voicing unease at discussing patient issues at the bedside, the increased time it took to perform handover and logistical issues when multiple patients were on isolation requirements. However, as the project progressed the nursing satisfaction increased with strengths identified as an increase in knowledge regarding patient priorities, an opportunity for nurses to ask each other questions and the standardized "I PASS the BATON" tool guided nurses toward the information considered critical to the handover.

Patient satisfaction was also noted to increase, with no invitation to participate in handover being refused (Thomas & Donahue-Porter, 2012). Although the deliberate inclusion of the patient and the family in the handover process was found to need constant and consistent reinforcement. The authors in this study found that the involvement, participation and support of the unit leadership was instrumental in implementating such process changes. In addition, buy in from the unit staff affected by the change is also integral to the project success.

In summary, location of patient handover is also variable. However, many units wanting to implement patient-centered care emphasize the importance of the bedside handover and involving the patient and family (Street, et. al., 2011; Thomas & Donahue-Porter, 2012). This format requires an element of verbal, face-to-face handover, which is not always available in all areas. The barriers to this location for handover include hesitancy from nurses to discuss sensitive patient information at the bedside and how to actively involve the patient rather than just discuss over them (Street, et. al., 2011; Thomas & Donahue-Porter, 2012). As interruptions are a major barrier to safe handover, having an identified location for handover is important, however, many reports occurred where ever there was space (Athwal, et. al., 2009; Street, et. al., 2011).

Content. Standardization of inter-shift handover report also includes the specific information that is passed along from the offgoing RN to the oncoming RN. Standardizing the content of the report refers to ensuring that critical information is captured and passed along from shift to shift. This would ensure continuity of care and prevent important information being forgotten and non-essential information being passed along. My project seeks to understand what is considered critical content for inter-shift handover and how to ensure that it is captured with each handover. In my literature search three articles explored standardizing the content of inter-shift handover.

The first article I will review was written by Lamond (2000) and had two goals. First of all, the author explored the nature of the content of shift handover and how this handover report assisted nurses in processing the information and planning care. Secondly, the information contained in the handover report was compared to information available from other sources to identify the information that is unique to handover reports (Lamond, 2000). This study occurred in England in both acute medical and surgical units within two district hospitals.

This was conducted as a comparative study with a two-by-two design comparing the two National Health Service hospitals and the type of ward, medical or surgical (Lamond, 2000). Five handover reports on each unit were audio recorded in succession, as well as, all medical and nursing documentation were examined for a total of 15 patients from each unit being included in the study. The units practiced team nursing and report was given away from the bedside. Patients were divided into groups and each group was assigned to a team of nurses, therefore during report one nurse in each team gave report on all the patients in that group to the next team of nurses. In the end, the author captured 20 shift reports, 5 on each of two medical units and the same on the surgical units.

The author found that the patients' notes, charts and specific written documentation contained much more information than what was given in shift report (Lamond, 2000). The charts and notes are official legal documents and therefore are required to contain this information. The author also found that global judgements about the patients' condition, personality and psychological status were reported verbally in handover more than they were written down or officially documented. However, judgements made about the patients' care needs were more often officially documented and contained in the charts rather than reported in handover. The content that was standardized and consistent among reports included name, age, physician, date of admission and admission diagnosis or operation, after this the content varied and was more specific to each patient and his/her situation. Finally, the author found that the nurse giving report was effectively saving the arriving nurse from collecting this information his/herself and therefore decreasing time needed to process and understand the information.

The second article I will review was written by Staggers and Jennings (2009) and is a qualitative study that sought to describe the content and context of inter-shift handover report on medical and surgical units and assess whether the nurses utilize electronic health records during their handovers. This study took place across seven medical and surgical units in three separate acute care hospitals in the United States.

The researchers collected data by observing and audio taping inter-shift handover report (Staggers & Jennings, 2009). The units used different handover formats including audio tape, written and verbal. Data was collected on 13 separate occasions with a total of 53 patient handovers and 38 different nurses being observed and audiotaped. Both verbatim transcripts and fieldnotes were used in the study to capture the content and the context of handover, such as the

setting, body language and other non-verbal aspects of the handover report. Content analysis was used to analyze the data.

The researchers grouped their findings into two clusters each with several themes that emerged from the data. The first cluster is the content of inter-shift handover report and four themes were identified by the researchers. The first theme is "the dance of report" which refers to the movement of communication between the two nurses involved in the handover process (Staggers & Jennings, 2009). The authors referred to interruptions, distractions and losing one's train of thought as "speed bumps" which occurred throughout the handover process (pg. 394). In addition, this theme emphasized the clarification of the information with exchange of questions and answers.

The second theme emerging under the content of report cluster was "just the facts" (Staggers & Jennings, 2009). This theme referred to the exchange of factual, objective patient data which required no interpretation by the nurse receiving the information, this accounted for 30% of the content of handovers. This information included patient's name, age, room number and values for weights, tests, orders, vital signs and those types of objective data.

The third theme was that of "professional nursing practice", referring to nursing actions, knowledge, judgements and knowing that combined to make decisions in the care of a patient (Staggers & Jennings, 2009). This type of information accounted for 25% of the content of inter-shift handover. This theme encorporated the nursing process, the critical thinking and integration of information to make decisions and included nursing language.

The final theme that emerged from the content of inter-shift handover was that of "lightening the load" (Staggers & Jennings, 2009). Captured in this theme is content that demonstrated thoughtfulness toward other staff, increasing teamwork, attemping to assist

eachother and attempting to ensure a seamless transition from one nurse to the next. The authors also included humour and fun in this theme.

The second cluster described by the researchers is the context of inter-shift handover which included six different components or themes that emerged from the data analysis (Staggers & Jennings, 2009). These themes include "getting the big picture", although it was not clear to the authors who on the unit had a sense of the bigger picture of the overall unit; "not the sounds of silence", referring to the background noise on the unit when inter-shift handover was occurring; "patient assignments", the process of each departing and arriving nurse needing to find each other and a space to perform the handover process; "tools for giving and receiving report", the authors found no structure for inter-shift handover report and many nurses had created their own personal tool for conducting this process; "report styles", those giving report shifted rapidly from topic to topic utilizing nursing language and unit acronyms; finally, "interruptions", the authors noted that handover was rarely completed without being interrupted.

In summary, the authors were surprised by the lack of consistent structure and content of the inter-shift handover report, which they described as "informal, unstructured, and heavily reliant upon nurses' memories" (Staggers & Jennings, 2009, pg. 396). In addition, interruptions and background noise contributed to a hectic atmosphere when trying to give a complete handover. Someone with an overall big picture and sense of the entire unit was lacking and could contribute to errors and mistakes. Finally, the use of the electronic health record was not utilized by any nurses giving or receiving inter-shift handover report, this source of information was largely overlooked and underutilized in the researchers' opinions.

The third article I will review is by Johnson, Jefferies and Nicholls (2012), the authors' purpose was to explore nursing handovers and provide a structure that would support the use of

an electroic tool (pg. 463). To achieve this purpose the authors' sought to understand the existing content and organization of nursing handover by examining the structure, content and organization of nursing clinical handovers.

A qualitative approach was used to look at 126 nursing handovers in seven different clinical settings in a large Australian city (Johnson, et. al., 2012). The majority of handovers were on medical/surgical units. To gain access to the nursing handover process, the reasearchers approached the managers on each unit and written consent was obtained from the nursing staff to observe and digitally record the clinical handovers. Thematic and content analysis was utilized after the transcripts were transcribed verbatim.

Five major themes were identified that described the structure of inter-shift nursing handover (Johnson, et. al., 2012). The first theme was described as the identification of the patient, including patient identifying information, room, name, gender, age and risks such as infection control risks, falls risk or at risk for pressure sores. The second theme was the clinical history/presentation and in all handovers except for one followed immediately after the identification of the patient. The information included here was related to the patient's previous medical history and what brought the patient into the hospital. The third theme identified was the clinical status. This information was noted as assessment data such as vital signs and stable or deteriorating medical status. Clinical status was handed over to the arriving nurse in the form of signs and symptoms that described the current medical status and also the functional status of the patient, such as high blood pressure and able to mobilize to the bathroom independently. Although the researchers found this theme followed the clinical history category often, the information contained within this theme did not follow any logical order. The fourth theme was found to be the care plan. Contained in this category was information related to the care given to

the patient or upcoming plans of care, including tests, diagnostics or procedures that were scheduled. As well, dressing changes and other tasks carried out were described in this theme. The fifth and final theme found was that of goals of care or outcomes. This information was not frequently included in the inter-shift handover report and pertained to discharge plans or goals for that shift. The authors note that there was minimal evidence that the nurses actively prepared the patients for discharge although this is a key component of any hospitalization and should be discussed immediately upon admission (pg. 466).

The authors' also found that there was minimal nurse-patient interaction during the inter-shift handover (Johnson, et. al., 2012). In addition, they found that there was variation in the structure of inter-shift handover report and the information was not presented in any logical order. The authors supported the use of a developed tool for structuring inter-shift handover report, such as SBAR, but also attempted to develop a tool based on the five themes described to give a structured order to handover. The order of the key themes described above is how the author's recommend structuring report, but with some flexibility. They also recommend that critical information should be given after the first and second themes or categories, patient identification and clinical history, to ensure that this information is not lost in the handover.

This study described the current content of inter-shift handover and made recommendations for structure and content, but did not explore what the nurses' wanted to hear in report and what information they considered to be critical to the continuity of care.

In summary, the researchers who described the content of inter-shift handover found that wide variation as with the other elements of inter-shift handover, location and format (Lamond, 2000; Staggers & Mowinski Jennings, 2009; Johnson, et. al., 2012). The content of inter-shift handover was found to be comprised of factual data and nursing judgements, with the nursing

judgements being more often found in handover than documented in the chart (Lamond, 2000; Staggers & Mowinski Jennings, 2009). There was also no consistent structure to the content of the handover and the nurses were found to jump from topic to topic with no logically planned sequence (Staggers & Mowinski Jennings, 2009; Johnson, et. al., 2012). All of these researchers found that nurses utilized a consistent approach to the beginning of inter-shift handover identifying the patient's name, age, room number, admission date, physician and admitting diagnosis, but then was inconsistent after this point (Lamond, 2000; Staggers & Mowinski Jennings, 2009; Johnson, et. al., 2012).

Appreciative inquiry and nursing handover

Appreciative Inquiry (AI) is an approach or methodogoly that uses a positive or strength based approach to change by looking at what processes or structures are currently working well within on a unit and trying to replicate this over and over again with each handover (Knibbs, et al., 2012; Sullivan Havens, Wood, & Leeman, 2006; Richer, Ritchie, & Marchionni, 2010). AI has been described as both a methodology and a philosophy that emphasizes positive elements of systems already in place, drawing on the strengths of what is currently being done and engaging those who are actively involved or effected by the organizational change proposed (Cooperrider, Whitney & Stavros, 2008; Sullivan Havens, et. al., 2006; Knibbs, et al., 2012; Richer, et. al., 2010).

Two studies found in my literature review looked at nursing handovers utilizing the AI approach. The AI approach is the process that I will be using to conduct my project and therefore these two articles are very relevant to my study. Although both articles focused on standardizing and improving nursing handover between two units within one hospital rather than on inter-shift handover the findings from these studies are still applicable to my research project.

The first article I will review is by Shendell-Falik, Feinson and Mohr (2007) and focuses on patient transfers from one area of the hospital to another. The purpose of this study was to engage staff to identify and build on the most effective patient handovers between the emergency department and an inpatient telemetry unit in a large urban United States hospital. The goal was to improve patient safety and build relationships between the two units.

The AI approach was chosen based on the idea of engaging staff members in developing solutions to improve the handover process between the two units (Shendell-Falik, et. al., 2007). This approach specifically draws upon the experiences of the staff who utilize the systems in place to ask what is going well and how can we ensure that this is replicated each and every time. In addition, AI is evidence informed by using the experiences of the stakeholders and helps to build relationships among those stakeholders, which was another goal of this project. The researchers chose the AI approach for three described reasons: first of all, it shifts the focus from what is not working to what is working, from blaming and complaining to seeing what is working well and appreciating that. Secondly, the process is inclusive, energizing and innovative which leads to successful implementation as it utilizes the staff members to gain credibility. Thirdly, the administrators were committed to the positive energy AI facilitates, but also wanted the approach to be flexibile and scientifically grounded.

The project utilized the AI 5-step cycle, definition, discover, dream, design and destiny (Shendell-Falik, et. al., 2007). The first step is "definition" and begins the AI process by reframing the problem into positive topics. During this stage, the consultants at the hospital worked with the senior leadership team for five hours to identify inquiry topics that would address both patient safety and employee satisfaction objectives. The senior executive team

chose the particular process of patient transfer handover between the emergency department (ED) and inpatient telemetry unit.

The second step in the AI process is "discovery". This step involves clarification of what is necessary to support optimal performace? what aspects of the current process work really well and should be continued? and what opportunities are there for improvement and innovation? (Shendell-Falik, et. al., 2007). During this phase the questions that were created during the defintion phase are utilized in stakeholder interviews to clarify the questions noted above. For this phase the consultants and the leadership team developed discovery questions that would generate conversations around the patient transfer process and when it worked really well. The nurses from the ED then interviewed the nurses from the telemetry unit and vice versa for a four week period. The authors note two important benefits from this process, the nurses were able to share best practices with each other and also built positive relationships between the two units. Six weeks after the completion of the interview process, a group of nurses from the ED and the telemetry unit met for a one and a half day working group meeting to review the interview data together.

The third step in the process is "dream". During the one and a half day working session the team of nurses created a dream of what the handover process should look like if every handover was a "perfect" one (Shendell-Falik, et. al., 2007). This dream was created after analyzing the data from the interviews that highlighted handover successes and the factors involved.

The fourth step is "design". This phase requires the dream being translated into a reality that highlights the changes necessary to roles, systems, structures, processes to allow the dream to come to life (Shendell-Falik, et. al., 2007, pg. 99). In this phase, the working group detailed

the new way of performing the patient handover process. They described the key elements and activities that needed to take place at each stage of the process.

The fifth and final step is "destiny". In this phase participants discuss how to implement the change and how to move their dream into the reality of everyday practice with all of their colleagues (Shendell-Falik, et. al., 2007). The group in this project discussed what initiatives would assist in making their dream become daily practice, which would have priority, how the various initiatives would impact implementation (which have the highest payoff) and who would work on each initiative, based on varying passions and skill sets. After this session and discussion the group agreed on the specific roll out plan and timeline of activities and created a chart to illustrate the various initiatives. They also created a list of the stakeholders that would be most impacted by the change and a plan around engagement and adopting the change. The group also created an overall communication strategy and a list of impacts to patient safety, care and teambuilding that would be useful in explaining to the stakeholders to increase buy in.

The outcomes of this project were described as short-term and intermediate. The short-term outcomes included five iniatives to improve the patient handover process between the two units (Shendell-Falik, et. al., 2007). These five iniatives included: a welcome script, a script to communicate specific information when a patient handover occurs; safety assessments, the ED implemented a way to start key elements of the patient database to improve safety through access to timely care; standardized transfer report, a standard report was created that communicated patient status, diagnostic testing, treatment, interventions and follow up plan; low-risk cardiac transport protocol, a protocol was developed to transfer specific low-risk patients from the ED to the telemetry unit without a cardiac monitor promoting more efficient resource utilization and

finally interpersonal relationships, a program was developed to allow for shadowing colleagues in the other department to see the challenges faced during their daily practice.

Intermediate outcomes included collecting data and identifying metrics to measure the success of the initiatives and projects, including: "patient satisfaction, nurse satisfaction and team work, nutritional and skin assessment, compliance with cardiac enzyme regimen and medication administration records" (Shendell-Falik, et. al., 2007, pg. 101).

Focusing on a specific process to improve in this project was a successful way to meet several of the project goals. Safety was improved for patients in the handover process, staff were engaged and built relationships with each other and employee satisfaction was improved by having a voice and the ability to participate in the project that had the greatest effect on them (Shendell-Falik, et. al., 2007).

The second article I will review is by Clarke, et. al., (2012) and also focuses on standardizing patient handover between an acute medicine and sub-acute medicine units within a tertiary teaching hospital in Canada. The aim of this project was to utilize appreciative inquiry (AI) in the study of unit to unit transfer handovers to establish which processes were working well and should be incorporated into a standard practice.

The idea for this project arose from several incident reports discussing issues with the unit to unit handover of patients and was brought forward to the Nursing Practice Council of a large tertiary teaching hospital in Canada (Clarke, et. al. 2012). The principal investigator was a faculty member from the affiliated university, other team members included two managers from participating units, one clinical resource nurse, two direct care nurses who were interested in learning more about this type of research, a manager from the Safety and Quality department and an undergraduate nursing student who was a research assistant.

The study utilized four phases of the AI approach: discovery, dream, design and destiny. The discovery phase involved interviews with all of the stakeholders asking them to describe what works really well within the current system of unit to unit handover (Clarke, et. al. 2012). The stakeholders identified for this phase included direct care nurses, patient care managers, clinical nurse educators and clinicians, patients and family members from the participating units. The interviews were semi-structured, lasted between 15 to 20 minutes and were conducted by the direct care nurses involved in the project team. Themes that emerged from the interviews included trust, information needed for the handover and communication – related variables. Overarching all of these themes and emerging again and again was patient safety being the most important aspect.

The information the nurses needed to prepare and ensure a thorough safe patient handover included knowledge of the patient, reason for admission, the events that occurred while admitted and plans for discharge (Clarke, et. al. 2012). Relevant tests, therapies, treatments and any pending tests, diagnostics or rehabilitation plans were also deemed relevant to the handover process. The biggest challenge identified was finding the time and quiet space to collect and organize the relevant information.

Nurses identified that a face to face handover as the ideal way to transfer patients, but acknowledged that this was likely not practical (Clarke, et. al. 2012). Instead the nurses agreed to providing handover on the phone where there is an opportunity to ask questions and clarify information. This was preferable to the present process of faxed report. In addition, the nurses agreed that there should be some form of standardized report form so that the nurses were all on the same page. Finally it was brought up that communication with the patient and family as to the reason for the transfer needed to occur to prevent confusion and anxiety.

The second phase of the AI process was dream. After the thematic analysis of the interview data was completed the research team and staff met in a day-long session to view the analysis and quotes from the interview transcripts (Clarke, et. al. 2012). The goal was to create a vision for the future of what the staff wanted to the patient handover to look like. The group mapped out on a storyboard the perfect handover protocol based on the collected data from the interviews. The key components were a quiet place to prepare the handover report, time to find the information and organize it, time to speak with the family and patient, a standardized handover report and a transfer checklist.

Design was the third phase of the AI process. In this phase the dream is operationalized into designing a process and identifying changes to systems, process and roles (Clarke, et. al. 2012). Three major aspects were decided on for the specific units: a quiet place and time to fill out the documents, standardized verbal report using the SBAR pneumonic and a universal transfer checklist designed from the previously identified crucial points in the process.

Finally the destiny phase occurred and was completed with an implementation and sustainability plan (Clarke, et. al. 2012). Included in this phase is determining metrics that would be used in the evaluation of the AI process and implementation of the change project. It was determined that data collection would involve chart audits of transfer notes, audit of units locked drawers at six months post implementation to determine if valuables were being transferred with patients (an identified issue), rates of form usage, incident reports, and staff, patient and family feedback. The study team developed a questionnaire that would be voluntary and anonymous to survey the stakeholders regarding levels of satisfaction with the new process. Finally, the Quality and Safety department would track patient safety to see if there were positive changes as a result of the project.

