Evaluating the Effects and Process of Nurse Bedside Shift Report on Nurse's Perceptions of

Communication Patterns, Nurse Satisfaction, and Patient Involvement

Final Defense

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An Abstract of

Evaluating the Effects and Process of Nurse Bedside Shift Report on Nurse's Perceptions of

Communication Patterns, Nurse Satisfaction, and Patient Involvement

By

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The University of Toledo/Wright State University DNP Consortium

Background: A growing body of evidence identifies transitions of care as vulnerable points in the care continuum where vital information is often omitted and inadequate communication occurs. Nurse shift report has been identified as a vulnerable communication point. Specifically, research has suggested that more effective communication between healthcare providers can improve care to patients and subsequently result in better outcomes. **Problem:** Nurse shift report lacks consistency and is not done at the patient bedside. An effective nurse bedside shift report process that provides a focused assessment of key items and involves patients is essential.

Purpose: The purpose of this evidence-based practice project is to examine the PICOT question: Among adult patients on a medical surgical unit, how does the use of a standardized nurse bedside shift report process compared to other nurse shift report processes improve communication patterns, nurse satisfaction, and patient involvement over 3 months? **Theoretical Model:** This quality improvement project was guided by the Iowa Model of Evidence-Based Practice to Promote Quality Care and Lewin's change management theory. **Methods**: The Agency for Healthcare Research and Quality Nurse Bedside Shift Report Checklist was implemented and the 17-item Nurse Assessment of Shift Report Survey was used to evaluate the effects of the process change on nurse perceptions of communication patterns, nurse satisfaction, and patient involvement. Central line infection rates were used as an indicator to identify the

effectiveness of line visualization. **Results**: A total of 55 nurses participated in education about the process change; 25 nurses completed the survey pre-implementation and at 3 months. There was a significant difference in patient involvement in care ($p = .004$) but, no statistically significant differences on any of the other questions on the survey. There was a positive trend in nurse's perceptions of patient involvement in nurse bedside shift report on communication patterns, nurse satisfaction, and patient involvement. In addition, there was a clear process change in the nurse bedside shift report after the implementation of this quality improvement project. **Conclusions**: Although this EBP project is not able to demonstrate statistically significant effects of a standardized nurse bedside shift report, a larger sample size and longer implementation period, may have provided more promising results.

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Introduction

The American Hospital Association and Agency for Healthcare Research and Quality (AHRQ) report that approximately 44,000 Americans die in hospitals each year due to medical errors. Many believe underreporting is common, and a more accurate acknowledgement of medical error deaths is closer to 98,000 annually (AHRQ, 2009). Despite the variances in reporting, preventable medical errors remain the 8th-leading cause of death in the U.S.. The Institute of Medicine (IOM) (1999) states, "...total national costs (lost income, lost household production, disability, health care costs) are estimated to be between $17 billion and $29 billion for preventable adverse events." The IOM publication identified communication problems as one of the chief contributors to preventable adverse events. They specifically discussed inadequate oversight of safety concerns and the lack of interventions to improve the culture of safety within a health care system. Patient safety should be the primary focus of all healthcare providers.

A report by the Joint Commission on Accreditation of Healthcare Organizations noted that almost 70% of all sentinel events were generally caused by inaccurate communication (The Joint Commission, 2014). The IOM/Robert Wood Johnson Foundation (RWJF) Future of Nursing report highlights a safety initiative that captures an interesting approach to address patient safety. The report specifically combines plans mapping the transformative course for population health in a healthcare setting and focuses on patient safety initiatives. The IOM/RWJF plan includes principles and tools such as the AHRQ Toolkit 3 to guide safety transitions for healthcare organizations to implement changes that improve communication patterns, nurse satisfaction, patient involvement, patient safety, and care delivery. Sentinel

events and patient satisfaction have financial impacts to hospitals. Communication with nurses

has been linked to patient satisfaction; if patient satisfaction scores are low, the Centers for

Medicare and Medicaid Services reimbursement for care to hospitals will be lowered (2013).

Compromised patient safety further compounds the financial burden of stakeholders

across the care spectrum, namely hospital organizations. Reactive healthcare practices need to

be replaced by aggressive preventive tactics. Better communication between nurses is

considered a preventative measure that improves patient safety.

Description of Clinical Issue

A growing body of evidence identifies transitions of care as vulnerable points in the care

continuum where vital information is often omitted and inadequate communication occurs.

Specifically, research has suggested that more effective communication between health care

providers can improve care to patients and subsequently result in better outcomes (AHRQ,

2013). Nurse bedside shift report has been identified as one of the vulnerable communication

points. Some researchers suggest that patients should be involved during nurse bedside shift

report and a focused assessment of key items such as wounds, incisions, drains, central lines, etc.

should be included. Therefore, it is possible that a thorough standardized nurse bedside shift

report including effective communication will increase communication patterns, nurse

satisfaction, and patient involvement.

Prevalence and Significance

The EBP project was conducted at a 77 bed rural community hospital, which is part of an

eleven hospital system. The target hospital requested an evaluation of their nurse shift report

process on a 40 bed combined medical surgical and intermediate acute care unit. The DNP

student conducted a preliminary observational assessment of the current nurse bedside shift

report. During a 4 day period, with 24 nurse shift reports, the following characteristics were

observed:

- 100% (24/24) of shift reports occurred outside the patient's room; 50% (12/24) of these occurred at the main desk.

- 100% (24/24) of shift reports had the patient's medical record available to all staff; 13% (3/24) opened the patient's medical record.

- 100% (24/24) of shift reports had 5P's (Patient, Past, Present, Progress, Plan) available to all nurses; 58% (14/24) of the reports included the use of the 5P's.

- 87.5% (22/24) of the nurses wrote notes, 12.5% (3/24) only listened.

- 100% (24/24) of the nurses were willing to answer each other's questions.

- 0% (0/24) of the nurses entered the patient's room together during report.

Based on the preliminary results of the observational evaluation and information about

the nurse shift report process, the target hospital Chief Nursing Officer and Acute Care Unit

Director recognized the need for change in the nurse shift report process to improve nurse

communication, nurse satisfaction, and patient safety. During preliminary discussions the

hospital administrators strongly supported that the patient be informed, included in report

processes, and that part of nurse shift report should be conducted at the patient bedside. Hospital

administrators verbalized a preference to use a standardized nurse bedside shift report checklist

that included a standardized nurse shift report format and the visualization of central line sites to

ensure that the report took place at the bedside. The nurse bedside shift report checklist (see

Appendix A) from the AHRQ Toolkit 3 was selected as the ideal tool after an extensive review

of other tools (see Table 1).

In addition to including the patient in the bedside shift report, the AHRQ Bedside Shift Report Checklist (see Appendix A) also includes a focused assessment of the patient, including intravenous (IV) sites and IV tubing. The assessment of central lines was included in the focused assessment due to an increase in CLABSIs at the hospital over the course of the last year. In 2013, the hospital reported a rate of no CLABSIs in the Intensive Care Unit (CMS, 2013). Subsequent internal surveillance audits conducted after that report revealed three CLABSIs in the target hospital from June 2014 to October 2015. In 2015, raw real-time data obtained from the target hospital Infection Preventionist revealed a current rate of 2.4 CLABSI incidences per 1,000 patient days. In short, a rate of three CLABSIs equated to a Standardized Infection Rate of 3.0 which exceeded both the 2013 state average of 0.460-0.619 and the national benchmark of 1.0. Hence, this evidence-based practice (EBP) project aimed to improve the effectiveness of nurses' shift reports, enhance the quality of care, and minimize avoidable infection such as CLABSIs.

Purpose and Overall Aims

The purpose of this evidence-based practice quality improvement project was to implement a standardized nurse bedside shift report process on a 40 bed combined medical surgical and intermediate acute care unit and evaluate communication patterns, nurse satisfaction, and patient involvement with the use of a standardized nurse bedside shift report process. The EBP project examined the PICOT question: Among adult patients on a medical surgical unit (*P*), how does the use of a standardized handoff communication tool during nurse bedside report (*I*) compared to other nurse shift report processes (*C*) improve communication patterns, nurse satisfaction, and patient involvement (*O*) over 3 months (*T*)?

The quality improvement goals and aims of the EBP project included: implementing the use of a standardized nurse bedside shift report tool and process; evaluating nurse perceptions of communication patterns, nurse satisfaction, and patient involvement using a pre and post-implementation nurse satisfaction survey; and monitoring CLABSI rates over a 3 month period. It was anticipated that 95% of the nurses (n=59) would complete some part of the report at the bedside by the end of 3 months and also visualize central lines and central line dressings for patients who have central lines. An additional goal for this project was a CLABSI rate of zero in the 3-month period.

Evidence-Based Practice Model/Framework Guiding the Practice

The Iowa Model of Evidence-Based Practice (EBP) to Promote Quality Care best suited this project as problem-focused triggers were supported by telltale data highlighting problem areas. Patient outcomes affect more than the patient and the healthcare organization. Negative patient outcomes impact not only nurses, but nurse confidence and satisfaction. Stakeholder identification included first and foremost, the patients and their significant caregivers who have the most to gain from improved nurse to nurse communication. Other primary stakeholders were nurses, specialty practice nurses such as the Infection Preventionists; Nurse Case Managers who collaboratively manage the length of patient hospital stays, licensed independent practitioners, and the unit, department, and organizational leadership teams within the healthcare entity.

The Iowa model algorithm outlined 7 steps - including the selection of a topic, formation of a team, collection and critique of relevant research and supportive literature, and the ultimate examination to validate a sufficient basis for the pilot promotion and eventual adoption of practice of the EBP to promote quality care (Melnyk & Fineout-Overrholt, 2015). Monitoring

and analysis of the structure, process, and outcome data ensures efficacy and proper application of the EBP (See Figure 1).

In order to better organize the project, the Iowa model was placed in a table and expanded to include all aspects of project management that cover the seven step process using specific column descriptors of: activities to complete, key points to address for success and reduce barriers, persons accountable (facilitators), and projected/actual timelines (See Appendix B).