In both of theses studies utilizing AI to improve unit to unit patient handovers, the process that engaged the front line staff was central to the success of the projects. The main themes that emerged were trusting each other and team building between units, improving communication and understanding through the use of standardized handover tools and transfer checklists and finally increased buy in from the unit staff when the changes are brought to them from their colleagues (Clarke, et. al., 2012; Shendell-Falik, et. al., 2007). Both studies acknowledged the challenges with unit to unit patient handovers and the safety issues associated with those handovers (Clarke, et. al., 2012; Shendell-Falik, et. al., 2007). Through harnessing the energy and engagement of the varying units staff original and creative ideas were generated to improve not only communication and safety of the patients, but also the rapport and building of positive relationships between the units.

Summary and identified gaps

This exploration of the published literature on patient handovers revealed several predominate themes. The first major theme revealed is that of the impact of handovers on patient safety. As previously described patient handovers occur throughout a patient's stay in an acute care hospital and represent a significant safety risk. The patient handover is vital to ensure the accurate and concise transfer of information between healthcare providers and to ensure continuity of care for the patient (Leonard, et. al., 2004). With an ineffective patient handover process vital information could be lost leading to adverse patient events (Leonard, et. al., 2004; Clarke, et al., 2012). To increase the safety of each patient handover, accreditating agencies, safety councils and other governing bodies recommend standardization of handover communication to ensure the content and process of handover is safe, accurate and concise

(Accreditation Canada, 2011; Institute for Healthcare Improvement, 2009; The Safety Competencies Steering Committee, 2008).

In reviewing the literature and the studies performed regarding safety and the patient handover process, issues have been raised that interfere with the standardization process. The lack of agreed upon definition of patient handover is an idenitified need within this area of research (Cohen & Hilligoss, 2010; Patterson & Wears, 2010; Staggers & Blaz, 2012). An agreement of what processes and functions handover includes or does not include is lacking (Cohen & Hilligoss, 2010; Patterson & Wears, 2010). Without a widely agreed upon definition of handover and the functions it includes it is difficult to standardize the process or content (Patterson & Wears, 2010). It is also difficult to implement interventions to improve the process (Patterson & Wears, 2010)

There is no widely agreed upon definiton of handover and the functions it includes, but there is agreement that transfer of information from one health care provider to another is a primary function of the process (Cohen & Hilligoss, 2010; Patterson & Wears, 2010; Staggers & Blaz, 2012). The researchers in this area also indicate that this is not the only function of patient handover, but also teaching, learning and socialization are additional functions of the handover process (Cohen & Hilligoss, 2010; Patterson & Wears, 2010; Staggers & Blaz, 2012).

Nursing inter-shift handover is composed of three main ingredients or components, namely format, location and content. There are three main formats for inter-shift handover, verbal, written or audiotaped. Format for inter-shift handover varies widely across the studies conducted with inconsistent and inaccurate information being a noted issue in all types of formats (Welsh, et. al., 2010; Staggers & Blaz, 2012). The overwhelming preference from nurses in all studies was for a combination of both written and verbal handover (Welsh, et. al.,

2010; Staggers & Blaz, 2012; Athwal, et. al., 2009). The preference was for a checklist to ensure all components of handover are accomplished, a written form for the arriving nurse to write notes on and a verbal component (Welsh, et. al., 2010; Staggers & Blaz, 2012). This verbal component allows questions and clarification, but also meets the needs of the other functions of inter-shift handover including teaching, learning and teambuilding (Cohen & Hilligoss, 2010; Patterson & Wears, 2010; Staggers & Blaz, 2012).

As with format, the location of inter-shift handover is also variable across sites where research was conducted. There is an emphasis on the importance of bedside handover that would involve the patient and the family (Street, et. al., 2011; Thomas & Donahue-Porter, 2012). However, researchers found that there were barriers to this location such as nurses feeling uncomfortable discussing sensitive patient information at the bedside, especially in multi-patient rooms and that often the patient was not actively involved but rather being talked over (Street, et. al., 2011; Thomas & Donahue-Porter, 2012). The main finding in this section was that it is important to have an identified location for inter-shift handover and that the location assists in decreasing interruptions and distractions. (Athwal, et. al., 2009; Street, et. al., 2011; Thomas & Donahue-Porter, 2012).

Again when exploring the content of nursing inter-shift handover, wide variation was found in the sequence patient information was presented and there was no standardized approach to what the necessary content should include (Lamond, 2000; Staggers & Mowinski Jennings, 2009; Johnson, et. al., 2012). In general, the patient's name, age, room number admission date, admitting physician or team, admitting diagnosis or surgery were presented consistently at the beginning of handover, but after this the content and sequencing was inconsistent (Lamond, 2000; Staggers & Mowinski Jennings, 2009; Johnson, et. al., 2012). The nurses jumped from

topic to topic with no structure or logical process (Staggers & Mowinski Jennings, 2009). The major components of the inter-shift handover content includes factual patient data and nursing judgements (Lamond, 2000; Staggers & Mowinski Jennings, 2009). Although the concrete data could be found readily in the written documentation including the patient chart and flowsheets, the nursing judgements were only identified in inter-shift report (Lamond, 2000). Johnson, et. al., (2012), identified the major components observed in nursing inter-shift report and recommended a sequence to standardize content. This recommended sequence included: identification of the patient, patient's relevant history and reason for admission, current clinical status, current plan and upcoming treatments, therapies or diagnostics and finally goals of care, optimal outcomes or discharge goals (Johnson, et. al., 2012). The authors also recommended that critical information be presented after the patient's relevant history so as to not be lost in the report and instead be highlighted (Johnson, et. al., 2012).

Discussion around the barriers and facilitators to nursing inter-shift report was consistent among researchers and similar findings were presented. Commonly mentioned barriers included information characteristics such as the sharing of too much, too little or irrelevant information, no ability to ask questions or seek clarification and the most emphasised was that of interruptions and distractions, which had the biggest impact on the ability to give a comprehensive and safe inter-shift handover (Lamond, 2000; Staggers & Mowinski Jennings, 2009; Johnson, et. al., 2012; Riesenberg, et. al., 2010; Sullivan Havens, et. al., 2006; Athwal, et. al., 2009; Street, et. al., 2011; Thomas & Donahue-Porter, 2012; Kerr, et. al., 2011). The major facilitators included a focus on relevant content, ability to seek clarification and ask questions, but at the same time utilize a checklist and written report for the purposes of jotting down notes (Athwal, et. al., 2009; Staggers & Blaz, 2012; Welsh, et. al., 2010). In addition, a major facilitator was the inclusion of

the front line nursing staff in the discussion and decisions around inter-shift handover, this was especially highlighted by the projects that utilized an appreciative inquiry approach (Shandell-Falik, et. al., 2007; Clarke, et al., 2012).

Methods

Research approach/design

This study followed a qualitative approach utilizing action research and the appreciative inquiry (AI) process to create a handover form to be utilized by an acute medical unit at Hospital X. Action research involves 'local experts' in every phase of the research project. In most instances, researchers act as project facilitators and active participants. Knowledge integral to the projects success is based on discussions and project decisions made by those who know the context best-the local experts (Stenger, 2003). In action research, the researcher becomes an active participant in the research itself (O'Brien, 1998), as in this study, the researcher was part of the project group and therefore likely had an influence on the results. Action research is best utilized in situations where a project group or researcher is looking to solve real-life problems, in this case, develop a handover form that captures critical elements necessary for safe patient care (O'Brien, 1998).

The appreciative inquiry (AI) approach was chosen as it fits well with the aim of the study, to develop, pilot and refine a handover form that will be used by the study unit. Members of the study unit team were utilized to both appreciate the current process and to find ways to improve upon, increasing their engagement and support for change (Watkins & Mohr, 2001). AI is a collaborative and participative approach to looking at what processes work well within an organization or in this case, an acute hospital unit, and how can that be recreated each and every time handover is received or given (Watkins & Mohr, 2001; Knibbs, et al., 2012; Sullivan Havens, Wood, & Leeman, 2006; Richer, Ritchie, & Marchionni, 2010). By definition, appreciative inquiry seeks to find the value in processes using a positive or strength based approach and to increase that value or "appreciate" and to discover these processes through

active and engaged inquiry or questioning (Watkins & Mohr, 2010). AI has been described as both a methodology and a philosophy that emphasizes positive elements of systems already in place, drawing on the strengths of existing processes and engaging those who are actively involved or effected by the organizational change proposed (Cooperrider, Whitney & Stavros, 2008; Sullivan Havens, Wood, & Leeman, 2006; Knibbs, et al., 2012; Richer, Ritchie, & Marchionni, 2010).

Appreciative inquiry is grounded in social constructivist theory. Social constructivist theory is based on the idea that we construct the world around us through our interactions and conversations, that reality cannot be known, but is rather constructed through our interpretations (Mills, Bonner, & Francis, 2006; Watkins & Mohr, 2001). Social constructivism as it relates to the AI method and process is seen in the inquiry of the past and present processes and imagining the ideal future and to create that future (Watkins & Mohr, 2001). In addition, the social constructivist paradigm recognizes the influence that the researchers and the participants have on the interpretation of the subject of inquiry and that the ideal future state is constructed from shared experience (Polit & Beck, 2011; Annells, 1997). As the AI approach is based on positive psychology and active involvement of the participants, involving the unit staff in the project process is integral to this approach and influences the interpretation of the subject in a way that is reflective of the work being done in their setting, thereby increasing engagement and enthusiasm for the project.

This study was conducted using the AI "4 D" process of discovery, dream, design and destiny or delivery. For the purposes of this project, delivery will be used to describe the final phase. The first phase, discovery, seeks to uncover what is already working well with the current process or in this case, the current inter-shift handover form and what could be done

differently to improve on the process. Typical questions asked in this phase included, describe a time when you received a perfect handover, what did it look like? What is working well with your current handover form? What could be improved upon with your current handover form? The second phase is dream where the project team was asked to consider the perfect handover and what would need to be in place to have that perfect handover occur every single time and what benefits that would have. Questions asked in this phase are what would it look like to have the "perfect" handover every time? If you received the perfect handover every time what impact would this have on you? Your day? Your specific work? The third phase is the design phase, where the team created a handover form incorporating the elements discussed in the first two phases. The goal of this phase was to create a handover form that ensures the dream described becomes a reality. The main question asked in this phase was what are the critical elements needed in every handover to achieve the perfect handover? Finally, the fourth phase is delivery, where a new standardized inter-shift handover form is created, refined and implemented and on the study unit. In this phase, the previously created form was rolled out to the unit and feedback was sought using an anonymous online survey tool, questions were asked related to the functionality of the new form, ease of use and recommendations to further improve the form (Clarke, et al., 2012; Knibbs, et al., 2012; Shandell-Falik, Feinson, & Mohr, 2007; Sullivan Havens, Wood, & Leeman, 2006; Richer, Ritchie, & Marchionni, 2010).

Ethics

Ethics approval was sought and granted by both the University of British Columbia Behavioural Ethics Review Board and Vancouver Coastal Ethics Review Board.

My office contains a locked space where I kept the project consent forms and my notes will be kept for at least 5 years after the conclusion of the study. At that time, I will shred hard

copies of documents related to the study. I also conducted digital recordings and after I had transcribed these recordings, Dr. MacPhee offered to store the recordings on her password-protected research computer, and these recordings will be deleted 5 years after the end of the study. The original recordings were deleted from the recorder after transfer of data to the computer.

Sample and setting

Overall setting. The setting of this study was an acute medical unit within an acute, urban, tertiary teaching hospital in the Lower Mainland. The unit is a fifty-two bed acute, tertiary general medical unit employing a mix of Patient Care Aides, Licensed Practical Nurses, Registered Nurses and Employed Student Nurses. In addition, there are multiple preceptor students and nursing student groups active on the unit at any given time.

Project team sample and setting. A non-probability, purposive sample of unit nursing staff and leadership were asked to participate in action research as members of a project team that designed, implemented and refined a standardized handover form (Polit & Beck, 2011). The sample consisted of representatives from key stakeholder groups or those groups with the most knowledge and interest in the development of a standardized handover form. The frontline leaders included one Patient Care Coordinator (PCC) and one Clinical Nurse Educator (CNE), as well as, two frontline direct care nurses that work on the unit involved in the study and trial. There were also two unique members on the project team. A current direct care nurse from the study unit, who had previously held positions in the leadership team as both a PCC and a CNE, and a human factors engineer working for the Patient Quality and Safety department at Hospital X. Both of these individuals agreed to participate and lend their unique perspectives of the content and layout of the nurse-to-nurse handover form.

All participants were approached by the researcher and asked to participate in the study, the script for recruitment can be found in Appendix B. The study and project description were provided to the participants approached and they were asked to sign the informed consent (Appendix C).

The project group meetings occurred in a reserved conference room to provide a distraction and interruption free environment for the project participants. In addition, the conference room provided ample working space for the project group.

Survey sample and setting. During the pilot period of the newly designed nurse-to-nurse handover form, all nurses working on the pilot unit were asked to voluntarily participate in a survey seeking their feedback on the new handover form. Sampling for the survey component during the pilot phase of the handover form was conducted through convenience sampling. The convenience sample was obtained through posting flyers, emailing the project and survey description to all nursing staff on the pilot unit and making the electronic survey link available to the same (Appendix D, E and F). The participants met the following inclusion criteria: inpatient medical nurses on the pilot unit, full-time, part-time or casual, including Employed Student Nurses, Student Nurses, Licensed Practical Nurses, and Registered Nurses, have used the new handover form and are fluent in English. These criteria allowed for a sample of participants that could contribute to giving useful feedback regarding the pilot form.

The survey of the general nursing staff on the pilot unit was an electronic survey and therefore could be completed at work on one of the available computers. There was no way to guarantee a private or interruption free environment.

Data collection

Project team procedures. Prior to the first meeting of the project group, the group was sent via email an article that described the process of Appreciative Inquiry and the 4 D's of the process. The project group was also sent the current nurse-to-nurse handover form used on the unit (Appendix G) and the five questions that were asked during the first meeting (Appendix H):

1. Describe a time you received a perfect handover at the start of your shift and what made it perfect?
2. What would it look like to receive a perfect handover at the beginning of every shift? What would need to be in place for that to happen?
3. What are the core or critical elements needed for a perfect handover?
4. Looking at the current handover form, what works really well with the current form?
5. What doesn't work very well with the current form?

The project team was asked to reflect on these questions, consider the current handover form and come prepared to answer the questions at the first meeting.

The first meeting for the project group took approximately two hours and took place in a private, reserved conference room with room to move around, talk candidly, and with a whiteboard to draw and write notes. The focus of this meeting was on the first three phases of the AI process, discovery, dream and design. Because I was a facilitator and participant in this team process, I took notes of team discussions and I digitally recorded sessions to ensure completeness and accuracy of information captured during the team meetings.

Discovery. The first phase of the AI process is discovery. The action group were asked questions to uncover what works in the current process and to voice their reflections from the pre-meeting work. The first step was to have the participants describe a time when they

received a handover that was the perfect handover and what made it the perfect handover? (Clarke, et al., 2012). As well, they were asked to describe what works well or not well with their current handover form, to discover the current process and what they saw as the strengths and weaknesses.

Dream. The next phase is the dream phase and the questions focused on replicating the "perfect handover" described in the discovery phase. Questions included: "What would it look like to receive a perfect handover at the beginning of every shift? What would need to be in place for that to happen?" (Clarke, et al., 2012). These questions attempted to find ways to increase the value of the current handover form, and to appreciate the current process.

Design. During the design phase, the group focused on the essential elements needed to create a handover form that will capture the critical information consistently. The question asked for this phase was "what are the core or critical elements needed for a perfect handover?" The project group discussed the information needed on the handover form, design, layout and format that will work on their unit and ensure a shared understanding among all of the frontline nursing staff. The project group drew out their ideas on the white board in the meeting room and I photographed this to use in the form design (Appendix I). By the conclusion of our first meeting, the team had decided on the information needed on the handover form.

Both the data collection phase and the data analysis phase occurred concurrently (Polit & Beck, 2011). The project group was audio recorded, transcribed verbatim and analyzed by the researcher (Polity & Beck, 2011). Thematic analysis was used to identify critical information required in the nurse to nurse handover process. As a result of this process, a nurse to nurse handover form was created by the researcher that incorporates the critical information identified

by the end-users in the focus groups (Appendix J). The analysis phase will be described in more detail in the analysis section.

Once the handover form was developed the form was shared electronically with the project group for validation and feedback. Project group members were asked to consider whether or not the form captured the project discussion accurately and included the core elements that we had discussed. A second meeting with the project team was requested to provide feedback and validation of the newly created form, this meeting occurred within a confidential space at Hospital X that I reserved. Unfortunately one team member was unable to attend the meeting, and she provided feedback electronically for me to take to the meeting. Another team member could only attend during her break time to give her feedback and ideas. During this session, I once again took notes and audio taped the session.

The purpose of this session was to come to a team agreement on the final form to be piloted on the unit and to validate the form. Prior to agreeing to the form, the team wanted to try it out with a sample patient. A scenario was presented by one of the team members as an example of a patient for the other team members to trial filling out the form. Some slight wording was changed from the initial iteration, and one of the team members offered to re-create the form in Visio instead of Excel to make the form look more finished. Agreements were made on the final version of the form and timelines were agreed to for the pilot period.

Survey procedures. After team validation, the form (see Appendix K) was piloted on the study unit for a period of two weeks. I obtained the permission of the unit's nursing manager to pilot the form. The development of the form and project team work is congruent with quality and safety initiatives underway within Hospital X (personal communication, Blackburn, 2012). The form is self-explanatory and no training was required among nurses on

the unit. I did, however, post the form on educational boards within the unit and sent out a broadcast e-mail with an e-attachment of the form explaining the purpose of the form and the two-week pilot process. The project team felt it was important to highlight the fact that the handover form was meant to complement the nursing Kardex and not serve as a stand-alone document, which was done every morning in group report.

The nursing manager for the unit and the educators assisted me with informing the nursing staff of the handover trial. An email was sent to all nursing staff three days before the start of the trial and also the day the trial started to ensure all staff were aware (Appendix E and F). In addition, the Patient Care Coordinators and Clinical Nurse Educators on the unit discussed the new form, the pilot and the online survey during each morning huddle for the duration of the pilot period.

During this pilot period an anonymous, confidential online survey was available to all front line users of the form to give feedback and make recommendations. The survey (See Appendix L) was a brief, 10 minute on-line survey rating the form with respect to comprehensiveness, utility and critical nature of content. A reminder e-mail and survey link was sent out with the pilot information three days prior to the start of the trial, the day the trial began and again one week after the original e-mail to generate more feedback and survey responses (Appendix F). The survey was closed after two weeks.

I utilized the internal hospital survey system that is confidential and password-protected. Access to the survey is only available from internal hospital computer systems and therefore staff were uanble to complete the survey from home. The study unit has a total of 103 nursing staff, comprised of full time, part time and casual Registered Nurses and Licensed Practical

Nurses, all of whom were invited to participate in the survey. We received a total of 16 responses for a response rate of 16%.

After the trial implementation period I collated the survey feedback and presented the findings and major themes at the third and final meeting for the project team. As before, I circulated collated feedback to team members in advance. The project group came back together for another period of time to review the feedback given by the staff nurses and make any necessary changes to the form. Initially two hours was alloted but the team only required one hour and came prepared to discuss the themes found in the feedback surveys, but also with anectdotal and verbally received feedback. Again a confidential space was reserved within the hospital for this meeting, it was audio taped and I took project notes during the session. This last meeting was also considered the fourth phase of the AI process, the delivery phase, where there was a final creation of a new handover form, designed by the end-users (Shandell-Falik, et. al., 2007; Clarke, et.al., 2012). As well as, a discussion around strategies for maintaining and supporting the change process.

Data analysis

As is common in action research the data collection and analysis phases occurred concurrently during the course of this project. Initially, after the first meeting of the project group, both the audio taped discussion and my participant notes were transcribed verbatim and utilized to develop themes for the next project group meeting. The analysis phase concentrated on what content was found to be critical information to the project group for nursing handover report. The transcriptions of the project group meetings were considered the unit of analysis discussing the critical information for nursing handover report, which is the overarching theme (Graneheim & Lundman, 2004).

The text was read through several times until I had a good grasp of the whole picture. After this I divided the text from the first meeting into groups according to the phases of the AI process and the five questions that were asked of the project group (Graneheim & Lundman, 2004). Any statements or words that attempted to answer the questions asked were grouped accordingly. From here I analyzed the data that was answering or attempting to answer each question and looked for themes that emerged (Graneheim & Lundman, 2004).

Using the current handover form as a beginning for the new handover form, the field notes and transcription of the first project team meeting was utilized to both add and discard categories that were deemed either critical or not critical to the handover form. Categories and sub-categories will be added to the form or deleted based on the analysis of the project group data. In addition, codes or clinical indicators could potentially be added to the handover form. The resulting handover form was presented to the project group during the second meeting and discussion around any further adaptations or changes occurred. The changes were made during the meeting and as a result we had an end product to be utilized on the pilot unit.

After the two-week pilot period, the responses from the completed surveys were analyzed. The previously described process of content analysis was repeated with the responses from the surveys and analyzed in the same manner prior to meeting with the project group a final time. Once analysis had been done, these results were presented to the project group. The project team also discussed any final changes to the new handover form and the form was amended for ongoing use on the pilot unit.

Enhancing rigor and trustworthiness

Several strategies were used to enhance the rigor and trustworthiness of this research study. These strategies are discussed in this section in depth.

Reflexivity. I incorporated reflexive journaling and regular check-ins with my researcher advisor to maintain reflexivity. Journaling was used to note my own preconceived notions from personal and professional experience, surrounding the research question and phenomenon. I found that the decisions made by the project team in terms of their preferred structure for handover report was not what I was expecting or had anticipated. Utilizing the reflexive journaling assisted me with separating my assumptions from what the project team was concluding and prevented me from leading the group in the direction that I had previously anticipated. Checking in with my research advisor also assisted with reflexivity by discussing personal assumptions, thoughts and feelings in an attempt to distinguish these from the emerging findings.

Triangulation. A variety of triangulation techniques were used to enhance the quality of the data gathered, generated and analyzed for this research project (Polit & Beck, 2011).

Data triangulation. The data was triangulated utilizing person triangulation and having a variety of members on the project team with varying levels of experiences and in a variety of roles, both leadership and clinical (Polit & Beck, 2011). The six-member project team consisted of five Registered Nurses, including three staff nurses, one Patient Care Coordinator and one educator, as well as a Human Factors Engineer. The rich variety of experience and knowledge within the project team ensured that the data was generated and validated by multiple perspectives, therefore, enhancing the quality and trustworthiness of the data (Polit & Beck, 2011).

Method triangulation. Multiple methods were utilized to gather the data for this research project. Utilizing the appreciative inquiry method, questions were sent to the project team prior to the first working session. These questions were then addressed in the first working session,

and as both a participant and observer I wrote observation notes and audio recorded the session. In addition, previous handover forms were utilized by the project team to assist in the creation of a new handover form. Finally, an electronic feedback survey was utilized to survey the entire unit of nurses for their viewpoints and feedback regarding the newly developed handover form. All of these methods of data collection were utilized in the analysis and subsequent generation of themes (Polit & Beck, 2011).

Comprehensive and vivid recording of information. Both participant field notes and observations were recorded at each project team meeting to enhance the comprehensiveness of the information recorded. All of the project team working sessions were audio taped and transcribed verbatim, including pauses, slang and "umms" of the participants. The combination of participant observations and transcribed working sessions were analyzed to develop the themes discussed in this paper. Quotations from the participants were utilized to demonstrate the comprehensive recording and capturing of the data utilized and to enhance the trustworthiness of the analysis and results described in the next chapter.

Member checking. Member checking refers to the technique of validating findings and researcher interpretations with the participants of the study to increase the credibility of the data (Polit & Beck, 2011). In this study, after the first project team working session I interpreted the data that was gathered regarding the critical elements for a nursing inter-shift handover report and created a draft of this report. This draft report was then sent to all of the participants of the project team via email to validate that the report accurately reflected the thoughts and intentions of the group. In a subsequent meeting this draft form was again validated with the members of the project team, feedback was solicited and changes were made prior to piloting the form.

Utilizing the member checking technique enhances the credibility of the data gathered and ensured that the document created was an accurate reflection of the project team's intentions.

Results

This chapter will provide the thematic analysis findings for each phase of the Appreciative Inquiry (AI) process: the discovery, dream, design and deliver phases. Five questions were sent out to the project team prior to the first project meeting. The five questions are in Appendix H. These questions were used to gather data for the discovery, dream and design phases of the AI process. At the first project team meeting, the team engaged in the discovery, dream and design phases of the AI process. The final phase, the deliver phase, addressed the concrete deliverables based on discussion and refinement from the previous phases. Each phase of the AI process will be discussed below and divided into sub-sections based on the themes that emerged from the project meetings, guided by the discussion around the five questions. A summary of the team meetings, AI phase, theme and sub-themes can be found at the end of this chapter in Table 4.1.

First project team meeting (March 5, 2013)

The first project team meeting was held on March 5, 2013 and proceeded through several phases of the AI process: discover, dream and the initial part of the design phase. This first team meeting lasted approximately three and a half hours and was attended by all project team members: a Patient Care Coordinator (PCC), a Clinical Nurse Educator (CNE), a human factors engineer, three Registered Nurses (one with five years experience and two with two years experience) and the researcher. Utilizing the five questions in Appendix H and the AI process, the team members were guided though the first few phases of the AI process. The discussion progressed naturally from the discover phase to the dream phase and into the beginning of the design phase, where the team began the design of a deliverable handover report form.

Discover

The following sub-sections emerged from the thematic analysis of the first phase of the AI process. In this phase we discovered what team members' opinions were regarding the current inter-shift handover form (Appendix G) and the handover process in use on the unit. The inter-shift handover report is the written document utilized by the departing nurse to communicate to the arriving nurse, important and critical patient information. During the discover phase of the AI process, the team sought to uncover what worked and what could be improved in the study unit's current handover process and form.

Three major themes emerged with regards to the inter-shift handover report:

1. Overview,
2. Efficiency, and,
3. Objectivity.

Overview. The team agreed that the best handover is organized, systematic, succinct and that both the departing and arriving nurses are aware of the reasoning or rationale behind the interventions and plans. It is important, therefore, for the nurse giving the report to provide an overview of nursing interventions within the context of the patient's general history, current status and overall plan of care. As stated by a member of the leadership team:

> I know what it looks like when a nurse at the bedside knows what's going on, which partly comes from having received a good handover…if they know what's going on and why, that's helpful. Like why they are having an MRI, why they are concerned about this person or there's urgency. The reasoning behind what they are doing, the rationale (PCC).

Trust. A sub-theme that emerged during the team discussion was that of trust. The team emphasized the need to trust the departing nurse to provide an accurate and succinct handover, because the handover sheet is considered one of the most important sources of patient information. Other sources of patient information, such as the kardex and patient flowsheets also contain relevant patient information, but the handover sheet is viewed as critical for succinctly gathering and reporting information from shift to shift. Unfortunately the kardex, which contains general information for the patient, such as upcoming tests, procedures, diagnostics, as well as, dates for tube, line, drain and dressing changes, is not trusted by the staff to be consistently updated by the departing nurse.

> Something that's challenging about the kardexes is that I often will repeat information in my written report because even though I've updated the kardex nobody trusts what's written on the kardex anymore so if you really want something to be relied on you have to write it every shift to make it clear to people (RN B).

The frustration around needing to repeat information on the inter-shift report that should only be located in the kardex was expressed by all team members. They felt that if they could trust that all staff members were consistently updating the kardex then the inter-shift report could focus on more critical patient information.

> …So I think if the kardexes were accurately updated then the inter-shift report could be very brief, but the problem is that the kardexes don't get updated so a lot of the kardex information ends up in the shift report (PCC).

The consensus of the group was that updating the various communication tools was not seen as a priority compared to direct patient care tasks and when time was tight the communication

updates were what was left out of the shift. "I think part of it is making it…having nursing see it as more of a priority and more of a responsibility of their shift…" (RN B)

Duplication of information. Another sub-theme that emerged from this discussion was the concept of duplication of information or double charting. The team expressed that often they were repeating information that should be found in other sources of patient information, such as the kardex or patient care plan, in the inter-shift report to ensure the arriving nurse received this information. Part of this was due to the lack of trust in these other documents being accurate or up-to-date and also not trusting the arriving nurse would actually read these documents. This lack of trust led the team to feel frustrated in the amount of time they took to repeat information in various locations.

> We repeat information that should be in the kardex. Same as kind of like a care plan too or certain patients want certain things like if someone is in a pain crisis this, this and this works. I find that if we have a like a really good working care plan and the time to do it in a dream world like you can save yourself from writing it down over and over again in shift report (RN A).

> Or it's not duplication but it's written in the inter-shift report, which is lost every shift and therefore is written down again and again (PCC).

Continuity of care. The final sub-theme found in the overview discussion was that of the importance of continuity of care for patient safety. The group agreed that there are issues related to the other communications tools, such as regular updates of important kardex information (e.g., tests, line changes etc.), but a priority for the project team was to revise the current inter-shift handover report form to best reflect an overview for each patient based on critical events within

the past 12 hours and critical patient goals for the following 12 hours. The group felt that this time frame would provide an accurate portrayal of the patient's overview and best assist nurses for the arriving shift to plan patient care delivery for their shift.

> I think that is definitely something that gets missed a lot is communicating the actions that need to get done. Cuz [sic] often I come on and I'll read through my reports and I'll take a look at the orders that have been written and the information there is completely different from what I'm seeing. So it's either that the person hasn't fully grasped what needs to be done or they haven't like seen it's not on the kardex or whatever else (RN B).

> I think knowing your patient is information in the kardex, care plan whatever [sic], I think the inter-shift report is to try and allow you to pick up where the last person left off and plan your day (PCC).

Efficiency. Another theme that emerged from the discussion was efficiency. Although it is necessary to gain an overview of the patient's recent past and current healthcare trajectory, it is also necessary to present information in the most succinct and structured way as possible. The project team agreed that the best way to efficiently structure critical information would be in a written format. The kardex represents one source of written information, although not well trusted, which increases the importance of a well-structured and thought out handover report. A well-structured handover report should serve as an additional source of critical information. Currently, handover information is often done verbally in a rushed, jumbled, non-systematic manner. Important information is often left out and irrelevant information is sometimes included.

Timing. A sub-theme identified within the theme of efficiency is timing. Several team members described a common trend of arriving nurses being bombarded with an impromptu verbal report before they have even started the shift or put their things away. Stated by a project team member:

> My biggest pet peeve is if I come on shift and I haven't even sat down yet and I'm putting my coat away and somebody's talking at me and it's like this happened, that happened, this happened. For me that's a big pet peeve, I think write it down and I will look at that (CNE).

Another team member described a typical inter-shift report situation in the following way:

> And usually if you come in early they [departing nurses] see you by the lockers and they like come running over to you at like quarter to seven [all RN team members nodding in agreement] and you're like can I put my lunch in the fridge first? Like so yeah, I think it would be good to have a sheet [inter-shift handover report] where everybody would know what they are supposed to write down, even the ones who require a bit more guidance (RN C).

The arriving nurses need time to put their things away, organize their cheat sheets and start their day in a calm and organized fashion, the early bombardment of information was expressed as "too much" at the start of shift. Requesting some time to give more details verbally by the departing nurse was seen as more appropriate by the team.

> If they ask you to go to a quieter area and it's your first day with the patient, and I have something to tell you that's more then what's written and they know what's going on and can articulate that clearly and systematically that can be helpful (RN A).

Information overload. Another sub-theme identified during the team discussions was information overload. Receiving too much information, in a short period of time and in an unorganized manner contributed to arriving nurses feeling overwhelmed and uncomfortable at the beginning of their shifts.

> I often hear complaints about the verbal handover. Like a lot of more senior nurses are like just write it down, don't bombard me when I walk in let me actually just read it and figure it out. I don't need to know all the frenzied verbal details (CNE).

The project team noted that although there is a written handover form in existence, the current form is inadequate and consequently, the informal verbal report is used to fill in other information. Newer nurses, in particular, have difficulty filling in the current form with relevant information, and they are most prone to providing irrelevant verbal information during inter-shift report times. One project member commented, "it can also make things seem very overwhelming and there's a lot more going on than there actually is…" (PCC).

Experience. The discussion around novice versus senior nurses provided another sub-theme to the discussion. Many team members felt that it was novice nurses who gave the additional verbal reports, "most times either if somebody is a new nurse and they are uncomfortable with writing reports, I often get verbal's from new grads and from people with less experience" (RN A). Another team member explained:

> ... I think there is always that fear, and this is coming from my experience as a new grad, that you're forgetting something um really important and if you say it out loud people can ask questions and it's sort of back and forth as opposed to

> having to rely on yourself that you've written everything down that that nurse may want to know (RN B).

With further exploration, it was discussed that many novice nurses were not comfortable with written handover and were fearful they were missing something that was important for the arriving nurse. The team also hypothesized from their experiences as novice nurses that providing an appropriate written handover was not something that was taught to them. The only exposure was during preceptorship and the quality of the written handover was therefore dependent on how well the preceptor wrote report. Two team members explained that the assumption of senior nurses being more adept at written report was not completely accurate:

> The idea that senior nurses' reports are sort of a gold standard on some level is not really true, as sometimes they are worse than a new grad because you come on and 17 things have happened and all you can see is like O2 sats 99%, A&O check…and like what does that even mean? (RN B)

> I think senior is the wrong term to be using, but a good nurse, some nurses have only been nursing for a year, but senior is not mandatory to giving a good report (PCC).

Process. The final sub-theme identified was that of process. The process around inter-shift handover appears to be a major issue on the study unit. With both written and informal verbal handover, combined with what was described as a non-structured current handover form, the process of how, when and what information to handover to the arriving nurse is convoluted and confusing. As described by a team member:

> …everything is jumbled and I like being systematic with things otherwise medicine itself is all over the place so if you add an all over the place report it doesn't give you a focus for how or what you need to keep an eye on (RN A).

The project team agreed that the best way to increase the efficiency and effectiveness of the inter-shift handover report and to improve the process was to have the report follow a systems - based format to organize the information. One project member endorsed a body or physiological systems approach to the handover report; "I like that it's structured and gives you the full picture as opposed to being all over the place" (CNE). Other team members agreed and shared their thoughts and experiences:

> Like the best handover reports that I ever get are when we're getting an ICU transfer I love getting report from those nurses. Because it's always like this is what they came in with, this is the code status, this is what happened and now their like neuro blah blah blah cardio, go always through systems, every single system and when they come up I feel like I know the patient (RN A).

> I think if it's given as a systems report you can deal with the system and put a check box beside it and file it away and go to the next one and when it's a report that doesn't have any type of systematic process to it at no point do you feel like you've closed a piece of it up (RN C).

Objectivity. Another theme that emerged from the discovery phase was the need for objective data versus subjective data on the inter-shift handover form, presented through professional communication. The danger of simply following the previous nurse's opinion or assessment was echoed throughout the project group as a real hazard to the patient's well being.

This contributed to the need for the inter-shift report form to contain objective patient data rather than opinion or conjecture.

> It's challenging when you have to sift out what's judgments or criticisms or nurse um personal challenges versus sort of system challenges and um issues that you're going to face as an individual coming from your perspective. If it stays really objective then there's less sort of trying to root out what information you actually need from the report (RN B)

Professional communication. Professional communication emerged as a sub-theme described below by the team. The team felt that personal judgments, criticisms or impressions of the patient and/or family are not relevant to patient care delivery:

> I think if it's a systems report it would be very succinct and would just be the medical issues and what you need to know and not like…everybody reacts to different people differently. Sometimes people can be like 'oh that patient's awful' and then they're totally fine with you, like I think it depends on your approach and if you go in already thinking they are going to be awful they are going to pick up on that (RN B).

> A big thing for me is when they come in and say 'oh this patient is such a…such a whatever, pain in the butt' or like with a really negative connotation to the day, 'oh you're going to have such a horrible day'. Is that really necessary? Tell me what I need to know, but the attitude going into it is important because it sets up my day (RN A).

The project team agreed that arriving nurses can be influenced by the tone and delivery of the inter-shift report and creating an inter-shift handover form based on objective facts would reduce subjective biases.

In the discovery phase of the Appreciative Inquiry process, the project team agreed that the following changes should be made to the current inter-shift handover form:

1. The form should focus on critical events in the patient's healthcare trajectory from the past 12 hours and the current 12 hours. This time frame will best support effective nurse care planning for the arriving shift.
2. The form should be standardized to provide succinct, systematic information using a physiological systems approach.
3. The form should be written, and additional verbal "add-ons" should be discouraged.
4. Only objective data should be included on the written handover form, because subjective information can actually harm or hinder the arriving nurses' professional approach to patient care delivery.

Dream

During the first project team meeting, the team also completed the dream phase of the Appreciative Inquiry process. In this phase, the project team was encouraged to think about the best-case scenario and to discuss what they felt would be the ideal in terms of inter-shift handover. The dream phase focused on what it would look like to receive a "perfect handover" every shift and what would need to be in place for that to happen consistently. The dream phase also addressed the core or critical elements needed to achieve a perfect handover. Three themes emerged from the dream phase:

1. Defining the purpose,

2. Systematic relevance, and
3. Developing Trust.

Defining the purpose. The project team agreed that a perfect handover happens when everybody understands the purpose of the inter-shift handover report. If the purpose of the report is not explicitly understood among all the nurses, nurses will continue to mis-use the form, including unnecessary and inappropriate information during inter-shift report. The project team shared that if they arrive in the morning and receive a "great handover", this influences their day in many ways, such as:

> It gives me a sense of control from the start (RN A).
>
> It helps me organize my day that way and the kind of follow up that's a big thing (RN C).
>
> It helps you set priorities or like start to think about how you're going to set priorities and which patient you need to go and see first (CNE).
>
> It also helps with like goal setting like as an aside from prioritizing and what you need to do but maybe you might actually want to take the patient a step further than they were yesterday and you can start deciding what that might look like based on what you're getting from that report…(RN B).

The project team agreed that the purpose of the inter-shift report, for them, is to ensure continuity of care for the patient. The information presented on the handover report should focus on what has happened and what needs to happen, with the kardex and the care plan providing specific information on the patient and his/her story.

> So if we're playing perfect world scenario and the kardex is updated then you have an accurate snapshot of their medical history and what their abilities are and

> what the plan is then the inter-shift report would give you a summary of what the day nurse has been tackling all day and what you need to proceed with (PCC).

The project team felt that the inter-shift handover report is currently not emphasized as a priority. For a succinct, standardized report to occur consistently, the critical purpose of this document needs to be reinforced. More education and reinforcement is necessary to define the purpose of the inter-shift report and how the reporting process is essential to continuity of care and patient safety. Emphasis on the purpose of the report and its link to continuity of care and patient safety will hopefully enhance nurses' effective use of the form.

> I think part of it is making it…having nursing see it as more of a priority and more of a responsibility of their shift to give an accurate and thorough report at the end because I think we tend to prioritize shift reports down further and further as things get busy then all of a sudden it's six pm and we are trying to quickly jot down reports for four patients or whatever…(RN B)

Systematic relevance. The project team agreed that the best handover is one that is presented systematically, based on physiologic systems and with only relevant information. This was based on the best-case scenario that the kardex is completely up to date, trustworthy and reliable.

> I think I would like it laid out in systems and have like neuro and do it like a check… everything's good… like CVS, GI, I don't know if that would be like an easier thing and just check if it's all good and if there are abnormalities just do a brief blurb…(CNE).

> The other piece that I think that would help to avoid is that kind of verbal panic that I might get in trouble because I might have forgotten to tell you something so instead I tell you everything to overcompensate (RN C).