Topic selection. The implementation of the nurse bedside shift report process aligns with organizational priorities for creating a safe patient environment (Melnyk & Fineout-Overholt, 2015). Effective communication and patient safety are important topics to hospital organizations for a multitude of reasons. Consideration for topic selection included understanding the hospital's organizational environment and staff knowledge base. The EBP was guided by Lewin's change management theory (See Figure 2). The use of this theory was an important consideration as the target hospital had previously trained staff about this change theory. The use of Lewin's change theory facilitated the implementation of the project timeline. Specifically, to operationalize the theory, the proposed EBP team developed and promoted a plan to "unfreeze" staff from using a faulty process, "move" through the examination and redefining stages identifying current state processes and future state mapping, and then "refreezing" the improved process of bedside handoff communication to reduce or eliminate safety events. The use of Lewin's change management theory supported this project. Stakeholders or nursing staff worked through the transitions and identified areas of strength and resistance prior to implementing change. Also, the use of a framework as a guide deterred workarounds that would have potentially threatened implementation.

Forming the team. Forming the team was based on the most important paradigm shift as IOM and RWJF (2011) specification that practicing Registered Nurses need to become the next trailblazers in healthcare politics and organizational leadership. Therefore, it was imperative that bedside nurse caregivers become front-line activists, change innovators, and leaders in the political and organizational levels of healthcare. The EBP Unit Practice Council consisted of volunteers who were motivated unit charge nurses, bedside nurses, and ad hoc members were nurse leaders. The team was facilitated by the DNP student.

Retrieving the evidence. A search of the Cumulative Index for Nursing and Allied Health Literature (CINAHL) was conducted to identify research articles relevant to the PICOT question. Guided evaluation and grading of the evidence was conducted by the DNP student (see Tables 3, 4, & 5). For this project, as Melnyk and Fineout-Overholt (2015) indicated, it was important to acknowledge the possibility that 56% or more of the staff may not have had education specific to research or EBP (p.373), which is why the evaluation and grading of the literature was conducted by the DNP student. The results of the evaluation and grading of the articles was presented to the EBP team by the DNP student. The EBP Unit Practice Council, through use of evidence translation, identified the implications for the practice change, how to evaluate the change, and ways to maintain the change after implementation of the project. Melnyk and Fineout-Overholt (2015) suggest that evidence translation helps staff identify the implications for practice change, understand the evaluation techniques and results, and implement the change to maintain sustainability (p.371). The EBP Unit Practice Council identified the criteria that needed to be included in the bedside shift report. The criteria was selected by the team after review of the literature and was also designated by nurse leaders as priorities for the hospital. The seven criteria included that the report tool: encouraged bedside report, included patient/caregivers,

included a focused assessment and visualization of lines, prompted questions, prompted opening

of the medical record, identified outstanding tasks, and included a focused safety assessment.

Developing an EBP plan.   Next the EBP Unit Practice Council identified the EBP plan.

The plan included staff education and use of "action plans" to engage the staff in the practice

change and improve handoff communication and reduce CLABSIs. The staff education materials

reflected the most current evidence based AHRQ guidelines that included a bedside shift report

checklist (see Appendix A).   Scripting, the use of checklists, and targeted didactic training

provided consistency and allowed for mastery of the bedside reporting process.

Search Strategies

CINAHL was searched for current information regarding standardized nurse bedside shift

report for the years of 2010-2016. Keywords used to search the literature were *nurse bedside*

reporting and Boolean connections of AND *inpatient*. Additional keyword searches such as

caregiver transitions and *transitions of care* generated non-useful results as most of the

information applied to transitions to other agencies and systems or involved physician handoff.

Keyword searches of *safe patient handoff, nurse bedside shift report tools* and *CLABSI* were

effective at producing applicable articles and resulted in the tool appraisals and best practice

research. Further keyword searches specific to *Hospital Acquired Conditions*, *HAC* and

communication tools had low yields; each produced useful articles that applied to the content of

this project. In addition, the EBSCO Host search of *"bedside reporting"* revealed additional

articles complimenting the nurse satisfaction survey information. Articles were excluded that

only involved pediatric units, surgery units, emergency centers, and critical care. Little

information was found specific to acute care areas. There were a total of 2,426 articles initially

identified, with 147 articles reviewed, and 32 articles further evaluated and graded using the Johns Hopkins Rapid Appraisal process/tool.

Review of the Literature

Tools. Use of a standardized tool improves inclusion of the patient in their plan of care which is a primary goal of patient centered care. The review of the literature broadly supported the use of standardized communication tools during all transitions of care (AHRQ, 2009; Costello, 2010; Laws & Amato, 2010; Pronovost, Goeschel, Colantuoni et al., 2010; Sand-Jecklin& Sherman, 2014; The Joint Commission, 2014; Watkins & Patrician, 2014; Weaver et al., 2014). Ten keeper studies were used to examine nurse shift report tools. All of the tools identified in the literature contained mnemonics or checklists that were used during shift handoff.

Three of the manuscripts used SBAR which stands for **S**ituation, **B**ackground, **A**ssessment, **R**ecommendations (Freitag & Carroll, 2011; Reinbeck & Fitzsimons, 2013; and Street et al., 2011). The SBAR tool was consistent and simply structured in all reviewed articles. The Emergency Center and other specialty units modified the SBAR tool somewhat to meet the special needs of the ER varied staff (Street et al, 2011). SBAR by itself only met one element the EBP Unit Practice Council set forth as required elements for the tools. All the articles found that a scripted communication tool standardized the report process and improved overall nurse communications, but may be modified to include the specifics of a unit or specialty care area. Radke (2013) conducted a quality improvement project which implemented standardized reporting using the ISBAR tool to successfully improve nurse communications with patients. ISBAR combines Introduction with SBAR, yet lacked some other elements the EBP Unit Practice Council had designated as ideal. P-VITAL was used in another quality improvement project conducted by Wilson (2011). P-VITAL means **P**resenting information, checking

patients' **V**ital signs, checking **I**nput and output patterns, checking patients' **T**reatments, discussing **A**dmission or discharge criteria, and filling out **L**egal documents (Wilson, 2013). Wilson (2011) reported the results of the emergency center's use of the P-VITAL tool which reduced errors, was sustainable, and cost-effective. Additionally, it combined teaching/learning with report. A study by Thomas (2012) used the I PASS the BATON tool which means Introduction, **P**atient, **A**ssessment, **S**ituation, **S**afety concerns, **B**ackground, **A**ctions, **T**iming, **O**wnership and **N**ext although, the tool did not include time for questions. Freisen et al., (2013) used ISHAPED which is the acronym for **I**ntroduce, **S**tory, **H**istory, **A**ssessment, **P**lan, **E**rror, and **D**ialogue. The dialogue portion of this tool lacked scripting or prompts. Hughes and Clancy used a standardized shift handoffs approach based on the work of two nurses at Emory University with various facets addressed which included SBAR and additional steps in one tool (2005).

In 2009, AHRQ adapted the standardized approach and created the Toolkit 3 which included the Nurse Bedside Shift Report Checklist (see Appendix A), a family education brochure, and education templates to assist with implementation of the tool. Based on the comparison of tools conducted by the DNP student, the AHRQ Toolkit 3 was selected for implementation because the Nurse Bedside Shift Report Checklist met all seven required criteria set forth by the EBP Unit Practice Council (see Table 1). The literature summarizes and supports standardization of communication which includes the use of prompts, scripting, and checklists. Standardized communication tools have the potential to impact and improve care by improving communication and reduce errors.

Communication. Research suggested that improved and effective nurse communication between shifts can enhance the quality of patient care and minimize complications (AHRQ,

2013). Specifically, according to Weaver, Weeks, Pronovost, and Pham, (2014), the process of gathering information and conducting observations between shifts can be used to change practice and guide the process improvement plan by comparing current practices to those supported by evidence.

Dufault et al. (2010) examined all research articles related to shift report and developed supportive evidence for the creation of a standardized nurse shift report tool. None of the articles reviewed by Dufault et al. (2010) suggested using one tool over the other although all articles did support the use of a standardized tool for shift report. Dufault et al. used a structured and organized EBP model. Their team translated and implemented research into practice using an interdisciplinary team collaborative approach and standardized bedside communication tool (2010). Having facilitators lead the project ensures adaptation and sustainable practice change. Dufault et al. commented on the lack of control groups in current studies and suggest future work include control groups (2010).

Handoff communication which occurs during nurse bedside shift report is defined by the Joint Commission as a contemporaneous, interactive process of passing patient-specific information from one caregiver to another or from one team of caregivers to another for the purpose of ensuring the continuity and safety of the patient's care (Watkins & Patrician, 2014). Communication patterns and nurse satisfaction were closely linked as evidenced by 10 articles (Boykin, 2014; Friesen et al., 2013; Jones, Stewart, & Rozsell, 2015; Laws & Amato, 2010; Melnyk & Fineout-Overholt, 2015; Pothier et al., 2005; Sand-Jecklin & Sherman, 2014; Street et al., 2011; Tidwell et al., 2011; Tobiano, Chaboyer, & McMurray, 2011). Nurse teamwork and trust improved as did safety and accountability according to the quantitative study by Laws & Amato (2010) and a quasi-experimental study by Sand-Jecklin & Sherman, (2014).

In the past few years bedside report had increased in popularity as evidenced by multiple articles in the literature. Few studies had sufficient samples sizes. Laws & Amato (2010) collected information on communication and staff satisfaction, projecting positive experiences, but failed to provide clinically significant data. They are often referenced because of the positive findings of their early study. Clinically significant nurse perceptions of shift report was measured and reported in a quasi-experimental study by Sand-Jecklin & Sherman (2014). Sand-Jecklin & Sherman devised the 17-item nursing survey Nurse Assessment of Shift Report-Nurse Perceptions of Report Survey which contained specific items related to nurses' satisfaction in shift report efficiency, accuracy, teamwork, accountability as well as perceptions of patient involvement and patient safety. The survey has a Likert-type format with five agreement options (strongly disagree-1, disagree-2, neutral-3, agree-4, strongly agree-5). The survey was used to identify nurse satisfaction with the bedside reporting process with good reliability (Cronbach's alpha= .90) and inter-item correlations from 0.02-0.71. Demographics items include: nurse age, number of years in nursing, education and typical shift worked. (Sand-Jecklin & Sherman, 2014). In the study, 148 nurses from seven units working all shifts implemented a nurse bedside shift report process. They completed electronic surveys at pre-implementation, three-months (n=98) and 13-months (n=54) post-implementation. Nurses reported increased nursing accountability, improved nurse perceptions of patient involvement in care, and increased report accuracy.