Physiological Systems approach. The group felt that a physiologic or body systems approach would ensure the handover report is organized, succinct and would have a secondary effect of triggering nurses' critical thinking.

> That would be really great if we had system indicators, it sounds really terrible, but people…but it triggers you to think where does that information fit best cuz [sic] sometimes too I'll be trying to do a systems report, but some things fall into a number of categories so you're like where do I put this piece of information (RN B).

As is mentioned in the above quote, some of the discussion with the project team focused on how to actually do an effective physiological systems report. Although this content is taught in nursing school, many novice nurses struggle with identifying critical information to include in a physiological systems report. The project team felt that this approach to inter-shift handover report would be a benefit for novice nurses and for all the nursing staff.

> This was something that was lacking too in nursing…like we talked about systems but we never really… we weren't asked enough to break things down but that's a struggle even three years later… some people are really good at that and some people really struggle so this would help to outline it in your mind (RN C).

> From some nurses it would facilitate the thinking from some nurses assuming they actually took this and incorporated it into how they… I mean I know our

> flow sheets already have it in systems and that hasn't necessarily had the same type of influence but I mean if everything was systems based then maybe they would, just because of that consistency, be able to integrate it more into their thinking… (PCC).

One member of the project team noted that a physiological systems based handover not only assists the arriving nurse to get organized and start putting together the bigger picture of the patient in the most efficient way, but it also aids the nurse writing the report. The physiologic systems method would encourage the nurse to reflect on how all of the body systems work together and if there was anything missed during the shift.

> I feel like this report thing goes both ways in that it helps the nurse that's coming on to have this information, but it also short hand helps the nurse that is on to organize their thinking and to summarize the patient to think if there's anything they've missed or whatever… sometimes this stuff can be really good for like new grads even if they aren't necessarily utilizing it perfectly to just help them to start thinking in that way (RN B).

> And I think it can be overwhelming in medicine because we very rarely have a patient that only has issues in one system or issues have effects in several systems, so where do you place that information and not repeat it several times? (CNE).

Determining relevance. Throughout the project meeting in both the discover and dream phases, the idea of information relevance was continually mentioned. The team agreed that the core or critical elements of the inter-shift handover report are the data relevant to patient

physiological systems and nurse care planning. The discussion included how relevant information is determined, especially with varying levels of nursing experience on the unit.

> Abnormal vital signs that are being responded to or are concerning, same with abnormal blood work. I'd say too if there's been an abnormal vital sign that's been trending that way for some time, some note to that and what's been done or what the parameters the team may have set around dealing with that so you don't walk into a soft BP and start to react when if you look through the notes it's been something that's been going on for days and everyone's aware and there's nothing to be done at this point (RN A).

One project team member provided an example of what she would consider relevant or critical information for a typical medical patient. Other project team members added to her patient scenario to provide a more fulsome picture of relevant information.

> It would have the events, for example, if it was a patient who was in for a GI [gastrointestinal] bleed it would say if they have any active bleeding issues, it would say what their hemoglobin was, it would say if they went for a scope or whether they're going for a scope, whether they are back on clear fluids or still NPO [nothing by mouth] (RN B).

> If they have been prepped for the scope…would say if their LOC [level of consciousness] is fine or totally confused [sic]. So it would say, kinda a summary of the day that was relevant to the reason why the person was in the hospital and then what the plan is to deal with the reason they are in the hospital (PCC).

> It might have an additional piece that would say they are here for a GI bleed but they also have something else…like a huge wound or something else. Not directly related to their admission but still significant to the care you are going to provide for that day (CNE).

Overall, the team agreed that the critical information required for an effective handover was information that was related to the purpose of the report. In the team's dream world, the kardex would be consistently up to date and trusted. Therefore, the information needed on the handover form would be a summary of what the departing nurse had been tending to for the shift and what the arriving nurse needed to accomplish in the upcoming shift.

> So if we're playing perfect world scenario and the kardex is updated then you have an accurate snapshot of their medical history and what their abilities are and what the plan is, then the inter-shift report would give you a summary of what the day nurse has been tackling all day and what you need to proceed with (PCC).

From the discussion around critically relevant information based on a physiological systems approach, the project team began to dream about how to educate nurses to properly identify and convey this critical information during inter-shift handover. In this discussion, the previously mentioned ideas of trust and novice versus senior nurses were again brought forward.

> So there would need to be some element…I don't know of trusting that your colleagues are going to know what relevant information needs to be included and then a process to provide some feedback or education around what was relevant (Human factors engineer).

> I think something that needs to be teased out is that this is meant to be just as valuable for a senior nurse to a senior nurse and right now on our unit there's a lot of new staff so there's a lot of things being done to accommodate the needs of the new staff which hopefully won't always be the case… (PCC).

Developing trust. Various strategies to build trust among staff were discussed by the project team in the dream phase of the AI process. The team discussed strategies to develop trust in the inter-shift handover communication through feedback and role modeling. They also discussed developing trust by reiterating the importance of up-to-date kardexes and care plans. Finally, the team discussed the inter-shift handover form as serving as a teaching tool and improving the critical thinking of nurses in a more general sense.

Feedback. The project team agreed that some system of feedback and continuing education is necessary to ensure that only the relevant or critical pieces of information are included on the inter-shift handover report.

> I don't know what it would look like, but it would be very nice to have some form of feedback process so we could be like 'that inter-shift report you provided was awesome and my day totally started well' or 'essentially you failed to mention their hemoglobin was 52 and I needed to follow up with the stat blood work that was done at 0600'… it would be great to have a feedback process for a lot of things but in order for this to actually be successful and successful in a shorter period of time, that would be very valuable (PCC) .

Although there was agreement from the project team around the value and necessity of giving feedback to improve the inter-shift handover reports, there was discussion around how to best provide constructive feedback to staff. Some project team members thought that it should

be a formal system, while others thought that this should be an expectation between colleagues to provide this feedback.

> Like a very formal review process almost like an audit system in terms of like contacting certain people to give feedback on what was missing or not missing on the reports and what they…or even a check sheet that you could implement for a week or something and people could just document shift report was accurate or like provided unnecessary information or failed to provide necessary information such as…(RN B).

> And in a perfect world we would have communication between staff so you could just say it would have been really helpful for me this morning if I had known this in the inter-shift report, but we more and more tend not to provide that feedback (PCC).

The team agreed that constructive feedback is feedback that is presented in a positive way. Positive feedback should focus on improvement and be presented as an educational tool.

> I think it would be important to keep it in a positive and motivating light and be careful it's not going to cause more conflicts between staff. It's human nature to almost not take it as well, some people take it better than others so I don't know if there is a way to be subjective and evaluate a form without making it impact the team piece (human factors engineer).

After considerable discussion about a constructive feedback process, the team decided that input should be sought from staff, educators and management. There was consensus that feedback is a necessary part of all nurses' professional development.

> You should be able to take some degree of feedback. That's part of the profession, you should be able to take feedback and put into your practice and make your practice better (RN C).

Role modeling. The project team also felt that role modeling is an important method for improving effective communications during the inter-shift handover report.

> I think one of the major things that works on our ward is role modeling and people like setting those expectations and I know because we have the staff mix we do when the junior staff see senior staff doing something they tend to quickly pick up on those skills faster than when you introduce something that they don't necessarily see other people doing…(RN B).

> I think if you have some buy in from some key people who are sort of role models on the ward you'll start to see that actually start happening throughout the staff and with all of the staff members (RN A).

The project team agreed that role modeling is an aspect of professional accountability that should be reinforced as an expectation of professional nursing practice on their unit.

> If they see what the night nurse wrote down it might prompt them in their own practice to look for this stuff, like I didn't even think of this. It might set up an as expectation. It really helps my day when you walk into a room and you kind of know what you are going to get (RN C).

Trust in written communication. The team discussion also focused on other sources of information that need to be accurately updated to support content included on the inter-shift handover form. The team noted that disparities between information on the form and content in

other sources of patient information, particularly unit kardexes and care plans, cause confusion and frustration:

> See that's why I really think it's hard to tease it out as being what's just going on this [inter-shift handover report] if the rest of this [kardex and care plan] isn't updated. Like if we could say all kardexes and care plans are perfectly updated then you wouldn't need to have what tests are coming up, you wouldn't need to have NPO at midnight, you wouldn't need to have falls risk (PCC).
>
> If there are any appointments or tests that the patient has coming up or if they are going to be NPO should be in the kardex in a dream world but I don't trust it though really…(RN C).

The noted disparities are from a lack of updating to the complementary documents, kardexes and care plans, which results in a mis-match of the information contained in the handover report. This hinders the arriving nurse's ability to gain a comprehensive overview of the patient.

Teaching tool. The team also discussed how a physiologic systems-based inter-shift handover report should be used as a teaching tool by the education staff on the unit. The handover form, for instance, can be a teaching tool to assist novice nurses with identifying relevant physiologic systems information and its link to nursing care interventions:

> In [the educator's case] this might actually provide like a really tangible tool as we talked about for feedback, but also for her teaching tools. So you've written all these things down in systems so how do you think they connect with each other and taking it a step further (RN B).

> You can be like why do you think that should go here and not there? What was your thinking behind it? (CNE).

Not only could this be used to assist novice nurses' critical thinking, but even more senior nurses' who may struggle with this type of standardized reporting. In addition, this type of handover report may expose nurses who struggle with linking physiological findings with each other and the general overview of the patient's condition.

Through the discussion with the project team during the dream phase of the Appreciative Inquiry process a few key points were noted to ensure an efficient, effective and safe handover report.

1. The purpose of the inter-shift handover form needs to be reinforced regularly to all nursing staff. The purpose needs to be connected to patient continuity of care and safety for the staff to appreciate the true importance of the form.
2. To improve use of the form, regular informal and formal feedback needs to take place among staff with the assistance of educators and management. Staff should be encouraged to give each other feedback, but also more formal feedback process should be developed involving the leadership team. This will also serve to develop trust that the forms are complete and accurate.
3. To reinforce proper use of the handover form, especially with novice nurses, the form should be viewed as a teaching tool to guide identified critical systems issues and how these issues guide care planning and delivery.
4. Building trust underlies appropriate use and sustainable use of the tool. It is important for all nurses, particularly senior nurses, educators and managers to reinforce appropriate

inter-shift handover use through role modeling and positive feedback. As well as, proper completion of the accompanying documentation such as kardexes and care plans.

Design

The central focus of the design phase of the AI process was what the different system categories should consist of and what was the core or critical elements needed to consistently provide a 'perfect' handover.

The design phase of the AI process was started during the first project team meeting, was the focus of the second team meeting and was concluded in the third team meeting. The discussion in the dream phase centered on the best-case scenario and a 'perfect world' example of what inter-shift handover report would look like. From here the project team proceeded to the design phase of creating an ideal inter-shift handover form. In the first meeting, the team discussed physiological systems categories to include and critical information pertaining to each systems category. The structure or layout of content was also determined in this project team meeting.

The team passionately debated the content for the form, emphasizing the need to include all relevant information and maintain succinctness. The team encountered difficulties with structuring a handover form to capture all the possibilities of a medicine patient. The project team felt that if this was attempted the form would be cluttered and confusing and would lead to less important information being noted and also less critical thinking. This is discussed in more detail in the 'categories' section. The team felt that ongoing education and professional accountability (e.g., feedback, role modeling) could serve as means to focus and refine content included during handover (versus trying to include everything in one form).

Different examples were drawn on the meeting room's white board. Photos were taken of the different versions and can be found in Appendix I. The team modified and discussed the various components. The following subsections presented below highlight the process the project team went through in designing the form.

The following themes emerged during the first project team meeting discussion of the design phase of the Appreciative Inquiry process:

1. Categories,
2. Process, and
3. Content.

Categories. To begin designing the inter-shift handover form, the team began by considering the way the form should be structured. Throughout the first team meeting, the participants were consistent with the need to have the handover form organized by physiologic systems. This is where the team began coming up with the structure and categories that should be represented on the handover form. From the beginning the team agreed that because diagnosis, falls risk, aggression alert, restraints and infection control concerns are listed in the kardex these should not be included on the inter-shift handover report. Ensuring this information is captured in the kardex will be emphasized with education around the purpose of the inter-shift report.

Physiologic systems. The team agreed easily upon the following physiologic systems categories: neurologic, cardiovascular, respiratory, gastrointestinal, genitourinary and skin. These physiologic systems formed the bulk of the inter-shift handover form.

Pain. There was more discussion related to pain and psychosocial categories and how or if these should be represented on the inter-shift handover form. On the current handover form

utilized on the study unit, pain is addressed only by indicating when the last analgesia was administered. The team felt this was inadequate, as it did not address the pain concerns of the patient or what strategies might work for them.

> I think pain might be a stand-alone thing, we have a lot of patients that have generalized pain and that can take up a large part of your shift dealing with PRN pain just trying to make them comfortable (RN A).

> I think pain issues as a general statement is good to have but having last analgesia is not helpful, you can check the MAR (medication administration record) for that information. And that doesn't always capture the information you really need (CNE).

Psychosocial. The team agreed that it was important to have a category for psychosocial information that pertains to the patient or the family.

> I think psychosocial on the inter-shift report would capture any relevant family issues and also any kind of quirks of the patient you might need to consider, for example a very involved family (RN B).

Earlier in the team meeting discussion, the team emphasized the need to only include objective data and information. However, the team did agree that objective psychosocial data was important to the arriving nurse and is important to making a daily plan.

> The family is very involved and you need to set boundaries, I don't think that's a subjective thing, you can be polite and nice but you still need to set boundaries…(RN C).

> I think sometimes judgments have a place maybe we were too critical on judgments, but whether they are professional judgments made with objective observations or more criticisms based on our own personal issues because a lot of times it's more of a personal thing that's being triggered than necessarily a professional issue with someone which is just being human but doesn't need to be in reports (RN B).

Other team members believed that psychosocial information should be recorded in the kardex as there is a psychosocial section and then this information would not need to be written down in the shift report every shift. However, the team felt there were pieces that were important to cover in a psychosocial category and was critical to gaining a holistic overview of the patient.

> I think there is probably value in providing more detailed information about family involvement elsewhere, but I think the inter-shift report psychosocial piece would be like what have been the issues today and what can you anticipate for your shift. I don't think it needs to be a summary of all the crazy dynamics, but I think it would be like 'husband upset regarding blah blah blah, plans to meet the social worker tomorrow' or something like that (PCC).

Discharge planning. A final category that was up for debate with the project team was that of patient flow, or discharge planning. Some members of the team felt strongly that this should be included on the form, "something that refers to the patient flow…something that indicates they are not going to be in the hospital forever" (RN B). This sparked some discussion as many felt this is an overlooked component of patient care which deserves mention in an effort to have others proactively and regularly plan for discharge to home or other care facilities. Others felt that elements of patient discharge planning are already present on the kardex.

> I don't know that everyone would need a discharge goal written. I mean some are so far from discharge that even as a discharge planning team it's not discussed. And then with other patients it's very relevant, but again I think a lot of that could be captured in the kardex. If a patient is normally continent at baseline but they're incontinent for the moment, that matters for discharge but it doesn't need to necessarily be imminently handed over in the inter-shift report. It would be in the care plan or in the kardex where that information would be captured (PCC).

The majority of team members eventually agreed that discharge planning on the handover form should increase nurse awareness of this important aspect of continuity of safe patient care delivery.

> I do like…I really think that saying something about discharge specifics is important or just plan…you know there is no real forward thinking around getting them back to baseline to be discharged so if that could be a prompter that would be great. Even if its left blank it might prompt people to think 'oh yeah what is the discharge plan?' and people might dig through the chart a bit more to find out or it would be a perfect situation where leading by example might change it right? And every day there should be something new to write because every day there are advances or setbacks so it's really more us not knowing what is relevant than there not being anything to put down there (CNE).

Process. After the main categories were decided upon, the team wanted to discuss the process surrounding the form.

Normal versus abnormal. The first part of this discussion was around how to indicate normal versus abnormal physiologic systems functioning. The entire project team agreed that

each system should have a “check-off” if normal with a space for writing in any notes about abnormal systems function. There was some discussion about using terms such as “normal” and “abnormal” and a decision was made to refer to “normal” as “No Concerns.”

> I do think there’s value in having something to check off to say I did think about this and I don’t have any concerns rather than I may or may not have thought about it (RN A).

> Or if you had a check box if everything was fine you just check it off then at least you know, or the people coming in, and you don’t have that verbal handover, you know that they went through all of it, they haven’t just gone half way through and then um got into another event (RN C).

Information sources. Another concern was the multiple sources of patient information. The team agreed that the handover form had to stay true to its purpose without repeating information (and creating redundancy and additional work).

> I feel like there is so many different areas to write this information, the report sheet, the kardex, the tick sheets, the census, nurses notes, I feel we should have something on the report sheet specifically saying this is where you will find more information (RN A).

The team decided this information should not be re-charted, but should be acknowledged. The “check-off” system to alert nurses to other sources of information was agreed upon in lieu of re-charting. For instance, the handover form includes check-offs that the kardex was in fact updated and to indicate the need to read the nurses’ notes for more information on a specific

event. The team agreed that the nursing notes often contain relevant information that is overlooked or lost, adding to nurses' workload issues.

> I would almost want to have that as a separate piece rather than related to the systems. For example if I've been looking for a patient's wallet for 12 hours and I want to pass that along, I'd like to write missing wallet next to the see nurses' notes so the nurse can go and look in the chart for the information (PCC).

The team agreed that the inter-shift handover form should indicate other sources of detailed information (e.g., kardex, patient chart) to reduce the tendency to re-chart on specific systems or patient events (e.g., procedures, treatments). The team also wanted to include a follow-up section on the handover form. This section would be a priority "to do" list, acting as a guide of what has happened with the patient and what needs to happen, improving continuity.

> I think that if the system part of it was filled out properly it would capture the last 12 hours and your follow-up section would capture what you need to prioritize with the day (PCC).

Content. When the project team started to discuss the form design, they knew they wanted it to be physiological systems-based but exact content details needed to be determined. The team continually referred back to the purpose of the handover report: ensuring safe, continuity of patient care delivery.

Forcing functions. One consideration found in this theme was the idea of forcing functions, such as check boxes, or trigger words. The project team felt that by listing the separate systems this would act in itself as trigger words. They felt that more words or boxes on the report would cause confusion for nurses.

> This report is already much better organized, especially for those who have very structured minds, but if you don't have that type of mind and don't intuitively think that way this will guide you to think a certain way (RN B).

> I think even for the people that struggle with it though it's probably the most consistent concise way to facilitate their thinking even if it's not a natural thing it still walks them through it, might take them a little longer (PCC).

> I think for the systems just having the systems listed would be enough for me to think 'ok neuro what does that look like, what do I need to say about that' I think separate from that there should be sort of trigger areas the way there is on this [old, previous version] form, abnormal vitals or whatever else…I think like having actual sections for different systems and having things like follow up section like abnormal labs section, abnormal vitals or whatever else (RN A).

The unique input from the human factors engineer supported the nurses within the project team. She stated, "I think by having words it prompts people to think about certain things". In addition, she thought that utilizing forcing functions, such as checklists, would actually decrease the utility of the form as a teaching tool and source of critical thinking and professional accountability: "If you put more on there you start limiting what people will actually report".

Other group members agreed and added that there was such a wide variety of patient conditions on the unit that providing forcing functions for everything would be challenging.

> There's such a wide variety of issues that we would want to report on, yeah, it's hard to kind of have all of that covered on the form with forcing functions (CNE).

> If it wasn't a medicine floor like if it was a resp floor you could make a more focused report sheet, but here it's too difficult. People have very different things wrong (RN C).

In the end, the team agreed on listing the category followed by a blank space for the departing nurse to write relevant information regarding that category for the arriving nurse.

Relevant information. The team once again came back to the idea of only included relevant content on the inter-shift handover report. Each member of the team reinforced the idea of the content needing to be relevant to the arriving nurse and that this was somewhat subjective. Specific content relevancy was discussed, abnormal vital signs and lab values.

The team felt that having a separate section for abnormal vital signs, as is found on the current handover form, was not needed. This information is easily captured within the different categories and physiologic systems. However, a section that would connect lab results to the specific category would be valuable and relevant to the arriving nurse. The team organized the lab values section to correspond to each category on the handover report.

> The abnormal labs needs to be relevant to the patient and it may not be consistent throughout with all the staff members and I would rather have the information and not need it then not have it (RN B).

However, through educational and feedback processes relevancy would become more refined and understood by the staff.

The information included on the inter-shift handover report needs to be connected to the overall purpose of the inter-shift handover: patient safety and continuity of care, to be considered relevant.

The following key points emerged from the first project team discussion regarding the design phase of the AI process:

1. The project team agreed easily on a physiologic systems-based format that included all major body systems. Other categories including pain, psychosocial and discharge planning were also included.

2. Blank spaces were preferred to a check box system to encourage critical thinking and increase the relevant information handed over.

3. A check-off system was created to indicate that other sources of documentation (i.e. kardexes, nurses notes) should be referred to.

4. A check-off to indicate there were no concerns with a specific system was included so that the arriving nurse could see that the system was assessed, but with no current concerns.

5. Creation of a 'To Do / Follow up' section as a space to indicate critical tasks and assessments that need to occur in the next shift for continuity of care.

6. Only relevant information should be included on the inter-shift handover form. Relevancy is subjective but can be refined through both feedback and education processes and by connecting relevancy to the purpose of the handover form: patient safety and continuity of care.

Second project team meeting (March 27, 2013)

The second project team meeting was held on March 27, 2013 and was held in a private space on the nursing unit. The purpose of this meeting was to continue with the design phase of the AI process and for the team to validate the draft of the newly created inter-shift handover form prior to the planned pilot. One RN (A) was absent from this meeting due to a conflict with scheduling. All other team members were present. This meeting lasted approximately one hour and focused on gathering feedback on the form.

Design

The design phase of the AI process continued in the second project group meeting. The main purpose of this meeting was for the team to validate the proposed draft inter-shift handover form prior to the pilot implementation on the study unit. After the first team meeting, based on the discussion and the preliminary drawings on the white board found in Appendix I, the researcher developed a draft handover form. This form was circulated prior to the second team meeting. The team members came to the second meeting prepared to give feedback and discuss any proposed changes to the draft form.

Validation. The project team wanted to self-test the draft inter-shift handover form and come up with a version the entire team felt comfortable piloting on the unit. To do this one of the project team members described a patient scenario based on an actual patient on the trial unit.

There was a wide variation with how each team member utilized the form. Many wrote information in the 'concerns' section whether or not if was a pressing concern, "I put it in concerns just to draw attention to it" (CNE). Due to this trend one team member stated, "maybe the word concerns is tripping us up, maybe issues is a better word? Maybe no concerns and issues would be better?" (RN B). After some discussion, the team finally agreed with the suggestion of one of the project team members:

> I wonder if cuz [sic] I'm just looking at how there's two boxes here could we put instead of the categories of no concerns and concerns, could we put concerns and write in the box Y/N for a yes or no and in the area where they could write more we could call it comments or something like that? (CNE).

The process of writing a 'Y' or a 'N' would still indicate that the system was considered and not forgotten. Also the 'comments' section would capture any details that needed to be

passed along. This might not necessarily be a concern but rather something the arriving staff should be aware of.

> So if it was a 'N' in the concerns box then it would probably be blank unless it was like no concerns, but the foley came out yesterday. Then if it was yes there would likely be a comment as to what the concern was (PCC).

This leaves the 'Follow up/To do' section to write critical tasks or assessments, rather than it being used as a spot to write all of the comments that the departing nurse wanted to pass along.

Finally, the version created with EXCEL was choppy and did not flow properly. For example, the check boxes did not match evenly with the system and the 'Kardex updated' checkbox was in an awkward spot (Appendix J). One of the project members offered to create the form in Visio and redistribute to the project team prior to the trial. The Visio version was approved by the team and utilized during the pilot implementation (Appendix K).

Third project team meeting (May 31, 2013)

The third team meeting was held on May 31, 2013 and lasted approximately one and a half hours. This meeting focused on the design and the deliver phases of the AI process. The meeting was held in a private room on the nursing unit as two of the team members were on shift and able to attend the meeting if they were able to stay on the unit. Unfortunately two team members were unable to attend the meeting due to personal conflicts (RN A and PCC). However, an additional member of the leadership team, the nurse clinician, was present to offer the thoughts of the PCC and also her own observations and anecdotal feedback.

Design

The discussion in the third team meeting focused on the post-pilot survey results and anecdotal feedback from the project team members. The final design of the handover form would incorporate feedback from the rest of the staff of the study unit.

Post-pilot results. The new inter-shift handover form was piloted on the study unit for a period of two weeks. During this pilot, an online survey was available to all nursing staff, the questions can be found in Appendix L.

Unfortunately 16 completed surveys were received, out of a possible 103 nurses, for a response rate of 16%. The survey was made up mostly of rating scale questions. Answers for these questions ranged from 1 (not at all) to 5 (absolutely). There was also a yes or no question, an open comment question asking for feedback, as well as, the ability to free hand any other comments at the end of the survey.

The first two questions were concerned with how often the handover form was completed and how useful the information included on the handover form is to organizing patient care. Nine respondents (56.25%) felt that the handover form was almost always or always completed and 14 respondents (87.5%) felt that the information was useful or very useful to planning and organizing patient care. One of the project team members commented on her use of the new form and it's assistance with organizing her day:

> …and for me it's definitely helped me to organize my thoughts a lot more and that has always been a challenge for me, but I'm also noticing especially with people who in the past may have given a weak report it's now more thorough and organized (RN B).

The third question survey asked if the information on the handover form was redundant or easily found in other documentation. 12 respondents (75%) said no the content was not redundant; however 4 (25%) responded yes and this was echoed in the comments section on the survey:

> If used properly, this form is an improvement from the previous one. However, if the writer doesn't stick to 'problem-focused' documentation, there is waaaay [sic] too much to read through it defeats the purpose completely and it becomes extremely redundant (Survey Respondent).

The project team stated this was something that was a common complaint at the beginning of the pilot. The project team provided some education around the intended use of the form during morning report thereby decreasing the feelings of redundancy.

> …some people thought they needed to chart their whole head to toe on here and that led to some confusion. It is just getting used to it at the beginning it was just confusing because it looked like a double charting method. But using it as a handover tool is different…(CNE).

Question four asked if the handover form had helped to identify any good catches or near misses. The response was split, with 8 respondents (50%) answering right in the middle with 'somewhat'. Only two respondents (12.5%) responded with a 'yes, absolutely'.

Question five and six asked the survey respondents if the new handover form promoted team communication and improved the quality of patient care. Twelve respondents (75%) agreed strongly with the new handover form promoting team communication and thirteen respondents (81.25%) were in agreement that the handover form improved quality of patient care.

The final scale question asked if the respondent were a patient would you want the handover form completed for you on every shift? 87.5% (14 respondents) agreed strongly that they would like this handover form completed for them every shift.

The most common feedback provided at the end of the survey was that there was not enough space to write in the comments section. This was clarified by the project team as a misunderstanding of the type and amount of information required on the form.

> I think there was some confusion in the beginning just around how much to write in the comments and that sort of thing…the kinda bottom part for 'see chart for' we just had to remind them that if you charted it already then you don't necessarily need to write your entire charting out on the handover form, you can just indicate to see the nurses' notes…(CNE).

Although the survey response rate was low, the project team received informal feedback from the unit staff throughout the pilot period, "I felt that even though it was a small response what I was hearing from people on the floor more just like talking about it correlated with what was shown in the actual data" (RN C). In many cases, feedback was given verbally to the project team members and in many instances, the project team solicited verbal, in the moment, feedback from the staff.

> We actually handled it in the morning and actually approached some of the nurses if they have any feedback because they might not have been able to answer the survey. Overall they liked the details and it prompts them to think critically because it's right there it's a very appropriate for a specially acute patients they said there's just very good boxes to fill in those information (Nurse Clinician).

There were two other suggestions and comments around the new inter-shift handover form. One suggestion was to include the room number on the form, with the name, date and shift. The project team did not agree with this. One member described the reasons succinctly, "I don't think so, we shouldn't be using the room number as an identifier for patients anyway and we move patients so frequently" (CNE).

The final comment was around the use of the 'Kardex updated' check box. The project team members thought that this check box was one of the most important additions to this new form and this was reiterated in the survey results.

> I think it's a big improvement as it helps organize your report for the next Nurse [sic]. Also I really like that there is a check mark for Kardex Updated, as it is a very good reminder for RNs to update the kardex (which is so often forgotten & in my opinion really effects patient care). Thank you! (Survey Respondent).

The key point that came from this final discussion in the design phase of the AI process was the need to reinforce both education and the creation of an informal and formal feedback process to increase the likelihood of the form being filled in correctly and with relevant information. The feedback from the survey questions and verbally given to the team members reflected the need for education around the purpose of the handover form. In addition, clarification regarding what information goes on the handover form versus the kardex or patient care plan would further promote the effective use of the tool.

Delivery

The final phase of the Appreciative Inquiry process is delivery of the final product and discussion of strategies on how to manage the change process. This phase of the process began

during the third project team meeting. It was then handed over to the project team on the unit to continue implementing and supporting the use of the new handover form.

The following critical elements were decided upon during the team discussion around how to deliver the final product and support its successful implementation; these critical elements will be discussed in detail:

1. Support,
2. Ongoing education,
3. Informal feedback processes, and,
4. Formal feedback processes.

Support. The project team agreed to continue using the new handover form as it had gained some traction during the pilot phase. Rather than revert to the previous handover form and plan an official roll out of the new form, the team felt that with some specific strategies they could continue to support the change to the new form. This would create less confusion and disruption to the unit staff.

Leadership. As with any change project, the team experienced some negativity and reluctance to change to the new product. All of the project team members, the entire unit leadership team and management are needed to support the change to the new form. Visible leadership can reinforce the positive aspects and positive changes the form makes to patient safety. The project team members did find that because they were intricately involved with the development of the form that there was more general buy in from the unit staff. A commitment was made by the team members to support the new form and reinforce the purpose behind the form: to enhance patient safety through continuity of care.

Ongoing education. The project team committed to providing education to both new staff and current staff on the unit.

All new staff members are required to attend a unit-based orientation that would now include a section on the new inter-shift handover form. During the unit-based orientation, the handover form is introduced along with the intended purpose and how the form is used. The expectations are also discussed and described to the new staff members.

The following exercise was created for the new staff to gain practice in filling out the handover form. A clinical patient scenario, created by the unit educator, is given to the new staff and they are asked to fill out the inter-shift handover form for the next nurse. After the form is filled out, the new staff members compare how they each filled out the form and discuss the reasons behind their decisions. The exercise concludes with the new staff members partnering up and giving each other feedback about what they found to be helpful information in the handover.

For the current staff members, the project team decided that three to four times per year, they would discuss the handover form in unit's twice weekly 'quick and dirty' in-services. During these in-services the purpose of the handover form would be emphasized and how they contribute to the continuity and safety of patient care. In addition, the educator would conduct an abbreviated exercise, similar to the one given in the unit-based orientation. Instead the clinical scenario would be given to the attendees, as well as two different handover forms, one that is a 'perfect handover' and one that is less than perfect. From here discussion can be generated about what works or does not work and why.

In addition, ongoing communication would be delivered in morning report for the first month by the leadership team and manager around how to fill out the form. These reminders

would emphasize the purpose of the handover and that it is not a re-charting of the entire head to toe assessment. Staff members expressed this concern in the pilot survey, "education around ensuring that people are only using 'problem-focused' documentation is important to ensure that there isn't over documentation or double charting" (personal communication, survey results, 2013). After the first month, the project team agreed that it would be good to re-visit these reminders several times a year. The leadership team and manager would aid in reinforcing the purpose and the expectations of the inter-shift handover form.

Informal feedback processes. The project team also discussed how to implement and encourage both a formal and informal feedback process for the ongoing sustainment of the new handover form. Informal feedback processes rely on staff members taking ownership of teaching and guiding others on how to appropriately use the form. Role modeling and peer feedback were identified as key strategies for use on the study unit.

Role modeling. The project team discussed how role modeling acted as a large influence on the study unit. Having the project team members, as well as senior staff members complete the handover form in an ideal way will illustrate how it is used to more junior staff or staff who may be struggling. The leadership team discussed how they could recognize the staff struggling with the handover form. Then assign them to patients being cared for by staff who are role models with the handover form, exposing those who are struggling to examples of effective and efficient handovers, "…and I think the more that they do this and they get senior nurses doing reports before them they are going to model that" (RN B).

Peer feedback. Peer nurse-to-nurse feedback regarding what was helpful on the handover form, or what was missing on the handover was discussed. The project team felt that

this expectation needed to come from the leadership team and also from staff themselves who felt comfortable giving the feedback.

> It would be really great if we could highlight the CRNBC's renewal requirements for peer feedback and encourage staff to talk to each other about what works or doesn't work. It doesn't have to be…to be a criticism, but more like um this 'note about the potassium level was really helpful' or 'it would have been really helpful if you'd mentioned that you did a stat potassium level and that I should keep an eye out for it'. I think that has to come from us…not as a told to…but I don't know it should just start happening and then it will be like this is what we do here (CNE).

Formal feedback processes. The implementation of a formal feedback process was a major theme that emerged in each project team meeting.

Auditing. This formal process would rest with the leadership team and involve an audit process. The project team discussed how they conduct safety audits on randomly chosen weeks throughout the year and felt this might be a successful approach to the audit process of the handover forms. The idea was to select several patients on the unit and audit the handover forms. As the Patient Care Coordinators and Educators were familiar with many of the individual patient's clinical scenario they would be able to assess the appropriateness of the handover form. After this audit process, personal feedback from the leadership team would be given in private to individual nurses. In addition, the team thought they would post in a prominent staff location on the unit, examples of "ideal handovers".

Teaching tool. Combining a formal feedback process with supporting critical thinking was another strategy that the team agreed upon and would be owned by the education team on

the study unit. The idea was for the unit educator to utilize the handover form to work with new graduate nurses or those who need assistance with developing their critical thinking. The educator will schedule a time to meet with individual staff members and work through the systems based handover form. Questioning the individual staff member regarding why they chose to include information under different systems, for example "a new graduate might put bowel movements under the GI system of a liver failure patient, where I would put that under neuro…" (CNE). Through this process, the education team can support critical and systems thinking. In addition, they can assist new and novice nurses in putting together the big picture and how the different systems relate to each other, connect to lab values and contribute to what is seen in the vital signs.

The following are the key findings resulting from the project team discussion in the delivery phase of the AI process:

1. For a successful change project, the leadership team, management and staff members of the project team need to positively reinforce the reasons for the change and highlight the patient safety components of the new form.

2. The project team agreed that it was important to continue using the form after the planned pilot period. As the form had gained some traction with the staff, continuing using the form causes less disruption during the change process.

3. Orientation to the form for new staff members and ongoing education to current staff members is important to support the ongoing appropriate use of the form. Focusing on scenario based learning and highlighting the purpose of the form were the keys to the continuing education.

4. Informal and formal feedback processes are necessary to support the 'ideal handover' and give specific, focused education for how to achieve the 'ideal handover'.

Through the AI process several themes were discovered and developed over the course of the project and the series of project team meetings. The major themes and sub-themes are summarized below in Table 4.1. These themes will be discussed in detail in the next chapter in relation to the current literature on handover, communication and leadership.

Table 4.1 Summary of meetings and themes

	AI Process	**Theme**	**Sub-Theme**
First Project Meeting	Discover	Overview	Trust
			Duplication of information
			Continuity of Care
		Efficiency	Timing
			Information overload
			Experience
			Process difficulties
		Objectivity	Professional communication
	Dream	Defining the Purpose	
		Systematic relevance	Physiological systems
			Determining relevance
		Developing Trust	Feedback
			Role modeling
			Trust in written communication
			Teaching tool
	Design	Categories	Physiologic systems
			Pain
			Psycho-Social
			Discharge planning
		Process	Normal versus abnormal
			Information sources
		Content	Forcing functions
			Relevant information
Second Project Meeting	Design	Validation	
Third Project Meeting	Design	Post pilot survey results	
	Deliver	Support	Leadership
		Ongoing education	Novice and experienced education
		Informal feedback processes	Role modeling
			Peer feedback
		Formal feedback processes	Auditing
			Teaching tool

Discussion and Conclusions

In this section, I will begin with my impressions of how the AI process worked for this project. The next sections will discuss the importance of the key themes and their sub-themes in relation to the literature. These themes and sub-themes will be organized under the AI phases that took place during specific team meetings. Finally, the limitations of the project and conclusions will be outlined and discussed.

Appreciative inquiry process impressions

The AI process was chosen for this project because of its major principles of highlighting the positives and appreciating the current processes on the unit. In addition, AI works well with participatory action research. Other research has shown that project success is enhanced through participatory approaches (Trajkovski, et. al., 2013). There are four distinct phases to AI: discover, dream, design and deliver. Each phase is associated with distinctive questions that the team answers through anecdotal storytelling and discussion (Trajkovski, et. al., 2013; Sullivan Havens, Wood, & Leeman, 2006; Knibbs, et al., 2012; Richer, Ritchie, & Marchionni, 2010). The mix of different roles within the project team brought a wealth of different information and knowledge to the project. The project team instantly opened up and began discussing the current handover form and what they hoped for in the future. Through these discussions, the breadth and depth of knowledge, experiences and ideas around this topic was apparent.

In this section, impressions of how the appreciative inquiry process worked will be discussed and will be organized according to the four phases of AI.

Discovery

The discover phase took place during the team's first meeting. One of the difficulties with the AI process is keeping the project focused on appreciating the positive, rather than seeking to solve a problem (Trajkovski, et. al., 2013). Problem solving can change the focus to a negative one and the AI process seeks to avoid this (Trajkovski, et. al., 2013; Sullivan Havens, Wood, & Leeman, 2006; Knibbs, et al., 2012; Richer, Ritchie, & Marchionni, 2010). This was a challenge during the discover phase of the AI process, as the team naturally attempted to point out the problems that needed solving rather than appreciating what was currently working (Trajkovski, et. al., 2013; Sullivan Havens, Wood, & Leeman, 2006).

As the discussion developed the team members questioned and challenged each other, which is a key feature of the AI process (Trajkovski, et. al., 2013). The sharing of stories led to more stories and the team began questioning each other about their experiences and ideas (Richer, Ritchie, & Marchionni, 2009). This process functioned to push the team further in expressing their ideas. In doing so, they enriched the meaning of their ideas and opinions with rich and vivid examples of their experiences that were grounded in every day life on the unit.

The addition of the researcher and the representative from the Patient Safety and Quality group added a dynamic component to the project team. These two members were seen as 'outsiders' to the study unit. As the rest of the project team members were colleagues and friends, there was a shared understanding of the everyday realities of inter-shift handover. The external members brought different ideas to the project team and injected a point of view that the unit staff may not have previously considered (Patterson & Wears, 2010). By asking questions that challenged and pushed those shared understandings, underlying issues and concepts were revealed (Trajkovski, et. al., 2013; Knibbs, et al., 2012).

Dream

The dream phase of the AI process occurred in the same meeting as the discover phase, which is common with AI research (Trajkovski, et. al., 2013). The team naturally transitioned from discussing what the current process was into what they considered the ideal process. Based on the stories delivered in the discover phase, the team was energized by the perfect world scenario and a new set of ideas emerged that built off of those presented in the previous phase (Trajkovski, et. al., 2013). One of the main challenges in this phase of the discussion was following the ideas of the team. As the team discussed their visions for the future, the ideas were diverse and disjointed. Rather than interrupt the flow of the discussion, the ideas were untangled during the thematic analysis of the first project team meeting.