In their study, a significant change in nurse's perceived satisfaction in shift report efficiency, accuracy, and effectiveness of communication was detected by the following items 'the current system is an efficient means of communication' and 'report is relatively stress-free' between baseline and three month post-implementation. Similarly, nurse satisfaction with patient

involvement and safety promotion was detected by items like "the current system promotes patient involvement in care". Finally, nurses' satisfaction in teamwork, accountability, and perceived completeness of reports were evaluated by items such as 'the current system helps assure accountability' and 'the current system promotes patient involvement in care', 'report helps prevent patient safety problems', and 'report is done in a reasonable amount of time'. All above items were able to detect significant change between baseline and three month post implementation in their study (Sand-Jecklin & Sherman, 2014). While many items were able to generate significant findings, many nurses perceived an increase in the effort and time spent to deliver the bedside type of nurse shift reporting (Sand-Jecklin & Sherman, 2014). It is important to note that in this study the respondents' age ranged from 22 to 34 years old. The mean working experience in nursing ranged from10.2 to 10.5 years. Most nurse respondents had a baccalaureate degree. In summary, communication will vary among caregivers but, the nurse perceptions involved with care. The domain of communication includes the effects of communication patterns, nurse satisfaction, and patient involvement all of which are key elements of the project that are clearly identified in the reviewed literature.

Safety/CLABSI. Standardized tools are purported to impact patient safety in many sources (AHRQ, 2009; Boykin, Schoenhofer, & Valentine, 2014; Cornell et al., 2014; Costello, 2010; Cronenwett et al., 2009; Laws & Amato, 2010; Pronovost, Goeschel, Colantuoni et al., 2010; Sand-Jecklin& Sherman, 2014; The Joint Commission, 2014; Watkins & Patrician, 2014). The change of nursing bedside shift report to predominantly use a risk and safety management approach for improved accuracy of handoff communications was driven by literature identifying the effect miscommunication and incomplete handoff has on patient safety (AHRQ, 2009; Jones, Stewart, & Roszell, 2015; Kerr et al., 2011; Leape, Nance, & Nash, 2008; National Patient

Safety Foundation, 2013; Pothier et al., 2005; The Joint Commission, 2014; Thomas &

Donohue-Porter, 2012; Welsh et al, 2010). Consistent with the recommendations of Melnyk and

Fineout-Overholt, (2015), "…increased staff communications enhances an already existing

[central line] surveillance protocol performed during patient rounding and/or care compliance

and central line audits" (p 517-519). AHRQ encourages the highly repetitive activity of

visualization of lines and catheters along with communication during nurse bedside shift report

(2009).

Structure and uniformity promotes continuity and patient safety by enhancing

communication (Abraham et al., 2016). Patient safety also improved when communication

improved (Colvin et al, 2016; Weingart et al, 2013). According to Cornell, Gervis, Yates, and

Vardaman poor communication can result in loss of life (2014). CLABSI specific literature was

highlighted by many studies (AHRQ, 2009; Costello, 2010; Laws & Amato, 2010; Pronovost,

Goeschel, Colantuoni et al., 2010; Sand-Jecklin& Sherman, 2014; The Joint Commission, 2014;

Watkins & Patrician, 2014; Weaver et al., 2014). One key study lead by Pronovost, Goeschel,

Colantuoni et al. used a prospective cohort collaborative approach, the Keystone Intensive Care

Unit project (2010). The study included 103 Michigan hospital Intensive Care Units with

300,175 central line catheter days and an 18 month sustainability that included 90 Michigan

hospital Intensive Care Units with 300,310 central line catheter days. The hospitals achieved

markedly reduced rates of bloodstream infections in the initial evaluation period of the Keystone

Intensive Care Unit project. These rates were sustained for an additional 18 months after the

project concluded using a standardized communication checklists with goal setting during

collaborative rounding. The mean rate of bloodstream infection was significantly decreased by

12% (95% confidence interval 9% to 15%) per quarter during the entire post implementation period. This suggested that sustained practices were possible with the right tools in place.

Pronovost et al. (2010) and the Healthcare Infection Control Practices Advisory Committee Guidelines (2011) further endorsed the consistent use of checklists, policies, and protocols for central line insertions and maintenance, dressing changes, intravenous fluid line changes, and the use of alcohol caps on all unused ports to ensure sustained zero CLABSI rates. The AHRQ, (2009) Nurse Bedside Shift Report Checklist specifically addressed the importance of communication about central lines.

Weaver, Weeks, Pronovost, and Pham, (2014) investigated the relationship between intensive care unit patient safety climate profiles and CLABSI rates. Secondary analyses of data collected from 238 adult intensive and intermediate care units was collected. The study included hospitals involved in cohort one of the Comprehensive Unit-based Safety program: Stop Blood Stream Infections project. In this group 78% were non-rural hospitals and 50% of those were teaching hospitals. A hospital culture that promotes safety will be aware of their CLABSI rates. Use of a checklist correlated to decreased incidences of CLABSIs (Weaver et al., 2014). Inductive methods, deductive methods, and exploratory analysis of CLABSI data were used during the 12-month baseline period before the start of the intervention for each cohort in the study. Combined medical-surgical intermediate units (n = 161) that cared for a wide range of patients with complex care needs were also included in the analyses. Creating a culture of safety is an important part of healthcare associated infection improvement efforts, CLABSI reductions improved patient outcomes, and lower morbidity and mortality rates (Weaver et al., 2014).

Consistent use of infection control practices, such as the CLABSI maintenance bundles reduces CLABSI and improves patient safety (McAlearney & Hefner, 2014). The quasi-

experimental study also collected and analyzed qualitative data from interviews with 50 frontline

nurses and 26 Infection Control Practitioners regarding barriers and facilitators of implementing

and sustaining CLABSI reductions using the CLABSI bundle. In the study, there was a

disagreement among the nurses and practitioners about the definition of CLABSI. Therefore, for

this project, the EBP team needed to consider mitigating the potential disagreement by including

frontline staff in the project from the very beginning.

Jones, Stewart, & Rozell (2015) implemented a standardized bedside report practice in an

orthopaedic/trauma surgery unit that included use of the CLABSI bundle for central line

maintenance. The bundle included items such as: visualization of the dressing, changing the

dressing if soiled or non-sterile, use of sterile technique to apply dressings, port and site

cleansing with Chlorhexidine products. The unit based study used the Plan-Do-Study-Act

process improvement tools to implement the process change as well as used a standardized nurse

bedside shift report tool that included central line maintenance. CLABSI rates decreased

significantly over one year. These rate decreases were sustained over five years by implementing

this surveillance practice during the nurse bedside shift report process (Jones, Stewart, & Rozell,

2015). Safety is a priority for all stakeholders. According to the literature reviewed, safety

impacts projects and outcomes that use the best evidence based practices to enhance care and

reduce safety events which could include CLABSI's among other safety concerns.

In summary, the literature supports the use of standardized shift report tools to improve

nurse communications. Standardized tools positively impact communication patterns, nurse

satisfaction and patient involvement. Standardized tools also improve patient safety. Gaps exist

in the literature involving meaningful nurse participation in bedside report on medical surgical

units.

Critical Appraisal and Evaluation of the Evidence

The Johns Hopkins Nursing Evidenced-based Practice Synthesis and Recommendation Tool (Appendix C), lists the 32 articles that answered the PICOT question and were further analyzed. The thirty-two articles applicable to the PICOT question (see Table 2) were divided into three separate sections with rationale supporting the PICOT (see Appendix D). The three sections consisted of the intervention, bedside shift report tools, and the two outcomes, communication and safety/CLABSI.

In addition guidelines which included key components from the CDC's checklist for prevention of CLABSIs were evaluated using the Agree II Tool (see Appendix E). The two guidelines that were applicable to this project were the guideline and report by the American Society of Anesthesiologists Task Force on Central Venous Access and the Guidelines for the Prevention of Intravascular Catheter-Related Infections by the Healthcare Infection Control Practices Advisory Committee, 2011 (see Appendix F).

Synthesis of the Body of Evidence

The level of evidence of the articles ranged from level I through level V and were all of high or good quality. The literature driven practice change of standardized nurse bedside shift report to improve accuracy of handoff communications was strengthened by identifying the effect miscommunication and incomplete handoff has on patient safety (AHRQ, 2009; Jones, Stewart, & Roszell, 2015; Kerr et al., 2014; Leape, Nance, & Nash, 2008; National Patient Safety Foundation, 2013; Pothier et al., 2005; The Joint Commission, 2014; Thomas & Donohue-Porter, 2012; Welsh et al., 2010). The use of standardized tools are purported to impact patient safety by including the patient and/or caregiver in nurse bedside shift report (AHRQ, 2009; Boykin, Schoenhofer, & Valentine, 2014; Cornell et al., 2014; Costello, 2010; Cronenwett

et al., 2009; Laws & Amato, 2010; Pronovost, Goeschel, Colantuoni et al., 2010; Sand-Jecklin& Sherman, 2014; The Joint Commission, 2014; Watkins & Patrician, 2014). Including the implementation of the central line surveillance was a proactive tactic supported by the guidelines to help prevent CLABSIs. Safety is further improved when central lines are monitored and visualized using consistent surveillance methods or checklists (AHRQ, 2009; Jones, Stewart, & Roszell, 2015; Kerr et al., 2011; Leape, Nance, & Nash, 2008; National Patient Safety Foundation, 2013; Pothier et al., 2005; The Joint Commission, 2014; Thomas & Donohue-Porter, 2012; Welsh et al., 2010).

Implications for Practice

Standardizing the nurse bedside shift report process should improve communication. The effects of implementing a standardized report process will enhance communications by establishing a consistent format of report. Further effects of standardized nurse bedside shift report will impact nurse satisfaction and allow for mentoring and teaching to take place as nurses are afforded opportunities to ask questions. Introducing the oncoming nurse to the patient is an initial step in healthy communication and includes the patient in the process (Jones, Stewart, & Rozell, 2015). Patient involvement will increase simply by taking nurse shift report to the bedside rather than it occurring at various areas on the unit. When patients are included in their care decisions, patient satisfaction can improve. According to the Center for Medicare and Medicaid Services (2013), if nursing communication is poor - patient satisfaction was impacted. Including line visualization in the handoff process should sustain a zero CLABSI rate, thus improving patient safety.