During the dream phase of the AI process, the team utilized visual media to document their ideas for their dream handover form (Trajkovski, et. al., 2013; Shendell-Falik, et. al., 2007). Once this common vision was determined the team discussion led into innovative ideas of how to achieve and sustain this vision within the context of their particular nursing unit.

Design

The design phase of the project involved the co-construction of the new inter-shift handover form. This process was collaborative, utilizing the local experts on the project team (Trajkovski, et. al., 2013). Building off the discussion from the previous two phases, the team members came to consensus regarding the deliverable product they wanted to pilot on the study unit (Trajkovski, et. al., 2013; Richer, Ritchie, & Marchionni, 2010).

I anticipated the creation of a checklist for handoffs, but the team preferred a form that had spaces for pertinent, written narrative information (Trajkovski, et. al., 2013).

A pilot implementation of the new form was completed on the study unit to invite the frontline daily users of the new handover form to offer their thoughts, insights and feedback. Pilot feedback informed the final form design. It was important for the frontline users to pilot the form, because their involvement increased their sense of appreciation for the project and their input helped decrease resistance to the form. Other research has shown how end user engagement in projects can build trust and acceptance of change (MacPhee, Wardrop & Campbell, 2010).

Delivery

The delivery phase is the final phase of the AI process and was utilized to discuss strategies for sustaining the appropriate use of the new form in every patient handover and to sustain the improvements made in the handover process. During this phase, the team committed to persist autonomously with actions to support the continued use of the inter-shift handover form on the unit, a primary goal of the delivery phase (Richer, Ritchie, & Marchionni, 2010). To do this, the project team discussed plans to educate the staff about the new form and ensure ongoing evaluation of the new form.

At the conclusion of the third and final project team meeting, the team committed to the sustainability of the project. The education team developed concrete strategies to support the new handover form in both unit-based orientation and ongoing in-services with current staff, both strategies were discussed in detail in the previous chapter. There is risk in the researcher leaving the setting prior to the change being embedded in the unit culture, as other researchers have noted that the efforts to sustain the change tend to fall apart (Trajkovski, et. al., 2013). However, the hope was that the team members' enthusiasm and belief in the project would create the momentum needed to sustain the change.

Key findings

Discovery. The major themes from this AI phase were overview, efficiency and objectivity.

Overview. 'Overview' refers to the importance of getting "an overall picture" or holistic understanding of important needs and considerations for each patient. By gaining an overview of the patient's situation, history and health care goals, the nurse is better equiped to understand the specific needs of the patient.

There were three sub-themes identified within this theme: continuity of care, trust, and duplication of information. My analysis suggested that these three sub-themes are interrelated and work together to effect the nurses' ability to gain an effective overview.

One sub-theme, continuity of care, refers to the ability of the arriving nurse to seemlessly take over where the departing nurse left off. Continuity of care is critical to ensure patient safety within the hospital setting (Kerr, et. al., 2011; Johnson, et. al., 2012). In order to gain a larger overview of the patient situation, the departing nurse synthesizes the patient's needs, critical interventions, assessments and goals to be passed along at each shift change to ensure continuity of care.

Another sub-theme, trust, refers to the nursing staff belief that the documents needed to gain a patient overview and provide continuity of care are updated and accurate. This sub-theme is intricately linked to the third sub-theme of duplication of information, which refers to the necessity to repeat information in several documents to ensure continuity and therefore an accurate overview. The team indicated that there was a lack of trust in these supporting documents due to inaccuracy and omission of information. This contributed to duplication of information or double charting (Cheevakasemsook, et. al., 2006). In order to ensure that the

arriving nurse had all of the necessary information to care for a patient, the data that should be contained in the patient kardex or care plan was also recorded in the inter-shift handover report.

The importance of accurate and concise documentation is well noted, as are the detrimental effects of poor team cohesiveness and lack of trust. Inaccurate, inconsistent and out-dated information was noted by several authors as a barrier to effective patient handover and contributed to significant patient safety risks (Cohen & Hilligoss, 2010; Patterson & Wears, 2010; Kerr, et. al., 2011; Staggers & Blaz, 2012). In addition, professional nursing regulatory bodies emphasize the need for accurate and complete documentation as a core competency of the professional nurse (College of Registered Nurses of British Columbia, 2011). Several authors have also discussed the importance of nursing documentation that describes the decision making process and actions carried out as being key for safe patient care and meeting legal requirements (Grazie de Marinis, et. al., 2010; Jefferies, Johnson & Griffiths, 2010).

Receiving complete, up to date records and being able to trust colleagues to provide this is key to a successful team environment, to patient safety and continuity of care (Jukkala, et. al., 2012; Kalisch, Weaver & Salas, 2009). The development of mutual trust among nursing team members decreases the communication issues seen in the inter-shift handover process (Kalisch, Weaver & Salas, 2009). Once trust and reliability within the team is established, individual team members gain confidence in the information found in the accompanying patient records, such as the kardex or patient care plans (Kalisch, Weaver & Salas, 2009; Jefferies, Johnson & Griffiths, 2010; Miller, Riley & Davis, 2009; Marshall, West & Aitken, 2013).

The team members agreed that by maintaining complete and up to date records, there would be greater trust among the team, increased team functioning, an increase in time available

for documenting as “double charting” would no longer be necessary and an improvement in contuity of care for each patient.

Efficiency. Efficiency refers to the ability to effectively gather the information necessary to begin a shift prepared with a patient overview and needed interventions.

There were four sub-themes related to Efficiency: timing, information overload, experience and process. Once again these sub-themes were interconnected and all effected the ability to provide an efficient handover. These sub-themes are jointly discussed in this section.

The current process for inter-shift handover on the study unit is for the arriving nurse to receive a written handover report and to also consult the patient kardex and care plan for specific tasks that need to be accomplished in that shift, such as intravenous catheter changes, radiology exams or dressing changes.

The sub-theme of timing refers to what often occurs on the unit instead, which was described by the project team as a frantic, disorganized and non-structured verbal “ambush”. This often occurred at inopportune times, such as when the arriving nurse was still in the process of putting away her belongings and preparing to start the shift. The team felt that this behaviour was common with novice nurses on the unit and was a sign of being insecure about providing a complete and sufficient handover. Therefore the novice nurse felt compelled to tell the arriving nurse everything that occurred over the course of the shift, without considering organization or relevance. As a consequence, the impromptu verbal “report” occurred before the arriving nurse was ready to receive the information.

In addition, either too much information and/or irrelevant information was provided creating information overload for the arriving nurse. Many articles within the current body of handover literature point to too much information, irrelevant information and misuse of time as

common barriers to an effective and safe handover (Riesenberg, et. al., 2010; Kerr, et. al., 2011; Johnson et. al. 2012). Members of the project team also stated that this approach led to a disorganized and "frenzied" start to the day.

The team repeatedly stated that novice nurses were the most chronic offenders of the accepted handover process. There is evidence that a lack of training, education and orientation in the practice of efficient handover contributes to the phenomenon of the locker room verbal report (Cheevakasemsook, et. al., 2006; Riesenberg, et. al., 2010; Cornell, et. al., 2013). Riesenberg, et. al. (2010) point to education on how to give succinct, efficient and structured handover, as well as, what is considered relevent information should be included in orientation and training.

A structured process for inter-shift handover was missing for the study unit. Although the accepted practice is to read the written handover report as well as the supplementary information included in the kardex and care plan, there were variations on this process that included a verbal component. For example, one team member stated that she preffered written handover, but "if the patient is very acute or complicated, a verbal component is okay, as long as it's organized and contributes important information" (RN A). When new or novice nurses observe some arriving nurses receiving a verbal report this leads to process confusion and increases the fear that the written handover is somehow insufficient. Having processes with specific guidelines and accompanying tools to ensure that essential information is included consistently, along with training and education would create confidence in the handover process (Riesenberg, et. al., 2010). As experienced by this team, variation in handover processes creates confusion and can lead to errors or omissions, which can be avoided by developing a consistent approach to handover (Friesen, et. al., 2008).

Creating clarity around the process and providing guidelines, training and education to ensure consistency of handover to novice and new staff nurses would increase the efficiency of the handover report. This would allow new staff to feel confident in the process, eliminate the impromptu locker handover and reduce information overload.

Objectivity. Objectivity refers to the use of evidence during handover versus staff statements or documentation that are subjective judgements, opinions or biased references to the patient and/or family members. It was identified by the project team that it was important to remain professional in team and handover communications. This same finding was evident in other studies regarding patient handover and nursing documentation. Nursing documentation should reflect factual, objective data about the patient (Jefferies, et. al., 2010; Staggers & Jennings, 2009).

The themes and sub-themes noted in the discovery phase of the AI process, point to structures and processes that would allow for a smooth, organized and efficient start to the arriving nurse's shift. Establishing trustworthy documentation comprised of objective data and presented in an efficient way would permit the arriving nurse to gain a thorough overview of the patient and the ability to organize and prioritize care to ensure continuity.

Dream. The dream phase revealed the following themes: defining the purpose, systematic relevance and developing trust. As well several sub-themes were identified through the thematic analysis.

Defining the purpose. This phrase refers to explicitly stating the purpose of the inter-shift handover report so that all staff have a shared understanding. For this team, the purpose of the inter-shift handover form was to ensure continuity of care by focusing on the critical events of the past twelve hours and those upcoming in the next twelve hours.

Establishing a clear purpose for the inter-shift handover form was not clearly stated in the handover literature as discussed in a previous chapter. However, authors' point to the lack of agreed upon definition of handover or what activities are included in handover, which has a similar effect (Cohen & Hilligoss, 2010; Patterson & Wears, 2010). Teams and individuals work more efficiently with a common and mutually understood purpose (Kalisch, et. al., 2009; Miller, et. al., 2009). With the purpose of the inter-shift report clearly identified, the team would see value in a succinct and complete handover for themselves and would place more of a priority on the report. The idea that nursing documentation, including handover report, is not made a priority within a nursing shift is well supported; and in fact, documentation is devalued with direct patient care taking priority (Grazia de Marinis, et. al., 2010; Cheevakasemsook, et. al., 2006).

In addition, if the purpose is clearly defined the relevant content will be easier to determine, increasing the efficiency of the report and eliminating the information overload and need for duplication of documentation in several places. The patient safety and quality literature points to the need for critical information to be mutually understood and communicated within any team (Miller, et. al., 2009); this can only be accomplished once a clearly defined purpose for handover is developed.

Systematic relevance. This phrase refers to the need for the content of the inter-shift handover form be relevant and presented systematically. The sub-themes identified during the thematic analysis of this section include: physiological systems and determining relevancy.

The project team easily agreed on two aspects of their ideal handover report, that it be presented in a physiological systems format and only include relevant information. The team felt that the physiologic systems approach would aid in standardizing the report and reinforce a

common understanding of what information was necessary on the form. There is much support within the patient safety and quality literature for standardization of high-risk nursing processes, including handover (Riesenberg, et. al., 2010; Kerr, et. al, 2011; Johnson, et. al., 2012). Although one of the findings from Cohen & Hilligoss (2010) indicates a widespread lack of concensus regarding what standardization of handover actually means, the majority of studies support standardization and support handover being presented in a logical, sequential and succinct manner (Jefferies, et. al., 2010; Jukkala, et. al., 2012; Johnson, et. al., 2012; Thomas & Donahue-Porter, 2012).

The team also spoke of only including relevant information on the handover form and attempted to determine relevancy. The concept of relevancy is mentioned within several of the studies found in the handover literature as a facilitator to effective nursing handover (Kerr, et. al., 2011; Welsh, et. al., 2010; Kalisch, et. al., 2009). Defining what is considered relevant or critical information is missing from the current body of literature. Through the discussion with the project team, the information that they deemed relevant was contextually defined. Relevance was related to the purpose of the inter-shift report, namely focusing on critical events that occurred within the previous twelve hours and critical events or interventions anticipated in the next twelve hours. For the team, relevancy also encompassed the idea that in an ideal world the purpose of and the specific information needed to be captured in supporting documentation, such as the kardex and patient care plan is well defined, well known and consistently updated. The team also pointed out that determining relevancy was subjective leading to variation between nurses; however, through education, role modeling and feedback, a common understanding of relevancy could be established. These concepts will be explored more thoroughly in the next section.

Developing Trust. The final theme that emerged from the dream phase of the AI process was that of developing trust. The team members discussed the concept of developing trust in several ways, all of which focused on encouraging accurate and complete documentation on the kardexes and inter-shift handover report. This discussion included sub-themes such as delivering feedback, role modeling, establishing trust in written communication and use as a teaching tool.

The team felt that the implementation of informal and formal feedback methods would increase the likelihood of the ongoing and appropriate use of the handover form. The feedback process would also highlight the information that nurses' found critical to include in the handover form and further refine what information was considered relevant.

Role modeling was brought forward as an example of how to educate and orientate nurses to the appropriate use of the new handover form. This strategy had previously worked well on the study unit for other process changes. There is support in the literature that nurses could benefit from education in the process of handover as many nurses feel inadequately prepared in the process or in the knowledge of how or what to hand over (Cheevakasemsook, et. al., 2006). In addition, studies identifying the facilitators to effective handover, supported training and orientation on the process for quality improvement (Riesenberg, et. al., 2010; Staggers & Blaz, 2012).

The team discussed developing trust in the context of ensuring other complementary sources of nursing documentation were updated also, such as the kardex and care plan. This was a reoccuring theme that was discussed in all of the phases of the AI process. This indicated that for the handover form to be effective, there needs to be an emphasis on the proper completion of the accompanying documentation. Lamond (2000) discussed how the handover report contained different information than was included in other sources of patient documentation, as the purpose

for each document was unique. Linking back to identifying a clear purpose for handover, a clear purpose should be indicated for other sources of documentation to distinguish them from each other and illustrate their differing contributions to the overall patient story.

Finally, the team discussed how the unit educators and leadership team could utilize the handover form as a means to develop critical thinking, decision making and physiologic systems integration with novice or struggling nurses. Several studies within the handover literature point to the employment of the handover to serve secondary functions, such as teaching and learning (Staggers & Blaz, 2012; Staggers & Jennings, 2009; Cohen & Hilligoss, 2010). In fact, a study by Staggers & Jennings (2009) indicated that a portion of the information included in the patient handover was related to critical thinking and integration of information to make clinical decisions.

The themes and sub-themes identified within the dream phase of the AI process point to the need to identify a clear purpose for not only the handover report, but for the accompanying patient documentation to emphasize common goals for the team. In addition, a physiologic systems format was brought forward to ensure a logical, organized and succinct handover. Through accountability methods such as feedback, role modeling and teaching, documentation would be seen as a priority and intricately linked to patient safety.

Design. The central focus of this phase of the AI process was discovering what the different physiologic systems categories should be and what the core or critical elements are that need to be captured consistently in handover report. The central themes that emerged from this discussion included specific categories, process and content for the newly designed form.

Categories. Building on themes identified in the previous two phases the team discussed specific categories required on the handover form to allow for an organized, logical flow and to

capture the required relevant information. Several sub-categories were discussed including: physiologic systems, pain, psycho-social and discharge planning.

A physiological systems organization seeks to standardize the delivery of handover report and ensure a logical flow. Evidence from several studies indicate that patient identification, such as name, date of admission and admitting diagnosis are presented consistently at the beginning of handover (Johnson, et. al., 2012; Riesenberg, et. al., 2010; Staggers & Jennings, 2009). Following this information there is wide variation in handover organization and in many instances there is no logical organization with nurses jumping from topic to topic (Johnson, et. al., 2012).

The team also wanted to avoid having information on the handover form that should be contained within the supporting documentation such as the kardex or care plan. They felt this would encourage the completion of these other patient information sources as there would no longer be a space to write this on the handover form. The current form in use on the unit has duplicate information leading to confusion about where the different information should be documented. The documentation of pain is an example of this. On the current handover form, pain is a stand alone category that involves a space to document the last analgesic administered. The team felt this was unneccessary and encouraged double charting as this information is easily found in the medication administration record. Instead, the team felt that having pain as a stand alone category should still be supported, but should contain specific information about the type of pain that patient is experiencing or any specific strategies that have been effective to control the pain. A study by Jefferies, et. al., (2010) supports this finding and indicates that quality nursing documentation should be patient focused, documenting what works for the patient or what the patient prefers as treatment, specifically mentioning pain control (pg. 119). One

strategy promoting quality nursing documentation is to avoid double charting and repeating information that is found in other documentation records (Jefferies, et. al., 2010).

The final two categories enticed more discussion: psycho-social and discharge goals. Team members felt that reporting psycho-social data in an objective manner was important for the arriving nurse; however, judgements and opinions should be avoided. Frequently, psycho-social status and judgements are reported verbally from departing to arriving nurse and can negatively impact the arriving nurse's opinion of the patient and family (Lamond, 2000). The team felt it would be necessary to include this information in an objective manner but acknowledged this was an area that would require education and training to be able to complete in a professional manner. This is supported by Jefferies, et. al. (2010), as they found that nurses did not document psycho-social concerns because they were unsure of how to document these concerns objectively (pg. 114). Nurses were unable to find the appropriate language to describe these concerns and as a result, these components of the patient handover were inconsistent and inaccurate (Jefferies, et. al., 2010).

Discharge planning and goal-setting was another area of discussion. Studies have found that the omission of patient goals of care is common not only in patient handover, but largely missing from patient documentation and overall care planning (Johnson, et. al., 2012; Cornell, et. al., 2013). Including this as a category on the inter-shift handover report may serve to increase awareness of the importance of this component of nursing care and encourage nurses to consider this within their plan for each patient.

Process. Process was identified as an issue within the discover phase of the AI process. Currently there was a mix of written and verbal report on the unit even though the accepted practice was to only receive a written report. The group agreed that the process needed to be

consistent to reduce errors and structured in a manner that departing nurses felt confident that all necessary information was handed over (Friesen, et. al., 2008). Staggers and Blaz (2012) found that written reports contained more information than a verbal report. In addition, a structured, organized and consistent form is more likely to elicit complete and appropriate information (Staggers & Blaz, 2012).

The team wanted to continue with a written report format, but wanted some way to acknowledge that each category on the handover form was considered even if there were no concerns for a particular category. Utilizing a check box system to indicate normal versus abnormal or concerns versus no concerns was decided upon to instill confidence among team members that all categories were considered and assessed. Instead of leaving the space completely blank, the check box represents an understanding that it was assessed but no concerns were found. This creates a shared model and mutual trust among team members, this is key to improving communication and understanding (Miller, et. al., 2009; Kalisch, et. al., 2009).

Building off of this and previous discussions regarding accompanying sources of patient documentation, the team also wanted a check off system to indicate further or valuable information could be found in other documents. For example, a kardex updated check box was included, as was a space to refer nurses to read the nurses' notes for information on a specific event. This simple check box system eliminated the need for duplication of information and the need to verbally explain all the events that occurred during the course of the departing nurse's shift for fear of missing something (Jefferies, et. al., 2010; Cheevakasemsook, et. al., 2006).

Content. Following the decision to utilize a physiologic systems format and deciding on the specific categories of information to be captured, the team began to discuss the specific content that was critical to capture. The team agreed that the critical content needed to be

connected to the purpose of the handover report: continuity of care and patient safety. They also agreed that what was considered to be critical content needed to be understood by all team members (Miller, et. al., 2009; Jefferies, et. al., 2010; Welsh, et. al., 2010).

The team discussed implementing 'forcing functions' within the handover report to guide the user to assess for certain critical elements. One idea was for a check box system that would capture all of the critical content; however, the team decided against this and felt that the listing of the physiologic systems and additional categories such as psycho-social, pain and discharge plan would represent the forcing functions for this form. The addition of multiple check boxes would add clutter to the handover form and as pointed out by Jefferies, et. al. (2010) this can lead to critical information being missed due to information being crowded on the form that could be documented elsewhere (pg. 122). Staggers and Blaz (2012) found that utilizing a structured, consistent form itself provides a forcing function to ensure completeness of information. Flexibility is also required. Johnson, et. al., (2012) found that structured content should still be flexible as rigid structure could lead the nurse to overlook important information if it does not specifically fit in the predetermined spaces.