Methods: Implementation and Evaluation Plan

Project Setting and Population

The target hospital was a 77 bed rural community hospital with all private rooms. The study was conducted on a 40 bed combined medical surgical and intermediate acute care unit. The unit had an average of 892 patient days per month in a rolling 6 month period in 2016 and an average 353 central line days in a 3 month period. Typical patient diagnoses included, but were not limited to: Chronic Obstructive Pulmonary Disease, Congestive Heart Failure, Chest Pain rule out Myocardial Infarction, Sepsis, Orthopaedics, and general surgeries. The unit employs 59 registered nurses and workdays are generally divided into two 12 hour shifts in 24 hours. The number of nurses working each shift varies with census, however the nurse to patient ratio averaged 1:4. Shift change report typically occurred twice in a 24 hour period. Initially, shift report lacked consistency and was not done at the bedside. Nurses used various formats for note taking and interruptions occurred frequently when report was conducted in the hallway or nurses station.

Action Plan

The action plan is represented in Appendix B. The target hospital strives to be a high reliability organization with collaborative healthcare teams to manage care. A high reliability organization is one that aims to meet or exceed the patient's expectations, empowers providers on the healthcare team to collaborate, and ensures safe care (Melnyk & Fineout-Overrholt, 2015).   These organizations maintain optimal working conditions and have supplies readily available for staff use which supports the healthcare team delivery of adequate and safe care to patients.

Improving nurses' effective communications along with understanding patient safety related issues impacts healthcare delivery. System level changes necessary for safety transformation included cultural safety competence and organizational sustenance to establish care practices maximizing patient safety events and reimbursement to sustain effective hospital operations.

The target hospital EBP team faced many challenges. According to Chism (2013), evidence-based practice is often met with resistance in the clinical setting. For this project, resistance to change impacted effective communications during nurse bedside shift report. Barriers to this projects success were encountered. Effective nursing communication was essential to improve the safe management of acute and chronic health conditions. The nurse director of the targeted hospital Acute Care Unit echoed to the nursing staff AHRQs tenant that communication can reduce safety events during hospital stays. Supervisors who rounded also reinforced the problems identified during the observational needs assessment and noted the inconsistencies among different nurses. The fliers for the project included information from AHRQ. AHRQ has identified that the visualization of lines and catheters along with communication during nurse bedside shift report will decrease safety events.

Implementation Process

Project proposal meetings with administrative leaders were conducted. After two meetings, the target hospital committed fully to support the project. The signature of the agency agreement form is included as Appendix G.

Once the agreement form was signed team formation began. The EBP Unit Practice Council was fully established, meetings convened, and work was distributed. Facilitators from the EBP Unit Practice Council were used to promote change. Key participants were identified as

the acute care nurses working within the hospital and patients. The Infection Preventionist served as an ad-hoc member of the EBP team.

Tool comparison was completed by the DNP student. The team evaluated the comparison information and determined that the AHRQ Bedside Shift Report Checklist tool would be used for the standardized nurse bedside shift report tool. The nurse bedside shift report tool of choice included central line surveillance measures. The practice change using the following tools AHRQ's *Strategy 3* which supported safe patient handoffs: Bedside Shift Report Checklist (Appendix A), Nurse Bedside Shift Report Patient brochure (Appendix H), and Nurse bedside shift report Training PowerPoint. The Training PowerPoint was customized by the DNP student to meet the hospitals specific policies and practices and unique patient population. Scenarios for role playing and scripted responses were developed for the nurses to use and included in the power point training.

Evaluation of Outcomes. The nurse perceptions were measured using the 'Nursing Assessment of Shift Report Survey (Sand-Jecklin & Sherman, 2014) (see Appendix I). Basic demographic information was also collected with the nurse survey. Data was collected pre and 3 months post implementation. Institutional Review Board approval was obtained prior to implementing the quality improvement project.

All nurses were trained on the standardized nurse shift report process, the AHRQ Bedside Shift Report Process, and the outcome evaluation tools, prior to implementing the practice change (n=55). Education was presented during unit meetings to help the staff '*unfreeze'* current practices and opened their minds to new ideas. The training demonstrated the new practice expectations and allowed for practice through role playing. Signage reminded staff that a practice

change was coming and further that leadership was committed to providing a healthy work environment to support the '*change*'.

Prior to implementation the nurse satisfaction survey (Appendix I) was distributed to all 55 nurses using de-identified number coded paper survey tools. De-identified coding was used to correlate consistent nurse responders for the pre and post implementation surveys. Participation was voluntary. Baseline data regarding CLABSIs-3 months prior to implementation was collected by the Infection Preventionist. Implementation of the quality improvement project began in June of 2016.

Nurse bedside shift report compliance was observed throughout the three months that the project was implemented, by the DNP student, Charge Nurses, and Patient Care Supervisors using direct observational methods. The AHRQ Nurse Bedside Report Checklist was used as a guide and as a compliance monitoring tool. Observations occurred daily with each shift change for the first 2 weeks, then weekly for 2 weeks, every other week for 4 weeks, and then monthly. Rounding and compliance monitoring ensured staff had changed practice and the nurse bedside shift report was engrained in every shift change, every day. Lewin's Change Management theory refers to this as the '*refreeze*' necessary to sustain the new practice of standardized nurse bedside shift report. Central line auditing continued to occur by the Infection Preventionist as part of the quality processes in existence at the target hospital. Traditionally, central line surveillance in the target hospital had been done in a random fashion to monitor compliance and address fall outs. At the end of the implementation phase, post observation data was collected over 4 days on the same shift report characteristics as the preliminary assessment by the DNP student.

Data Analysis. Upon closing of the pre and post implementation surveys, responses were entered into an Excel spreadsheet for comparison and analysis using the IBM Statistical Package for Social Sciences 23 (SPSS). CLABSIs 3 months post data was collected from the Infection Preventionist audits and entered into the spreadsheet. Demographic data and responses to the survey items were summarized and reported. Demographic data were used to describe the participants. The mean difference between the pre and post survey scores of the nurse satisfaction survey were compared using paired sample t-test.

Timeline

The EBP Unit Practice Council provided the foundational structure and supported the feasibility and sustainability of this project. Staff education was completed by requiring mandatory staff meeting attendance for the nurses. The AHRQ Strategy 3 Toolkit consisted of 30 PowerPoint slides titled *Nurse Bedside Shift Report Training.* This set was customized and used to train all 55 nurses on the basic use of the tool and the new nurse bedside shift report process to be used at the target hospital. After review of the literature and consideration of administrative input, the EBP team designated seven essential elements that the ideal communication tool should include or address (see Table 1). These seven items were used to critique tools and score accordingly. The team selected the AHRQ Toolkit 3 for implementation as it met all seven essential elements.

Prior to implementation the DNP student conducted an observational evaluation, applied for and received tool approvals, permissions, and IRB approval (see Appendix J), introduced the AHRQ Nurse Bedside Shift Report education at the Acute Care EBP Unit Practice Council meeting, staff meetings and via email. With the assistance of supervisors, the DNP student distributed and posted process change reminders, distributed pre-implementation surveys,

initiated supervisor discussions of the plan with staff while conducting walking rounds and during huddles, and collected pre-implementation CLABSI data.

Nurse bedside shift report started Week 1 with each shift change; the majority of the staff were using nurse bedside shift report techniques by Week 4; nurse bedside shift report competency observations began immediately after implementation; and data collection, post implementation nurse satisfaction surveys, and assimilation began Week 12. During the final month of the EBP each staff nurse was observed to ensure compliance and competency with nurse bedside shift report tools and implementation. Observational methods were used to collect data and evaluate the assimilation of the process. Final reports were compiled after all data was collected, sorted, and analyzed. The implementation timeline is depicted in Table 6.

Economic Evaluation

This was a budget-neutral project as the DNP student led the EBP, reviewed and provided the supportive literature to the team, implemented, and evaluated the process change. The benefits of the project to the hospital, unit, staff, and patients outweighed the minimal financial costs associated with implementation of nurse bedside shift report.

<div align="center">

Outcomes of Project

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The purpose of this EBP project was to evaluate the effects and process of nurse bedside shift report on nurse's perceptions of communication patterns, nurse satisfaction, and patient involvement. The outcomes of the EBP are the nurse communication patterns, nurse satisfaction, and patient involvement. In addition, the process of nurse bedside shift report was observed to ensure the caliber of this quality improvement project. One of important indicators for this quality improvement project was CLABSI rates which were zero prior to project implementation and maintained unchanged over the entire EBP implementation period. Although this steadiness

in CLABSI rates make it impossible to demonstrate the effect of EBP project on the CLABSI rate, the sustained zero infection rates provide some clinical significances. Based on nurse comments during post implementation observational evaluation, for example, the central line surveillance identified and changed at least two outdated central line dressings. The central line surveillance within this EBP project may have contributed to the sustained zero CLABSI rates. The Iowa Model of Evidence-Based Practice to Promote Quality Care and the use of Lewin's Change Management Theory provided a solid basis for the overall EBP project process. Most nurses embraced the new process.

Demographic data of the nurses who participated in the pre survey compared to those eligible nurses surveyed revealed a 76% response rate and a balanced representative sample from day shift (45.2%) and night shift (50%). Two staff identified their shift as "other" accounting for the per diem staff included in the sample size (*n*=55). Of the respondents most ranged in the 20-35 year age range (52%). 76.9% of the respondents had less than 10 years in practice as RN's and 52% indicated their highest level of nursing education as Associate Degree/Diploma. There were more Associate Degree/Diploma level of education majority and less Baccalaureate nurses than was represented in the study by Sand-Jecklin & Sherman (2014), but other demographic information such as years in practice as RN's and age range was similar although unbalanced (see Table 7).

A pretest and posttest approach was used to survey nurses in the acute care areas of the target hospital to examine the nurse satisfaction with their reporting process. Survey participation was voluntary. Of the 59 unit nurses, 55 completed the change in practice education. Four staff members were excluded due to job changes: two were excluded due to leaves of absences, one newly hired staff nurse, and one who had resigned. Of the 55 nurses, 39

completed the surveys at pre implementation and 25 completed the surveys at three months post implementation. Twenty five respondents completed both surveys which represents a 45% response rate (see Figure 2). The Related-sample Signs test and two-tailed t-test were used to determine the mean changes with these ordinal data. Specifically, the paired t-tests were used to examine the mean change in scores from pretest to post test (see Table 8 & 9).

The survey items were grouped into three domains: Communication Patterns, Nurse Satisfaction, and Patient Involvement. Communication patterns included questions 1, 2, 11, 12, 13, 14, and 15. There were no statistically significant differences in these domains.   However, the shift in results is suggestive of some clinical significance and benefit (see Tables 8, 9, & 10). For example, most nurses consistently believed that *report is an effective means of communication* as queried in Question 1 of both surveys. Post implementation results further showed a positive trend for improvement in Question 2-*efficiency of communication*, Question 11-*adequately informed after report*, Question 12-*adequately informed about patient plan of care*, Question 13- *adequately informed about patient discharge needs* and Question 14-*informed about patient teaching needs*. Nurse respondents remained neutral regarding Question15-*completed in a reasonable time*.

Nurse satisfaction included questions 4, 5, 6, 7, and 17. Nurse satisfaction survey items were unable to detect significant change between baseline and three month post implementation of the project. Although, post implementation nurse respondents reported positive trending related to nurse satisfaction with shift report specifically; Question 4- *helps assure accountability efficiency and accuracy*, Question 7-*gives opportunity for mentoring*, and Question 17- *there is good teamwork between shifts.*

Patient involvement included questions 3, 8. 9. 10, and 16. Nurse respondents strongly agreed that the act of reporting at the patient bedside Question 8-*promotes patient involvement in their care*. Nurses reported that bedside shift *Report promotes patient involvement in care* (*p* =.004). Patient involvement in their care promotes communication and impacts a cohesive team approach to care planning including the establishment of realistic expectations. Perceptions of nurse bedside shift report on safety specifically, Question 10- *helps prevent patient safely problems* did not statistically improve with the implementation of nurse bedside shift report, although a positive trend was noted.

CLABSIs were monitored by the Infection Preventionist and reported to the hospital and system Quality Councils which reviewed the quality information that was entered into a database that eventually directs the results to the Center for Medicare and Medicaid Services. No near miss or CLABSI reports were observed during the 3 month implementation period of to the EBP project.

The Infection Preventionist continued this monitoring and submitted monthly reporting to the EBP team and served as an ad-hoc member of the EBP team. Pre and post project implementation CLABSI data showed marked improvement and sustained zero rates since April 2016 through September 2016. This could not be correlated to any interventions implemented during this project. Although, ongoing sustainability of zero CLABSIs may be attributed to nurse efforts in line visualization promoted by this EBP project designed to improve the quality of nurse bedside shift report.

Post implementation observational data collection was conducted by the DNP student over a 4 day post-implementation period at the end of 3 months. Twenty-four nurse shift reports

involving 16 registered nurses were observed revealing the following characteristics during

nurses' shift reports:

- 33.33% (8/24) of shift reports occurred outside the patient's room; .04% (1/24) of

these occurred at the main desk.

- 100% (24/24) of shift reports had the patient's medical record available to all

staff; 87.5% (21/24) opened the patient's medical record.

- 100% (24/24) of shift reports had 5P's (Patient, Past, Present, Progress, Plan)

available to all nurses; 100% (24/24) of the reports included the use of the 5P's.

- 87.5% (22/24) of the nurses wrote notes, 12.5% (3/24) only listened.

- 100% (24/24) of the nurses were willing to answer each other's questions.

- 87.5% (22/24) of the nurses entered the patient's room together.

Comparison of pre implementation and post implementation observational data showed

the practice change was embraced as 66.67% of report took place in the patient room and report

at the main desk was reduced by 46%. While staff consistently had patient medical records

available during report in both observations, during the use of Nurse bedside shift report, 74.5%

more of the nurses opened the patient medical record during report. Availability of the 5 P's

remained consistent (100%) and nurse use of 5 P's during report improved by 44%; 3 nurses

(12.5%) continued to only listen during report and not take notes which was identified as their

personal preference. Nurses continued to be willing to answer each other's questions and 87.5%

of the nurses entered the patient's room together during report. The changes observed between

pre and post implementation depicts a rapid adoption of the EBP of nurse bedside shift among

the majority of the nursing staff (see Table 11).

Unsolicited comments were received during supervisor rounding and from post implementation survey respondents which included; variable accuracy of report depending on what nurse delivered report; report taking 45 minutes or more which was partly attributed to pulling up the computer chart in the patient room; four nurses reported finding overdue central line dressings and commenting nurses praised off-going nurses for changing them during nurse bedside shift report or before leaving the hospital at the end of their shift. These comments were consistent with improved nurse accountability, good teamwork, and improved nurse satisfaction.

Discussion of Future Recommendations and Conclusions

Although communication patterns did not detect statistical differences before and after the implementation of this EBP project, the overall trend of improvement was observed. The change in nurse satisfaction, for example, was approaching a statistically significant level with the implementation of nurse bedside shift report.

Based on the statistical significance of patient involvement as reported by nurse respondents to the survey, future studies should include the evaluation of patient satisfaction with their involvement and the use of nurse bedside shift report. Future studies should include examination of the patient's perception of nurse communication and any possible impact this may have on patient satisfaction. Further examination of the patient's perception of nurse communication would be of interest to the project hospital. Monitoring and intermittent rounding to ensure compliance should be enacted when a change is implemented. Six month and 12 month follow surveys would reveal if compliance with the nurse bedside shift report process is maintained and sustainable over a longer period of time.

Clinically, the project supported the process which included nurses in the change process and used an EBP model to provide a clear foundation for all team members. Such organization

helped to form an effective team approach to implement practice change. The implemented

change was sustained over 3 months. Future change projects should use an EBP model to help

guide the project and form a plan for execution and implementation. Proactive consideration for

implementation at other sites should consider practice variances dependent on the size of the

hospital/units and number, age, and years of experience of staff. Coordination and

implementation may be difficult in larger target hospitals.

Strengths and Limitations

The strengths of the EBP project were greatly attributed to the implemented change and

the establishment of a Unit-based EBP Council led by the DNP student and collaborative charge

nurses and supervisors. Administrative support was also a contributor to the team's successful

implementation of the nurse bedside shift report process. The use of Lewin's Change

Management theory helped staff understand how to adapt and implement a new sustainable EBP

change to practice. Use of the AHRQ Toolkit 3 gave power to the project. Engaged and invested

staff contributed to a healthy response rate for both the pre and post survey.

There were several limitations with this study. First, the target hospital was a small single

site hospital with a small available sample pool. Second, the age and experience of participating

nurses seemed to be younger and newer to the target hospital, taking additional time and effort to

complete the report may be burdensome. For example, participating nurses reported that during

nurse bedside shift report, explanations to patients and family took longer than anticipated and

extended reporting time. Thus, this additional time and required effort may have influenced

nurse satisfaction with the report process. Third, the sample size used for this EBP project is

relatively small. With the use of the Listwise method to handle the missing data, only 25 pairs

were used for the comparisons. Thus, some insignificant findings may be related to its small

power. Future studies with a larger sample size may be needed to understand its effects. Fourth, the lack of evaluation of the patient's perception of nurse bedside shift report may post as an additional limitation. Future study may need to consider patients' perceptions. Finally, this EBP project failed to demonstrate its impact on the CLABSI rates during the implementation period. However, the downward trend of the CLABSI rate actually began in April 2016, before the project started in June 2016. Therefore no direct correlation could be established between the effects of nurse bedside shift report and CLABSI rates. Although one could surmise that as the literature supports, the implementation of nurse bedside shift report may have reinforced practice and created sustainable practice resulting in further zero CLABSI rates. Extended follow up surveys at 6 months and 12 months should be conducted to examine long term sustainability.

Summary

In summary, this EBP demonstrated the ability to implement process change is feasible. Although there is limited statistical significance, the clinical evidence results support further implementation of nurse bedside shift report at other like sized target hospitals. Healthcare delivery is shifting and the nursing profession must change to meet the growing demands and proactively ensure the safety of the stakeholders it serves. By using the AHRQ Toolkit 3, a working plan supportive of the future of nursing was developed. Promoting nursing's transition into safety-based patient-centered care by addressing nurse bedside shift report has positive effects. Staff willingly embraced a practice change that increased patient involvement in care. Further studies could improve quality and safety for all hospitalized patients. The project used the RWJF working plan to support the IOMs Future of Nursing report and promote nursing transition to evolve into something in which improved safety practices are rapidly adopted and lives are saved. This project also supports the DNP Essentials for Practice.

The target hospital believed that rather than preparing nurses to deliver task oriented reactionary care, the shift is now necessary to prepare nurses to promote population accountability for health, wellness, and the promotion of safety by including patients/caregivers in nurse bedside shift report. This project supported conducting nurse bedside shift report which included the patient in their plan of care and encouraged ownership of their health outcomes while working with a supportive team of healthcare professionals. The PICOT and the resultant positive trends indicating significant improvements were made. Target hospital staff supported the EBP process of implementation, adaptation, and standardization during nurse bedside shift report to improve nurse satisfaction and sustain decreased CLABSIs as an important project. The project is a powerful initiative in improving patient involvement and safety. Based on the positive trends noted from the result of this EBP project, nurse bedside shift report should be rolled out at additional sites within the target hospital system using similar methods and evaluation tools.

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Table 1

Comparison of Nurse Shift Report Tools

Tool	Encouraged bedside report	Included patient/caregivers	Included focused assessment & visualization of Lines	Prompted questions	Prompted opening of med rec	Identified outstanding tasks	Included focused safety assessment	Score
SBAR						X		1/7
ISBAR	X	X				X		3/7
P-VITAL	X	X			X	X		4/7
I PASS the BATON	X	X	X		X	X	X	6/7
I SHAPED	X	X		X			X	4/7
AHRQ Toolkit 3	X	X	X	X	X	X	X	7/7

Note. SBAR=Situation, Background, Assessment, Recommendations; ISBAR=Introduction, Situation, Background, Assessment, Recommendations; P-VITAL= Presenting information, checking patients' Vital signs, checking Input and output patterns, checking patients' Treatments, discussing Admission or discharge criteria, and filling out Legal documents; I PASS the BATON= Introduction, Patient, Assessment, Situation, Safety concerns, Background, Actions, Timing, Ownership, and Next; I SHAPED= Introduce, Story, History, Assessment, Plan, Error, and Dialogue; AHRQ= Agency for Healthcare Research and Quality.