The concept of relevant information was again discussed during this phase of the AI process. Although many authors agree that only relevant content should be included in the inter-shift handover, guidance on what information this encompasses is lacking (Staggers & Blaz, 2012). In this regard, the team discussed relevant information in terms of what was relevant to their team context and patient population. Again, they related relevant information back to the purpose of the handover report: continuity of care and patient safety. They agreed that relevancy would be somewhat subjective and that education and feedback would be necessary to clearly identify what was relevant and this would be ongoing and evolve with the new process.

The team worked to validate the draft of the new inter-shift handover report form and prepare the form for pilot implementation on the study unit.

Validation. After the team members tried the form themselves, using a clinical scenario, there was discussion regarding the language on the first draft of the pilot form. The initial form contained a check box to indicate no concerns and a blank space to write concerns. The agreement was to change the check box to a small box to indicate a 'Y' for yes or an 'N' for no to address any concerns related to that category or physiologic system. The empty box was then changed to say 'Comments'. The importance of clear and concise language is supported by the patient safety and quality literature (Friesen, et. al., 2008). The recommended change by the project team still provided for a shared understanding that the category was assessed by the need to enter a 'Y' or 'N', while allowing space for comments that were related to the category but not necessarily an urgent or critical concern. This was important to the project team as they felt many nurses would utilize the space for those comments regardless and wanted to ensure the language of the form supported that use.

Design. The key findings from the survey responses reflected the following themes: organization, duplication of information, improved communication and patient safety.

Post-pilot survey results. Unfortunately the response rate was poor (16% or 16 respondents), this will be discussed in more detail in the limitations section of this chapter. With a low response rate there is a potential that the results do not accurately reflect the majority views on the unit. However, the verbal feedback received by the project team members supported the findings from the survey.

Anecdotal comments and survey results indicate that the pilot handover form assisted with improving organization of the handover report. In addition, the majority of responses stated

that the handover from was completed and the information was useful to the arriving nurse. The inter-shift handover form created by the project team is systematic, logical and standardized. Providing a logical and systematic format assists both the arriving and departing nurses to be organized and receive a succinct, complete and consistent handover (Riesenberg, et. al., 2010; Cohen & Hilligoss, 2010; Kerr, et. al., 2011).

Survey results indicated that the unit staff believed that team communication had been improved with the development of the new inter-shift handover form. Establishing a mutually agreed upon purpose for the handover report contributed to team functioning (Miller, et. al., 2009; Kalisch, et. al., 2009). All team members now share a common understanding of the expectations and requirements for handover removing ambiguity and improving communication (Miller, et. al., 2009; Kalisch, et. al., 2009). In addition, the standardized format, utilizing a combination of check boxes and blank spaces for narrative writing, is argued to provide structure and forcing functions that assist nurses to supply accurate and complete information (Friesen, et. al., 2008; Staggers & Blaz, 2012).

The final survey question asked nurses if they would want this handover form completed for them on every shift, as a patient on the unit. This question sought to discover if unit staff felt that this new form contributed to an increase in patient safety. The positive response to this question indicated that the staff saw value in this new form and an improvement in patient safety.

The themes and sub-themes discussed in the design phase of the AI process reflected the desire and the ability for the project team to work together and come up with a product that would be successful within the context and culture of their unit and patient population. Engaging members of the unit staff to be involved in such an extensive change project enhances buy-in

from the staff as a whole and supports the consistent use of the new process (Friesen, et. al., 2008; Riesenberg, et. al., 2010).

Delivery. Post pilot implementation, the team decided to continue using the new inter-shift handover form rather than revert to the previous form as momentum for the change project had already been established. As identified in the previous section, handing over of the change project prior to the process becoming ingrained in the unit culture can cause the change process to lose momentum (Trajkovski, et. al., 2013). Therefore, identifying key strategies to continue to support the change project was vital to its sustainment. The following strategies were discussed in the third and final project team meeting: support from leadership and management, ongoing education for both novice and experienced nurses, informal feedback processes and formal feedback processes.

Support. One of the key components to any change project is the support required from the frontline leadership team and management. This leadership support contributes to the consistent use of the new handover form (Friesen, et. al., 2008; Riesenberg, et. al., 2011). Visible leadership is required on the unit to work with frontline nurses in the improvement of patient safety through the utilization of the new handover form (Udod, 2008). Engaging the unit staff to assist with ideas, feedback and decision making around the continuous improvement in handover communication and process will increase buy-in and provide momentum for the change project (MacPhee, Wardrop & Campbell, 2010).

Ongoing education. Another of the themes that developed over the course of the AI process was that of ongoing education. The team discussed on several occasions the need for education and training not only on the purpose of the handover report, but also on how to complete the report. Various authors have commented on the lack of training within nursing

education on the process and content of handover (Cheevakasemsook, et. al., 2006; Friesen, et. al., 2008; Riesenberg, et. al., 2010; Cornell, et. al., 2013). Incorporating education on the purpose, process and content of the inter-shift handover report in unit based orientation will help familiarize and train new staff to the unit, the majority of these being novice nurses. Increased comfort with the process of handover report and familiarity with relevant content will ease fears of missing something and the verbal onslaught many nurses face when arriving for their shift.

Continuing education and training for experienced nurses on the unit was also discussed. The education team committed to providing nurses with short inservices to reinforce the purpose and importance of inter-shift report to patient safety and the organization of their colleagues' shifts. Also, case studies would be utilized to create a shared understanding of what was considered relevant information in the context of the patient scenario, this increases understanding and provides for more relevant handovers going forward (Miller, et. al., 2009). As discussed previously, the inter-shift report was seen as less of a priority throughout the course of a shift (Cheevakasemsook, et. al., 2006). Ongoing discussion reinforces the importance of effective handover to patient safety and increases the likelihood of accurate completion of the form.

Informal feedback processes. Peer to peer feedback is a professional practice requirement of the CRNBC (November, 2012), engages the entire team in the process (Riesenberg, et. al., 2011), and encourages relevant information on the report form, by discussing with each other what was or was not helpful information and constructing the relevance as a team (Patterson & Wears, 2010). By encouraging a team process, the change is adopted into the culture and develops a shared understanding of what is needed to complete the handover form (Miller, et. al., 2009; Kalisch, et. al., 2009; Patterson & Wears, 2010).

Formal feedback processes. The team also felt it was important to implement formal processes carried out by the leadership and education teams, as well as, management. These processes include a formal auditing system and utilizing the handover form as a teaching tool for novice or struggling nurses.

The leadership team committed to conducting formal audits on the appropriate use, relevance and completeness of the form and then provide one to one feedback and guidance to the staff nurses. As discovered by Cheevakasemsook, et. al. (2006), the lack of nursing documentation audits and supervision of these processes on the unit increase the insecurity of nurses in this area of practice, therefore, acting as a barrier to effective communication (pg. 371). Implementation of a structured audit process, followed by concrete feedback, will allow staff to reflect upon and improve their practice in patient handover (Cheevakasemsook, et. al., 2006).

In addition, the education team committed to utilizing the handover report as a teaching tool. The educators would use the handover form, especially with novice or struggles nurses, to guide identified critical physiological systems issues, how these issues are interconnected and how they guide care planning and care delivery. These teaching moments will aid in the accurate completion of the handover form, but also in developing critical thinking and decision making in novice or struggling nurses (Staggers & Blaz, 2012).

The key strategies discussed in the delivery phase for the successful and sustained roll out of the new inter-shift handover form involved participation of the unit staff, the frontline leadership team and the manager of the unit. With the combined effort of the entire team the project will have a much higher chance of success and sustainment (Friesen, et. al., 2008).

Limitations

The first limitation of this study would be the lack of experience of the researcher, which may impact the results. As a new researcher and being an active participant in the research, my inexperience may have impacted the questions asked of the project group. Unexplored questions or further probing of central concepts I may have been missed. This can be improved for the next project through further experience, practice and observing more experienced researchers going forward.

A second limitation of the study was not having full representation from all nursing groups on the study unit. Absent from the project team was a licensed practical nurse (LPN), a new graduate nurse and a nurse with over fifteen years experience (a senior nurse). This representation would have invited different perspectives to the group and may have influenced the handover report form and how best to utilize it. New graduate nurses and LPNs may require more structure to the report form or further orientation to its purpose. Specific content is subjective. It is dependent on the patient, patient condition and the arriving nurse. Therefore being prescriptive in the information needed would not necessarily make the handover more meaningful. However, the views of this group of nurses could aid the project group in describing how best to orientate or educate the staff on what information would be considered relevant. The lack of these perspectives is a limitation of the current study.

A third limitation is access to the online survey during the pilot period. The survey response rate was very poor and likely due to limited access during the pilot period. The online survey utilized was an internal hospital based tool and therefore could only be accessed from the computers on site within the study unit. Participants were unable to complete this from home.

Utilizing a universally accessible survey tool, such as Fluid Survey, would have increased the response rate. Feedback also pointed to having a hard copy of the survey available on the unit and a drop box for paper copies. Many staff members voiced a preference for completing the survey manually contributing to a larger response rate. In addition, leaving the survey open longer after the pilot period is finished may have increased the response rate.

A fourth limitation was the lack of validation of the themes and sub-themes that emerged from the thematic analysis with the project team members. Although the deliverable inter-shift report was validated with the project team, the results from the thematic analysis were not. Therefore, the major theme and sub-theme codes were not seen by the project team to ensure they accurately captured the central points of the discussions.

Finally, transferability of the results of this project is limited. This project was conducted on a specific unit and utilized unit staff members on the project group. The insights gained may be useful to guide a similar project, but would not necessarily be transferable to another unit. As the study unit was a general acute medical unit, the handover form was preferred to be open-ended and less prescriptive in order to fit with the patient population. Other units with more specific patient populations might want to consider a more structured handover form.

Conclusions

Through the AI process several ideas developed through the team discussion. The process took the team members from describing what was working well and also what was not working in the current system, to imagining the ideal world, designing how to accomplish this and finally, strategies that would aid in the sustainment of this new ideal. The key conclusions from this process and discussions will be highlighted in this section.

First of all, clarity needs to be communicated regarding the purpose of the inter-shift handover report. Engaging the unit staff to develop a shared understanding and clear, standardized process for handover removes the insecurity and ambiguity regarding this nursing process. This will increase team functioning through mutual understanding of the purpose (Miller, et. al., 2009), and decrease information overload and the pre-shift frenzied verbal report through clarity of purpose and standardized process (Friesen, et. al., 2008; Riesenberg, et. al., 2010). This purpose should be connected to patient safety and continuity of care.

Secondly, clear differentiation should be delineated between the various complementary documents, such as the kardex and patient care plan. Building on the need to clearly define the purpose of the handover form, the accompanying documents need to be defined also and how they are all related to give an overview of the patient. When different purposes are discussed and explained, duplication of information is decreased as staff understand what information belongs on what document (Cheevakasemsook, et. al., 2006). Once this mutual understanding is developed, the team will be able to trust the information contained within these forms (Kalisch, Weaver & Salas, 2009; Jefferies, Johnson & Griffiths, 2010; Miller, Riley & Davis, 2009; Marshall, West & Aitken, 2013).

Third, the handover communication needs to become a higher priority within the scope of a nursing shift. The importance of this communication with regards to patient safety and continuity of care needs to emphasized so that staff understand that it is a priority to be completed (Cheevakasemsook, et. al., 2006).

Fourth, many studies support the need to standardize the inter-shift handover form and process to eliminate human factor related errors and increase the likelihood of these forms being completed appropriately (Friesen, et. al., 2008; Riesenberg, et. al., 2010). Forcing functions

should be included that guide users in the correct completion of the handover form; however, flexibility should be built in to allow for the individual patient context (Friesen, et. al., 2008; Staggers & Blaz, 2012; Johnson, et. al., 2012). Utilizing the standardize inter-shift report with forcing functions will also support staff to identify relevant information in each patient situation and include this on the form.

Fifth, education, training and ongoing feedback regarding the use, purpose, importance and specific content is needed for novice nurses, new staff members and completed on an ongoing basis for all staff on the unit. Education and training on how to hand over patient care between departing and arriving nurse is missing from formal nursing education and is only learned in practical clinical experiences, and is therefore dependent upon the buddy nurse whom the student is partnered with (Cheevakasemsook, et. al., 2006; Riesenberg, et. al., 2010; Cornell, et. al., 2013). Education is necessary to ensure new staff members understand how to use the form and the process in place on the unit. In addition, ongoing education and feedback to all staff members will emphasis the importance of the handover form, underscore the expectation that it is completed for every handover and support the development of a shared understanding around what is considered relevant information.

Finally, as with any implementation of a change project, the unit staff, frontline leadership team and manager need to be involved in the development of the process and decision making (Friesen, et. al., 2008; Udod, 2008; MacPhee, et. al., 2010; Riesenberg, et. al., 2011). In doing so, greater buy-in will be achieved and engagement in the process which increases the chances of a successful and sustained change.

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Appendices

Appendix A: Literature review table

Article Name	Author	Journal	Year	Purpose
Standardization of Change-of-Shift Report.	Athwal, P., Fields, W. & Wagnell, E.	Journal of Nursing Care Quality	2009	Describe a bedside clinical nurse-led initiative to design a standardized shift report that created a more time efficient process while increasing quality of the information reported.
Achieving the 'perfect handoff' in patient transfers: building teamwork and trust.	Clarke, D., Werestiuk, K., Schoffner, A., Gerard, J., Swan K., Jackson B., Steeves, B., & Probizanski, S.	Journal of Nursing Management	2012	Using an Appreciative Inquiry framework in the investigation of acute medicine unit to sub acute unit patient transfers to determine aspects that are working well and should be kept in the standardized practice
The published literature on handoffs in hospitals: deficiencies identified in an extensive review.	Cohen, M. & Hilligoss, P.	Quality and Safety in Health Care	2010	Provide guidance to hospital policy makers and researchers through a comprehensive review of the published literature focusing on patient handoffs.
Exploring the structure and organization of information within nursing clinical handovers.	Johnson, M., Jefferies, D. & Nicholls, D.	International Journal of Nursing Practice	2012	Explore the structure and organization of information exchanged within clinical patient handover and provide an overall structure to support an electronic handover tool.
Examination of current handover practice: Evidence to support	Kerr, D., Lu, S., McKinlay, L. & Fuller, C.	International Journal of Nursing Practice	2011	Describe the current handover practices for one organization and explore the nurses'

changing the ritual.				opinions about the quality of the handover.
The information content of the nurse change of shift report: a comparative study.	Lamond, D.	Journal of Advanced Nursing	2000	To examine the information contained within shift reports about the patient and compare this to information available to the nurse from other sources. Identify unique information to shift report.
Patient Handoffs: Standardized and Reliable Measurement Tools Remain Elusive.	Patterson, E. & Wears, R.	The Joint Commission Journal on Quality and Patient Safety	2010	Identifying the primary functions of patient handoffs and identifying interventions to improve them.
Nursing Handoffs: A Systematic Review of the Literature.	Riesenberg, L., Leitzsch, J. & Cunningham, J.	American Journal of Nursing	2010	Systematically review the literature focusing on nursing handoffs and review the barriers and strategies for effective handoffs to identify features of structured handoffs that have been effective.
Enhancing Patient Safety: Improving the Patient Handoff Process Through Appreciative Inquiry.	Shandell-Falik, N., Feinson, M. & Mohr, B.	The Journal of Nursing Administration	2007	Engage the staff of an Emergency Department and inpatient Telemetry Unit to identify and build on the most effective handoff experiences to improve patient safety.
Research on nursing handoffs for medical and surgical settings: an integrative review.	Staggers, N. & Blaz, J.	Journal of Advanced Nursing	2012	Synthesize outcomes from research on nursing handoffs to guide future computerization of the process on medical and surgical units.
The Content and Context of Change of Shift Report on	Staggers, N. & Mowinski Jennings, B.	Journal of Nursing Administration	2009	Describe the content and contest of change of shift report on medical and surgical

Medical and Surgical Units.				units and whether nurses use computerized support during this process, such as the electronic health record.
Communication at the bedside to enhance patient care: A survey of nurses' experience and perspective of handover.	Street, Maryann; Eustace, Paula; Livingston, Patricia M.; Craike, Melinda J.; Kent, Bridie; Patterson, Denise	International Journal of Nursing Practice	2011	Identify the positives and negatives in the current practices of handover at change of shift by nursing staff and implement a new bedside process to improve patient safety.
Blending Evidence and Innovation: Improving Intershift Handoffs in a Multihospital Setting.	Thomas, L. & Donahue-Porter, P.	Journal of Nursing Care Quality	2012	Provide an overview of the pilot implementation of redesigned inter shift handoffs with lessons learned.
Barriers and facilitators to nursing handoffs: Recommendations for redesign.	Welsh, C., Flanagan, M. & Ebright, P.	Nursing Outlook	2010	Explore one type of handoff, nursing end of shift and define the barriers and facilitators to this handoff process.

Appendix B: Script for project team recruitment (in-person)

Hi,
I'm Nicola Chalke. I am a nurse in critical care nursing at VGH and I am a graduate nursing student at the University of British Columbia School of Nursing. I received your name from Lorraine Blackburn because you have expressed interest in quality and safety initiatives or you are currently involved in them.
I would like to invite you to participate in a study that I am doing as part of my thesis work. I've discussed the study with Lorraine Blackburn and Linda Dempster from the Quality and Safety Department. The study involves the development, piloting and refinement of a nurse-to-nurse handover form. The goal of my study is to identify the critical information that must be included on nurse handover forms. I am conducting my study in the medical unit at VGH, based on the support of Lorraine Blackburn and the Quality and Safety Department.
Please read through the study consent form. If you are willing to participate in the study you may contact me by e-mail or phone (information is on the consent), or I will re-contact you after at least 24 hours so that you'll have time to read the consent form and consider whether or not it would be of interest to you.
Thank you for your time and consideration.

Appendix C: Study description and consent form

PROJECT TEAM PARTICIPATION CONSENT FORM

Title: Standardizing nurse to nurse inter-shift handover content

Principal Investigator: Maura MacPhee, RN, PhD, Assistant Professor,
UBC School of Nursing
Contact Information: **Ph:** 604-822-2891 **E-mail**: Maura.macphee@nursing.ubc.ca

Co-Investigator: Nicola Chalke, RN, Master's of Nursing Candidate
UBC School of Nursing
Contact Information: Ph: 604-328-5433 **E-mail:** chalkenic@gmail.com

During the typical patient stay in an acute care hospital there are many handovers that occur. Patient handover refers to any time when the responsibility for patient care is transferred from one provider to another. Inter-shift nurse reporting is one of the most important times for "handing-over" patient information. Handovers are considered a primary source for adverse events due to incomplete or inaccurate information being shared.

The purpose of this study is to develop, pilot and refine a standardized handover form to be used by nurses during inter-shift reporting on an acute medical unit within Vancouver General Hospital (VGH). We will use an action research approach to develop a standardized form with essential content needed by nurses to deliver safe, effective patient care. The handover form will be developed by a project team of direct care nurses and front line leadership to ensure that vital information is transferred between nurses during inter-shift reporting, and to ensure a shared understanding between nurses on the unit as to what information is considered vital to patient care. This form may then be adapted and used in other departments within VGH.

This research project is a component of graduate nursing thesis work for the co-investigator, Nicola Chalke. The Principal Investigator, Dr. Maura MacPhee, is the thesis advisor for Nicola Chalke. During the course of this project, the co-investigator will act as a team participant and facilitator: She will be present during project team meetings to facilitate team discussions and to take notes on the team discussion. The notes from team discussion will be used to develop a handover form to be piloted by nurses on the VGH acute medical unit.