Table 2

Search Strategies for Review of the Literature

Date	Keywords, Subject Headings, MeSH Terms	Database/ Source	Choice of Studies		# Keeper Studies for Critical Appraisal & Evaluation
			# of Hits	# Reviewed	
3.1.16	Nurse bedside shift report tools	CINAHL	100	20	9
2.5.16	Bedside reporting	CINAHL	1,627	45	6
		EBSCO			
3.1.16	Safe patient handoff	CINAHL	42	9	8
3.1.16	Caregiver transitions	CINAHL	267	30	0
3.1.16	Communication tools	CINAHL	134	16	3
3.1.16	Hospital acquired conditions	CINAHL	38	2	1
3.1.16	Central line associated blood stream infections	CINAHL	218	25	4

Table 3

Keeper Studies for Inclusion Examining Level of Evidence and Quality of Evidence of Tools

Author(s)	Year	#	Level of Evidence							Quality of Evidence		
			I	II	III	IV	V	VI	VII	High	Good	Low
Hughes & Clancy	2005	1		X								X
Dufault et al.	2010	2			X							X
Freitag & Carroll	2011	3		X								X
Street et al.	2011	4		X								X
Thomas	2012	5		X						X		
Radke	2013	6	X							X		
Reinbeck & Fitzsimons	2013	7		X						X		
Wilson	2013	8		X						X		
Jones, Stewart, & Rozsell	2015	9		X							X	

Table 4

Keeper Studies for Inclusion Examining Level of Evidence and Quality of Evidence of Communication

Author(s)	Year	#	I	II	III	IV	V	VI	VII	High	Good	Low
					Level of Evidence					Quality of Evidence		
Pothier et al.	2005	1					X				X	
Laws & Amato	2010	2					X				X	
Street et al.	2011	3		X							X	
Tidwell et al.	2011	4		X						X		
Tobiano, Chaboyer, & McMurray	2011	5			X						X	
Freisen et al.	2013	6			X						X	
Boykin, Schoenhofer, &	2014	7					X				X	
Sand-Jecklin & Sherman	2014	8		X							X	
Jones, Stewart, & Rozsell	2015	9		X							X	
Abraham et al.	2016				X						X	

Table 5

Keeper Studies for Inclusion Examining Level of Evidence and Quality of Evidence of Safety/Central Line Associated Blood Stream Infections

Author(s)	Year	#	I	II	III	IV	V	VI	VII	High	Good	Low
					Level of Evidence					Quality of Evidence		
AHRQ	2009	1	X							X		
Cronenwett et al.	2009	2					X				X	
Cornell	2010	3					X				X	
Pronovost et al.	2010	4		X						X		
Weingart et al.	2013	5					X			X		
The Joint Commission	2014	6	X							X		
Boykin, Schoenhofer, & Valentine	2014	7					X				X	
Cornell et al.	2014	8		X							X	
McAleraney & Hefner	2014	9			X						X	
Tavianni et al.	2014	10		X						X		
Watkins & Patrician	2014	11			X						X	
Weaver, Weeks, Pronovost, & Pham	2016	12		X						X		
Colvin, Eisen, & Gong	2016	13					X				X	

Note. AHRQ= Agency for Healthcare Research and Quality

Table 6

Implementation Timeline

Activity	June					July				August		
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Send staff education/updates via email	x	x	x	x	x	x	x		x			x
Staff attend staff meetings					x				x			
Checklists available	x	x	x	x								
Post Flyers/Reminders	x	x	x	x		x		x		x		x
Distribute survey												x
Facilitators present at shift change	x	x	x			x			x			
Supervisor support at shift change	x	x	x	x	x	x	x	x	x	x	x	
Gather CLABSI data					x				x			
Compliance rounding					x	x	x	x	x		x	
Organize data		x		x					x			x

Note. CLABSI=Central line associated bloodstream infection

Table 7

Nurse Respondents Demographic Characteristics Pre and Post

| | | Pre | | Post | |
Demographic		(n=39)	70.90%	(n=25)	64.1%
Age range in years					
	20-35	23	58.97%	13	52.0%
	36-45	8	20.51%	7	28.0%
	46-55	4	10.26%	4	16.0%
	56+	4	10.26%	1	4.0%
Practice as RN in years					
	<5	18	46.15%	10	40.0%
	6-10	12	30.77%	9	36.0%
	11-20	7	17.95%	5	20.0%
	21+	2	5.13%	1	4.0%
Highest level of nursing education					
	AD/Diploma	21	53.85%	13	52.0%
	BSN	14	35.89%	10	40.0%
	MSN	4	10.26%	2	8.0%
Typical shift worked					
	7am-7pm	16	41.02%	10	40.0%
	7pm-7am	21	53.85%	13	52.0%
	Other	2	5.13%	2	8.0%

Note. AD=Associate Degree; BSN=Bachelor of Science in Nursing;
MSN=Master of Science in Nursing; RN=Registered Nurse

Table 8

Comparisons of Survey Questions Pre and Post

Item Question	Pre & Post	Min	Max	M	SD
Q1 effective means of communication	Pre	2	5	4.2	0.816
	Post	2	5	4.4	0.816
Q2 efficient means of communication	Pre	2	5	3.92	1.038
	Post	2	5	4	0.957
Q3 helps identify change in patient condition	Pre	2	5	4.12	0.971
	Post	2	5	4.32	0.802
Q4 helps assure accountability	Pre	1	5	3.76	1.3
	Post	3	5	4.36	0.638
Q5 ensures professional report	Pre	2	5	3.52	1.005
	Post	1	5	4	1.041
Q6 is relatively stress-free	Pre	1	5	3.16	1.179
	Post	1	5	3.12	1.013
Q7 gives opportunities for mentoring	Pre	1	5	3.44	1.044
	Post	3	5	3.72	0.737
Q8 promotes patient involvement in care	Pre	1	5	3.04	1.338
	Post	2	5	4.04	0.79
Q9 prevents delays in patient care and discharge	Pre	2	5	3.36	0.907
	Post	2	5	3.08	0.997
Q10 helps prevent patient safety problems	Pre	2	5	3.76	0.831
	Post	3	5	4	0.577
Q11 adequately informed after report	Pre	1	5	3.52	1.085
	Post	2	5	3.72	0.678
Q12 informed about patient plan of care	Pre	2	5	3.6	1
	Post	2	5	3.76	0.723
Q13 informed about patient discharge plan	Pre	2	5	3.56	0.917
	Post	2	5	3.64	0.757
Q14 informed about patient teaching needs	Pre	2	5	3.28	0.98
	Post	2	5	3.6	0.764
Q15 completed in a reasonable time	Pre	1	5	3	1.19
	Post	1	5	2.8	1.118
Q16 keep patients informed about care	Pre	2	5	3.68	0.852
	Post	2	5	3.8	0.764
Q17 there is good teamwork between shifts	Pre	1	5	3.44	1.044
	Post	2	5	3.76	0.831

Note. Min=Minimum; Max=Maximum; M=Mean; SD=Standard Deviation

Table 9

Comparisons between Pre and Post for Each Survey Question

Paired Pre & Post	Paired Differences			t	p
	M	SD	SEM		
Pair 1 Q1Post - Q1Pre	+.200	.957	.191	+1.044	.307
Pair 2 Q2Post - Q2Pre	+.080	1.187	.237	+.337	.739
Pair 3 Q3Post - Q3Pre	+.200	1.080	.216	+.926	.364
Pair 4 Q4Post - Q4Pre	+.600	1.528	.306	+1.964	.061
Pair 5 Q5Post - Q5Pre	+.480	1.475	.295	+1.627	.117
Pair 6 Q6Post - Q6Pre	.040	1.020	.204	.196	.846
Pair 7 Q7Post - Q7Pre	+.280	1.100	.220	+1.273	.215
Pair 8 Q8Post - Q8Pre	+1.000	1.555	.311	+3.216	.004*
Pair 9 Q9Post - Q9Pre	.280	1.275	.255	1.098	.283
Pair 10 Q10Post - Q10Pre	+.240	1.052	.210	+1.141	.265
Pair 11 Q11Post - Q11Pre	+.200	1.041	.208	+.961	.346
Pair 12 Q12Post - Q12Pre	+.160	1.068	.214	+.749	.461
Pair 13 Q13Post - Q13Pre	+.080	.812	.162	+.492	.627
Pair 14 Q14Post - Q14Pre	+.320	1.145	.229	+1.398	.175
Pair 15 Q15Post - Q15Pre	.200	1.155	.231	.866	.395
Pair 16 Q16Post - Q16Pre	+.120	.927	.185	+.647	.524
Pair 17 Q17Post - Q17Pre	+.320	.802	.160	+1.995	.058

Note. Listwise (n=25); M=Mean; SD=Standard Deviation; SEM=Standard Error Mean; t=2-tailed t test; p=p-value
*p <.05

Table 10

Paired Differences of Survey Domains Pre and Post

Domain	Paired Differences				
	M	SD	SEM	*t*	*p*
Communication pattern (Q 1,2,11,12,13,14,15)	+.84000	5.77119	1.15424	+.728	.474
Nurse satisfaction (Q 4,5,6,7,17)	+1.64000	4.49889	.89978	+1.823	.081
Patient involvement (Q 3,8,9,10,16)	+1.28000	3.98455	.79691	+1.606	.121

Note. Listwise (n=25); Min=Minimum; Max=Maximum; M=Mean; SD=Standard Deviation; SEM=Standard Error Mean; *t*=2-tailed t test; *p*=p-value

Table 11

Observations of Nurse Shift Report Pre and Post

Observations	Pre (n=24)	Post (n=24)
Location of report		
Inside patient room	0%	66.67%
Outside patient room	100%	33.33%
Medical record		
Available	100%	100%
Used	12.50%	87.50%
Not used	87.50%	12.50%
5P's		
Available	100%	100%
Used	58%	100%
Not used	42%	0%
Nurses behaviors		
Both entered patient room	0%	87.50%
Wrote notes	87.50%	87.50%
Answered questions	100%	100%

Note. 5 P's= Patient, Past, Present, Progress, Plan

Figure 1.

Iowa Model of Evidence-Based Practice to Promote Quality Care
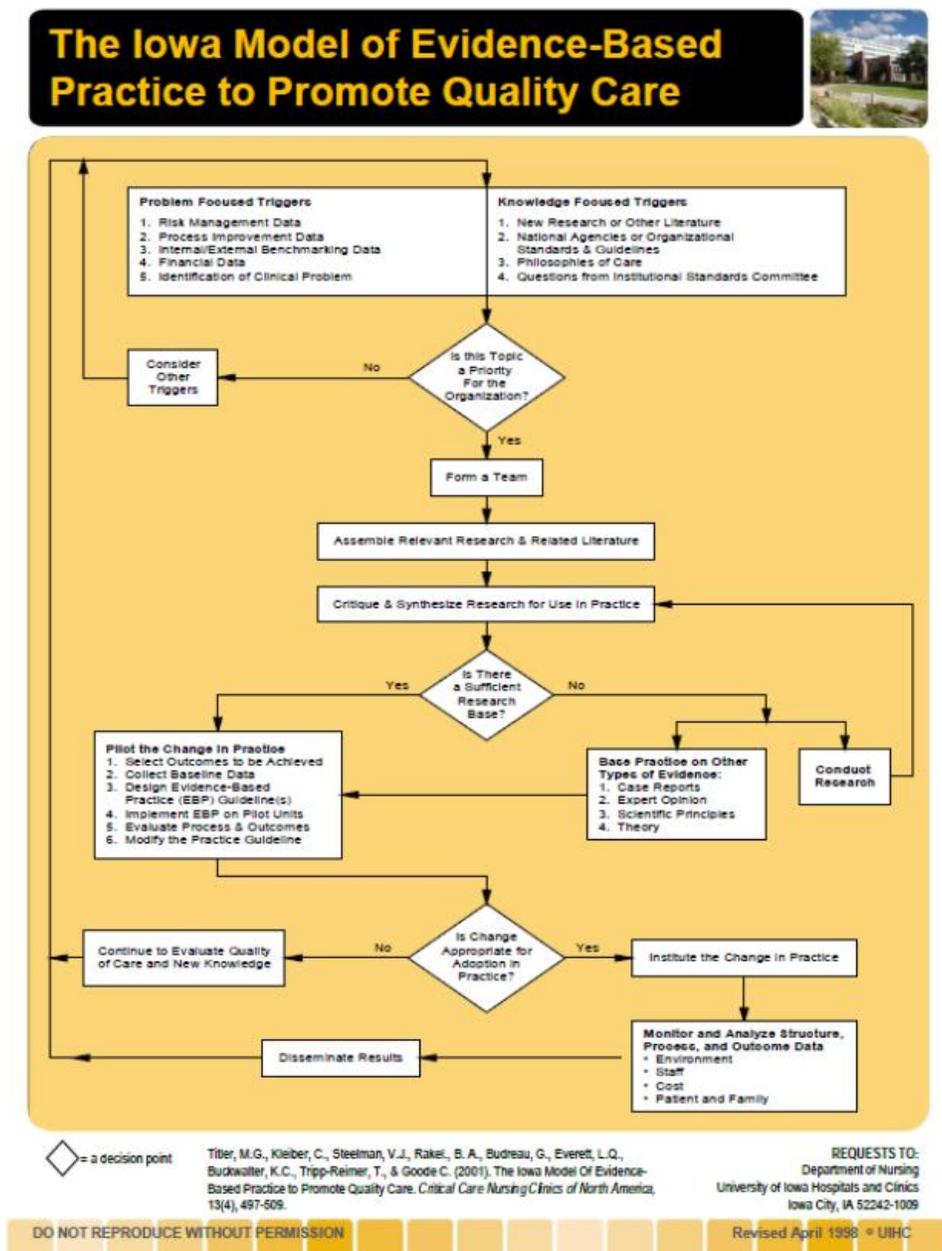
Figure 1. Used/Reprinted with permission from the University of Iowa Hospitals and Clinics, Copyright 1998. For permission to use or reproduce the model, please contact the University of Iowa Hospitals and Clinics at 319-384-9098 or uihcnursingresearchandebp@uiowa.edu.

Figure 2.

Lewin's Change Management Theory

Unfreeze	Change	Refreeze
Create the right environment	Provide an evolutionary environment	Reinforce desired state
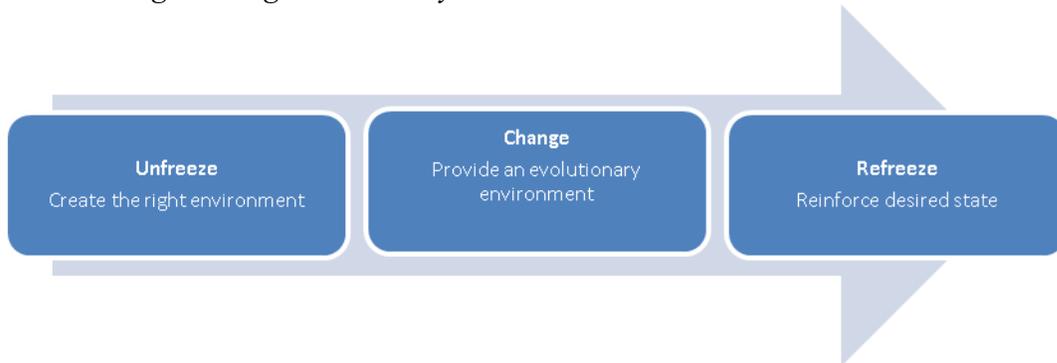
Note. Adapted from Lewin's Change Management Theory

Appendix A

Bedside Shift Report Checklist

☐ Introduce the nursing staff to the patient and family. Invite the patient and family to take part in the bedside shift report.

☐ Open the medical record or access the electronic work station in the patient's room.

☐ Conduct a verbal SBAR report with the patient and family. Use words that the patient and family can understand.

S = **Situation**. What is going on with the patient? What are the current vital signs?

B = **Background**. What is the pertinent patient history?

A = **Assessment**. What is the patient's problem now?

R = **Recommendation**. What does the patient need?

☐ Conduct a focused assessment of the patient and a safety assessment of the room.

- Visually inspect all wounds, incisions, drains, IV sites, IV tubings, catheters, etc.
- Visually sweep the room for any physical safety concerns.

☐ Review tasks that need to be done, such as:

- Labs or tests needed
- Medications administered
- Forms that need to be completed (e.g., admission, patient intake, vaccination, allergy review, etc.)
- Other tasks: _____

☐ Identify the patient's and family's needs or concerns.

- Ask the patient and family:
  - *"What could have gone better during the last 12 hours?"*
  - *"Tell us how your pain is."*
  - *"Tell us how much you walked today."*
  - *"Do you have any concerns about safety?'*
  - *"Do you have any worries you would like to share?"*

- Ask the patient and family what the goal is for the next shift. This is the patient's goal — not the nursing staff's goal for the patient.
  - *"What do you want to happen during the next 12 hours?"*
  - Follow up to see if the goal was met during the verbal SBAR at the next bedside shift report.

Adapted from the Emory University Bedside Shift Report Bundle.

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Guide to Patient and Family Engagement

Appendix B

Iowa Model and Action Plan

Iowa Model (Steps 1 – 7) & DMAIC Project Objectives	Activities to Complete	Key Points to address for success and reduce barriers	Persons Accountable (Facilitators)	Timeline Projected/Actual
1) Selecting a Topic (Define)	-Identify practice and knowledge triggers	Health system is part of a greater community Designated unit is part of a health care organization Access to data Priority for institution is necessary to ensure support & allocation of resources. National trend in performance measures used to compare organization and benchmarking Organizational support for development of EBP teams and Process Improvement Conduct a needs assessment	Heidi Shank Eileen Walsh	Projected: 7/2015 Actual: 5/2015 Modified: 9/2015 Projected: 7/2015 Actual: 9/2015 Projected: 7/2015 Actual: 9/2015 Projected: 7/2015 Actual: 9/2015
2) Forming a Team	-Recruit DNP project committee members -Recruit interprofessional EBP team members	System redesign supports care by an interprofessional team of experts Composition of team should reflect topic	Eileen Walsh UT Ann Bowling WSU Tsui-Sui Annie KaoUT Heidi Shank Heidi Shank Paula Grieb Kelly Vogt Acute Care Unit Practice Council	Projected: 5/2015 Actual: 9/2015 Projected: 10/2015 Actual: 12/2015
3) Retrieving Evidence	-Literature search	Electronic Support institution Expert team with integration of specialists Internal evidence through needs assessment	Heidi Shank Eileen Walsh	Projected: 10/2015 Actual: 5/2015 Updates: 7/2015, 9/2015, 2/2016,3/2016
4) Grading the Evidence	-Identify grading strategy	Expert team	Heidi Shank Eileen Walsh EBP team	Projected: 10/2015 Actual: 5/2015

Iowa Model (Steps 1 – 7) & DMAIC Project Objectives	Activities to Complete	Key Points to address for success and reduce barriers	Persons Accountable (Facilitators)	Timeline Projected/Actual
	-Assign level of evidence to each article			Updates: 7/2015, 9/2015, 2/2016,3/2016
5) Developing an EBP standard (Inspection)	-Identify practice standard for Consistent Bedside Communication to improve CLASBSI and HAI

-complete IRB paperwork after Proposal Defense approval | Evidence based guidelines need to be woven into everyday practice through consistent bedside communication which includes the patient and optimizes bedside report opportunities while reducing HAIs | Eileen Walsh UT Ann Bowling WSU Tsui-Sui Annie Kao UT Heidi Shank Paula Grieb ProMedica Kelly Vogt Gena Colton-IC&P ProMedica Bedside Nurses | Projected: 10/2015 Actual: 12/2015

Projected: 2/2016 Actual: 6/2016 |
| 6) Implementing EBP (Control) | -Develop timeline with PI team | Redesign of handoff communication that occurs between nurses to occur at the bedside

Staff education and use of "action plans' lead to improvements in collaborative goal setting and problem solving for engagement of staff and patients to improve handoff communication and reduce HAIs (CLABSIs).