Ideally, the project team will consist of a medical unit Patient Care Coordinator, a medical unit Clinical Nurse Educator or Clinician, a delegate from the Patient Quality and Safety department and two front line,

direct care staff nurses from the medical unit within VGH. These team members will represent those VGH healthcare professionals who are most knowledgeable of and interested in the use of a standardized handover form. **You are being asked to participate in this project because you are a VGH medical unit Patient Care Coordinator, a VGH medical unit Clinical Nurse Educator or Clinician, a VGH Patient Quality and Safety officer or a front-line, direct care nurse from the VGH medical unit.**

If you agree to participate in this project, we will ask you to attend a maximum of 3, in-person meetings. The first meeting will be a maximum of 4 hours to determine what types of critical information need to be included on the handover form. Some questions to guide team discussion are: "What would it look like if every handover was the perfect handover described? What needs to be in place for this to happen consistently? What would it take for this to happen every time?"

We anticipate that a second meeting will be a 2-hour session to review a handover form for piloting on the medical unit. The form will be based on discussion from the first meeting and evidence- based handover form guidelines from the professional literature.

We anticipate that the third, final in-person meeting will require a maximum of 2 hours. During this meeting, final revisions will be made to the handover form based on nurse survey feedback.

We anticipate that the 3 in-person meetings will take place over a 3-month period of time. They will be held in a confidential meeting space at VGH. Prior to meetings, team members will receive e-mail reminders of the meeting with any necessary information to review, such as drafts of the handover form. Pre-circulation of team meeting materials will help to inform and guide team discussions. All total, your participation in this study will require a maximum of 10 hours of your time (i.e.,in-person meetings and document review).

In addition to note-taking during team sessions, the Co-Investigator will also digitally record sessions to verify the accuracy of notes and to ensure all pertinent team discussions are thoroughly captured and reviewed during the design and testing of a standardized handover form.
No personal, identifying information from team members will be used to design and test the form.

Hard copies of consent forms and project notes will be kept in a locked research file in the research office of the Principal Investigator. Digital recordings will be transcribed by the Co-Investigator and used to verify content in hand-written team meeting notes. Digital recordings will be stored on a password-protected computer of the Principal Investigator. At the end of 5 years, hard copies of project documents will be shredded and digital recordings will be deleted.

There are no known risks associated with participation in this project. There are no actual benefits. Your participation is likely to help us discover what critical information needs to be included on a standardized handover form. The handover form will be trialed on a VGH medical unit, potentially enhancing the quality and safety of patient care delivery, and the form may be used on a wider scale within VGH to better standardize information sharing among VGH nurses.

We would like to invite you to be a member of the handover project team, and **we are asking your permission to record team discussions during project team meetings that involve creation of critical content for the nurse inter-shift handover form.** Records will include hand-written notes and digital recordings. No personal identifiers will be used on the notes or digital transcriptions.

You may refuse to participate in the project team or withdraw from participating in team sessions at any time without concern for adverse consequences or jeopardizing your employment.

Please feel free to contact Dr. Maura MacPhee, Principal Investigator, at 604 822-2891, if you have any questions about the research study or the co-investigator, Nicola Chalke at 604-328-5433.

If you are willing to participate in this study, you may contact the co-investigator Nicola Chalke by phone or e-mail. She will also be in touch with you in person at least 24 hours after receiving this consent form so that you can read through the consent form and thoughtfully consider the purpose of the study and study participant requirements and obligations.

If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598.

AFFIRMATION OF CONSENT TO PARTICIPATE

Your signature below indicates that you have received a copy of this consent form for your own records and that you consent to participate in project team meetings that will be recorded.

Name (please print your full name): _____

Signature (please sign your full name): _____

Date: _____

Appendix D: Survey participation flyer

Nurse to Nurse Handover Report Form

Over the next two weeks a new Nurse to Nurse Handover Report Form will be trialed on the unit.
After the 2-week trial period, you will be receiving a brief handover report feedback survey to complete via VGH e-mail. The confidential, electronic survey will take no more than 10 minutes to complete.
The survey e-mail will also include a **study letter attachment**.
Survey feedback data will be used to refine the handover form for use among VGH nurses, **and data will also be used as part of graduate nursing thesis work. Your completion of the survey will be your consent to have your feedback used as part of a graduate nursing student research project.**
If you have questions about the survey study please contact:

Principal Investigator: Maura MacPhee, RN, PhD, Assistant Professor,
UBC School of Nursing
Contact Information: 604-822-2891 (Work phone)

Co-Investigator: Nicola Chalke, RN, Master's of Nursing Candidate
UBC School of Nursing
Contact Information: 604-328-5433

Your participation is appreciated, thank you in advance for your time.

Appendix E: Survey cover letter (email)

Dear Acute Medicine Nurse,
I am writing to invite you to participate in a study entitled "**Standardizing nurse to nurse inter-shift handover content"**

Purpose of the Study
During the typical patient stay in an acute care hospital there are many handovers that occur. Patient handover refers to any time when the responsibility for patient care is transferred from one provider to another. Inter-shift nurse reporting is one of the important times when handovers occur. These handovers are a primary source for adverse events due to incomplete or inaccurate information being shared.

The purpose of this research is to develop, pilot and refine a a handover form on your unit at Vancouver General Hospital (VGH). This handover form will be developed by a project team of medical unit direct care nurse representatives, a medical unit nurse leader and educator or clinician, and a member of the Quality and Safety department. After the project team has refined the form, it may be adapted and used by other VGH departments.

Eligibility and Participation
Because you are a nurse on the medical unit where we are piloting a new handover form, we are inviting you to participate in an online survey. Your completion of the survey implies your consent to be in the study. Survey responses will be used to refine the handover form, and they are also data being used in graduate nursing thesis work by the study's co-investigator, Nicola Chalke.

You will find the online survey link embedded in the e-mail message accompanying this study letter attachment. The survey is being administered through an internal VGH survey system. No personal identifiers are associated with the survey. There will be no adverse consequences to your employment or you if you choose to not respond to the survey. Your participation is totally voluntary. The survey should take a maximum of 10 minutes to complete. Some examples of questions are: Do you feel that the handover form has helped to identify any good catches or near-misses? Do you feel that the handover form is promoting effective team communication with regards to patient care and care planning? Answers are based on rating scales, for example: 0 (not at all) to 5 (all the time).

Risks and Benefits
There are no known risks associated with participating in this study. There are also no direct benefits associated with participating in the study. Potential benefits from your participation include There will be no direct benefit to you, but your participation is likely to help refine a standardized handover form to enhance the quality and safety of patient care delivery.

Contacts
If you have any concerns about your rights as a research subject and/or your experiences while participating in this study, you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598.

You may also contact the Principal Investigator and Co-Investigator with any questions or concerns. Thank you very much for your assistance with this study.

Principal Investigator: Maura MacPhee, RN, PhD, Assistant Professor, University of British Columbia School of Nursing. Phone: 604-822-2891.E-mail: maura.macphee@nursing.ubc.ca

Co-Investigator: Nicola Chalke, RN, BSN, Master's Student, University of British Columbia School of NursingT201-2211 Wesbrook Mall, Vancouver, B.C. V6T 2B5. Phone: 604-328-5433.
E-mail:chalkenic@gmail.com

Appendix F: Email content for survey link

E-Mail Content
SUBJECT: Nurse survey study-nurse-to-nurse handover form pilot

BODY: The survey link will take you to a brief survey about the nurse-to-nurse handover form that is being piloted by nurses in the medical unit.

http://surveys.vcha.ca/Survey.aspx?s=8367b9da9b0847a0a15419fa9e069b42

If you had an opportunity to use this form, we would greatly appreciate your feedback. The survey is part of a graduate nursing student's thesis work, and your completion of the survey implies your consent to be part of a survey study. Please read the attached study letter for study details.
Thank you in advance for your time and participation. The survey is confidential and should take a maximum of 10 minutes to complete.

Appendix G: Previous AMU inter-shift report

AMU Inter-shift Report Sheet - Please use "Problem focused" Documentation

Name:_____Date:_____Shift:_____

Abnormal Vitals:_____	Clinical Issues:
O_2 Requirements:_____	
Last Analgesia:_____Dose:_____Time:_____	
Significant Labs:_____	Plan/Discharge goals(from hx):
_____	
Tests Completed/Specimens sent this shift:_____	
_____	
Tests to be done next shift:_____	Miscellaneous Notes:
_____	
Activity level:_____	

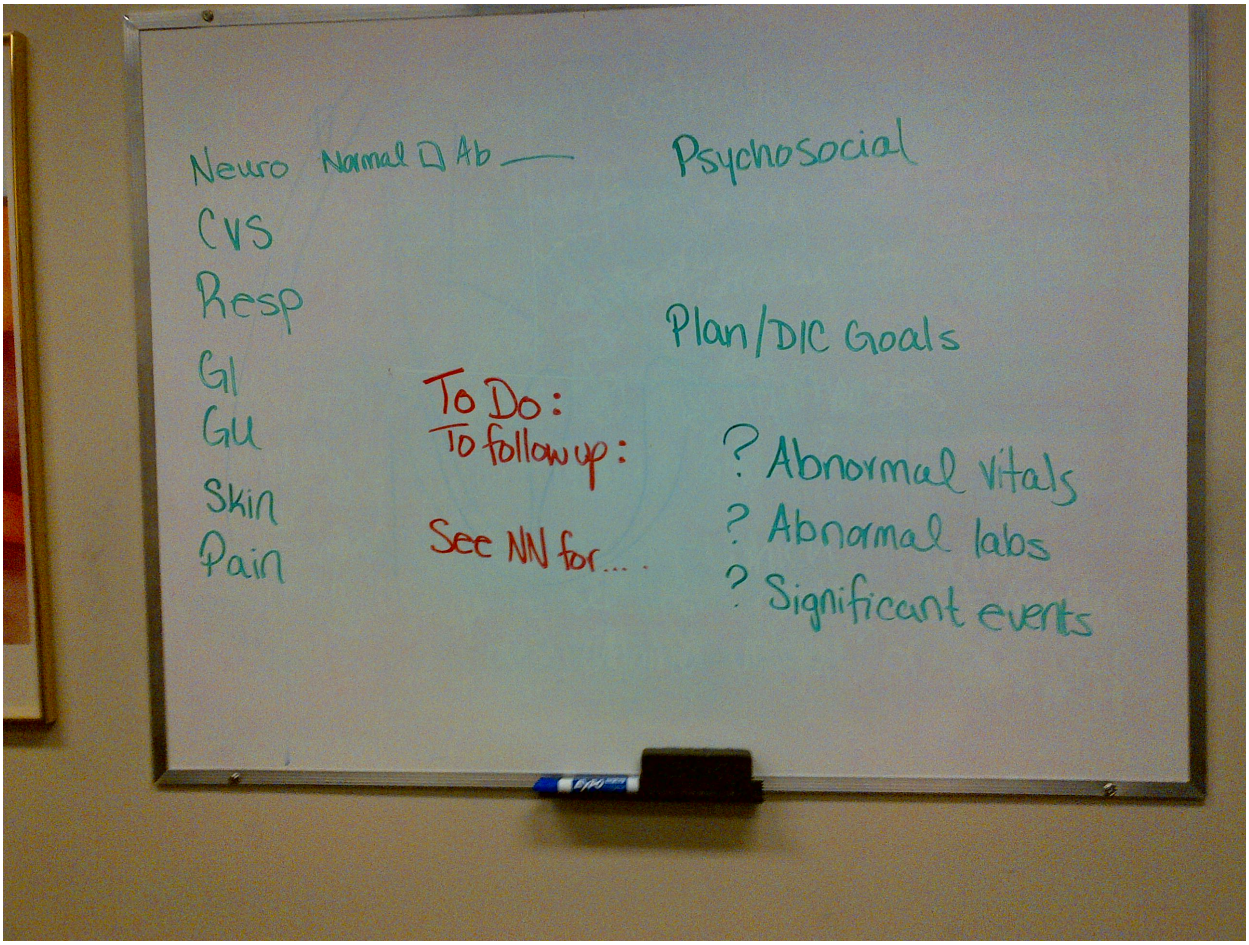
Name:_____Date:_____Shift:_____

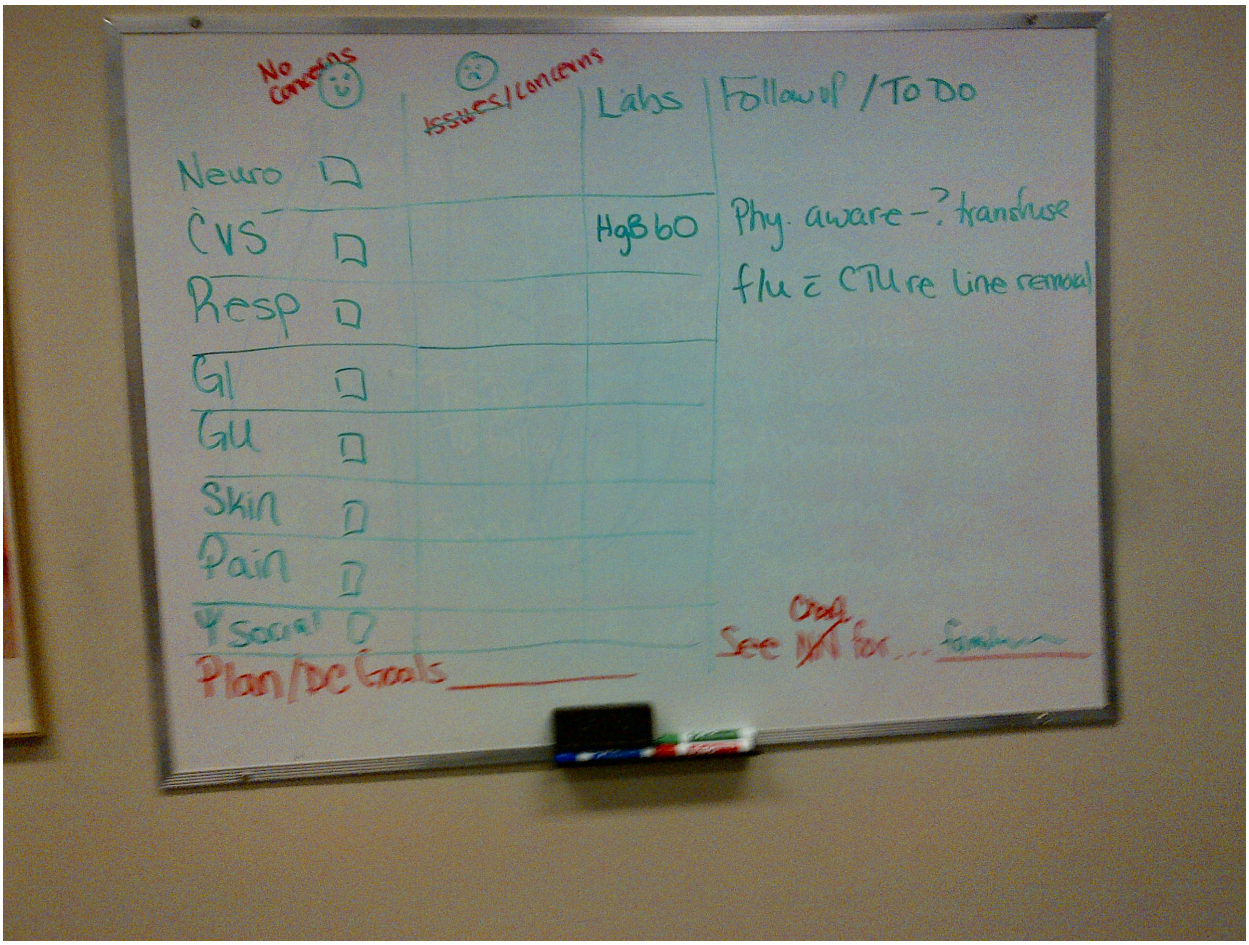
Abnormal Vitals:_____	Clinical Issues:
O_2 Requirements:_____	
Last Analgesia:_____Dose:_____Time:_____	
Significant Labs:_____	Plan/Discharge goals (from hx):
_____	
Tests Completed/Specimens sent this shift:_____	
_____	
Tests to be done next shift:_____	Miscellaneous Notes:
_____	
Activity level:_____	

Appendix H: Questions for froject group

1. Describe a time you received a perfect handover at the start of your shift and what made it perfect?
2. What would it look like to receive a perfect handover at the beginning of every shift? What would need to be in place for that to happen?
3. What are the core or critical elements needed for a perfect handover?
4. Looking at the current handover form, what works really well with the current form?
5. What doesn't work very well with the current form?

Appendix I: Photos of group designed inter-shift report




No Concerns
Issues/Concerns
Labs
Follow up / To Do
Neuro
CVS
Resp
GI
GU
Skin
Pain
Social
HgB 60
Phy. aware - ? transfuse
f/u c̄ CTU re line removal
Plan/DC Goals

Appendix J: Inter-shift handover form draft #1

AMU Inter-Shift Report: Please use "Problem Focused" Documentation

Name:_____**Date:**_____**Shift:**_____**Kardex Updated:** ☐

	No Concerns:	Concerns:	Labs:
Neuro	☐		
CVS	☐		
Resp	☐		
GI	☐		
GU	☐		
Skin	☐		
Pain	☐		
PsychoSocial	☐		

Follow Up/To Do:

Plan/DC Goals: _____ See chart for: _____

Name:_____**Date:**_____**Shift:**_____**Kardex Updated:** ☐

	No Concerns:	Concerns:	Labs:
Neuro	☐		
CVS	☐		
Resp	☐		
GI	☐		
GU	☐		
Skin	☐		
Pain	☐		
PsychoSocial	☐		

Follow Up/To Do:

Plan/DC Goals: _____ See chart for: _____

Appendix K: Inter-shift handover report final version

AMU Inter-shift report: Please use "Problem Focused" Documentation

Name: _____ **Date:** _____ **Shift:** _____

	Concerns? (Y/N)	COMMENTS	LABS
Neuro	☐		
CVS	☐		
Resp	☐		
GI	☐		
GU	☐		
Skin	☐		
Pain	☐		
Psycho Social	☐		

Kardex Updated ☐

Follow-up/To Do:

Plan/DC Goals: _____

_____

See Chart For: _____

_____

Name: _____ **Date:** _____ **Shift:** _____

	Concerns? (Y/N)	COMMENTS	LABS
Neuro	☐		
CVS	☐		
Resp	☐		
GI	☐		
GU	☐		
Skin	☐		
Pain	☐		
Psycho Social	☐		

Kardex Updated ☐

Follow-up/To Do:

Plan/DC Goals: _____

_____

See Chart For: _____

_____

Appendix L: Survey questions final version

1. From your perspective, how often is the nurse to nurse handover report completely filled out?

Never		Sometimes			Always
0	1	2	3	4	5

2. From your perspective, how useful is the information included on the handover report to you in organizing patient care?

Not Useful		Somewhat			Very useful
0	1	2	3	4	5

3. From your perspective, is information on the handover form redundant or easily found in other documentation, such as chart, kardex, flowsheets?

   Yes, content on the handover form is redundant ____

   No, content on the handover form is **not** redundant ____

4. Do you feel that the handover form has helped to identify any good catches or near-misses?

Not at all		Somewhat			Yes, absolutely
0	1	2	3	4	5

5. Do you feel that the handover form is promoting effective team communication with regards to patient care and care planning?

Not at all		Somewhat			Yes, absolutely
0	1	2	3	4	5

6. D o you feel that the handover form is improving the quality of patient care?

Not at all		Somewhat			Yes, absolutely
0	1	2	3	4	5

7. If you were a patient, would you want the handover form completed for you for every change of shift?

Doesn't matter		I guess so			Yes, absolutely
0	1	2	3	4	5

8. Please provide feedback on how you feel the handover form could be improved.

9. Any other comments?