Staff education materials should be based on current evidence based guidelines (AHRQ Toolkit 3).

Scripting and AHRQ checklists will support the EBP to ensure consistency of handoff communications | Eileen Walsh UT Ann Bowling WSU Tsui-Sui Annie Kao UT Heidi Shank Paula Grieb ProMedica Kelly Vogt Gena Colton-IC&P ProMedica Bedside Nurses | Projected: 11/2015 Actual: 3/2016 |
| 7) Evaluating EBP (Measurement & Analysis) | -Identify Process and Outcome indicators

-Gather baseline data and post -Post implementation Data comparison | Trend in performance measures used to compare organization and benchmarking using designated reporting data | Eileen Walsh UT Ann Bowling WSU Tsui-Sui Annie Kao UT Heidi Shank Paula Grieb ProMedica Kelly Vogt Gena Colton-IC&P ProMedica Bedside Nurses | Projected: 10/2015 Actual: 12/2015

Projected: 8/2015 Actual: 9/2015,3/2016, 6/2016

Projected: 7/2016 |

Iowa Model (Steps 1 – 7) & DMAIC Project Objectives	Activities to Complete	Key Points to address for success and reduce barriers	Persons Accountable (Facilitators)	Timeline Projected/Actual
				Actual: 6/2016 & 9/2016
Disseminating results	-DNP project presentation		Eileen Walsh UT Ann Bowling WSU Tsui-Sui Annie Kao UT Heidi Shank Paula Grieb ProMedica Kelly Vogt Gena Colton-IC&P ProMedica Bedside Nurses	Projected: 10/2016
	-Creation of sustainability plan & possible hospital wide roll out			Projected: 12/2016
	- Region 10 Research Day Presentation			Projected: 2018
	-Poster presentation UTCON Research day			Projected: 2017
	Write for publication			Projected: 2017

Appendix C

Johns Hopkins Nursing Evidence-Based Practice Synthesis and Recommendations Tool

Category (Level type)	Total number of sources/level	Overall Quality Rating	Synthesis of Findings
Level I · Experimental study · Randomized Controlled Trial (RCT) · Systematic review of RCTs with or without meta-analysis	4	A	AHRQ (2009) A standardized report process at patient handoff reduces errors and improves patient safety. The Joint Commission (2014) same as above. Melnyk, B., Fineout-Overholt, E., (2015) same as above. Radke (2013) The nurse-patient relationship is therapeutic and that it is crucial for nurses to assess, plan, and put context behind the care delivered to their patients.
Level II · Quasi-experimental studies · Systematic review of a combination of RCTs and quasi-experimental studies, or quasi-experimental studies only, with or without meta-analysis	12	4A 8B	Jones, Stewart,Rozsell (2015) Beyond Best Practice: implementing a UBP project. Sand-Jecklin, K., & Sherman, J. (2014) Positive trending of outcomes suggest bedside report standardization is perceived as a positive improvement by patients and staff. Weaver, Weeks, Provonost, & Pham (2014). On the CUSP: Stop BSI: Evaluating the relationship between central-line blood stream infection rates and patient safety climate initiative for 4 years collecting data, planning interventions, checklists, and processes.. Provonost is the father of clabsi prevention AND this article is the heart of the PICOT question. Pronovost, et al. (2010). Sustaining reductions in catheter related bloodstream infections in Michigan intensive care units: observational study

Level III · Non-experimental study · Systematic review of a combination of RCTs, quasi-experimental, and non-experimental studies, or non-experimental studies only, with or without meta-analysis · Qualitative study or systematic review of qualitative studies with or without meta-synthesis	**4**	**1A** **3B**	Dufault (2010) A tool can be developed if a methodology is used and team members are engaged. Abraham et al. (2016) understanding of the dynamics of communication in multiple settings. MacAlearney et al. (2014). Facilitates central line-associated blood stream infection qualitative study comparing perspectives of infection control Provides strong support for facilitation of implementation and buy-in. Tavianini, Deacon, Negrete, & Salpaka (2014). Up for the challenge: eliminating peripherally inserted central infections in a complex patient-2 year study involving PICC team members who are usually central line experts used checklists to ensure compliance. Validates use of checklists and evaluation. And included a central line audit tool
Level IV · Opinion of respected authorities and/or reports of nationally recognized expert committees/consensus panels based on scientific evidence	**0**		

| **Level V**

· Evidence obtained from literature reviews, quality improvement, program evaluation, financial evaluation, or case reports

· Opinion of nationally recognized expert(s) based on experiential evidence | **8** | **3A**

5B | Boykin, Schoenhofer, & Valentine (2014). Supportive research for standardized bundles and tools and consistent use of handoff communication.

Jones, Steward, & Roszell (2015). Implementing a Unit-Based CLABSI Project this article detailed steps similar to the Iowa model for project implementation and also was reliable

Cronenwett et al. (2009), National standards for safety

Costello (2010), Safety issues observed during report and literature found to support the use of a handoff tool
Weingart, et al. (2013) Overall improvement in process of handoff report and safety at low cost. |
| **Recommendations Based on Evidence Synthesis and Selected Translation Pathway** | | | |

Strong, compelling evidence, consistent results: solid indication for a practice change. 3 main Domains apparent in the literature are Communication Patterns, Nurse Satisfaction, and Patient Involvement. Tools were also reviewed along with Safety/CLABSIs. Synthesis of the Evidence supports implementation of standardized nurse bedside shift report.

EBP Question: Among adult patients in a 40 bed combined medical surgical and intermediate acute care unit, how does the use of a standardized nurse bedside shift report process compared to other nurse shift report processes improve communication patterns, nurse satisfaction, and patient involvement as well as reduce central line infections over 3 months?

Appendix D

Synthesis of Evidence

Tools

Article Citation	Conceptual framework & purpose	Design method	Sample/ setting	Major variables studied & definitions	Measurement	Data Analysis	Findings	JH LEVEL and Appraisal: Worth to practice
Hughes & Clancy (2005). Working conditions that support patient safety	Tools for implementing bedside report	Quality Improvement process	Several hospital units	Nurse Bedside Shift Report standard tool	Qualitative and Quantitative study	Reported process for implementing the plan with data	Improved patient sat, communication and patient satisfaction	LEVEL II-B Impactful knowing results suggest that a standardized tool improves patient sat, nurse sat, and reduces risk.
Dufault (2010) Translating an Evidence-based Protocol for nurse to nurse shift handoffs	Roger's theory with Orlando's theory	Translational research	9 articles supported tool development	Collaborative Research Utilization Model used	Evidence appraisal and evaluation	Theoretical & clinical evidence evaluated by literature review	A tool can be developed if a methodology is used and team members are engaged	LEVEL III-B A tool can be developed if a methodology is used and team members are engaged
Freitag & Carroll (2011) Handoff communication: using failure modes and effects analysis to improve the transition in care process.	Used FMEA & SBAR	Quality Improvement process and risk module	Pilot unit was ICU , then 7 other units in hospital	Piloted on a small unit then reproduced on other units.	Mixed measures of events, economic evaluation, surveys.	Data targeting patient satisfaction and nurse-sensitive outcomes were collected pre and post-implementation with notable gains. decrease in specific	Improved communication, patient safety, and nurse satisfaction. Supported a structured tool. Results hampered by the use of too many	LEVEL II-B Sustaining change in light of care-related variables is a challenge leadership, quality, and patient care teams are

						hospital-wide, nurse-associated indicators, falls (5%), restraint use (31%), and catheter-associated urinary tract infections (34%).	tools and no control group.	committed to achieving.
Street et al. (2011) Communication at the bedside to enhance patient care: a survey of nurses' experience and perspective of handover.	SBAR	Quality Improvement Project	259 nurses surveyed, and pilot of tool conducted	Pilot of SBAR tool	Cross-sectional survey	Audits/ monitoring involvement of patients, use of Situation-Background-Assessment-Recommendation, active patient checks and checking of documentation	Improvement of involvement of patients, use of Situation-Background-Assessment-Recommendation, active patient checks and checking of documentation	LEVEL II-B Mixed responses with variance between part time and full time staff perceptions noted.
Thomas, Donohue-Porter (2012). Blending evidence and innovation: improving intershift handoffs in a multihospital setting.	I PASS the BATON	Quality Improvement Project	Multi-hospital project	Pilot of I PASS the BATON tool at multiple hospitals.	Quantitative and Qualitative study	Identified critical issues in 459 incidents related to handover and trialed tool to improve communication and monitored errors.	Teams are effective at change process initiation and for sustaining change. Use of a tool standardized expectations of staff.	LEVEL II-A Developed a unit practice team and shared relevant evidence to implement change.
Radke (2013). Improving patient satisfaction with nursing communication using	ISBAR Peplau's interpersonal relations theory was used in the adoption of this practice.	Quality Improvement Process improvement Project	Small med surg unit/intermediate care blended unit	Implement ISBAR tool	Quantitative and Qualitative study	Met with the goal of reaching 90% satisfaction rates, which increased from 76% and 78%.	A pilot bedside shift report process was developed to improve patient satisfaction scores in the area of "nurse	LEVEL II-B The nurse-patient relationship is therapeutic and that it is crucial for nurses to

							communicated well,"	assess, plan, and put context behind the care delivered to their patients.
bedside shift report	Lewin's Change Theory							
Reinbeck & Fitzsimmons (2013). Improving the patient experience through bedside shift report.	SBAR	Quality Improvement Project	Variance among units in hospital	592 bed hospital	Quasi experimental	Determined variable tools help with handoff although some variance occurs because of human and situational factors. Marked improvement in errors with use of SBAR tool.	A pilot bedside shift report process was developed using SBAR to improve patient information handoff.	LEVEL I-A Standardized communication aids in handoff.
Wilson (2014). Improving clinical handover in emergency departments	Audit of bedside reporting & case studies using P-Vital process tool	Quality Improvement Project	Australian Emergency Department with nurse report occurring 2 times a day.	Emergency Department considered various handoffs including all professional groups in ER environment	Quasi experimental	Determined variable tools help with handoff although some variance occurs because of human and situational factors. Marked improvement in errors with use of PVital tool.	Recommends a structured handover tool- PVital tool. Highlights importance of bedside hand over and indicates involving patients and error reduction.	LEVEL II-A Although environment is different, the basic information needed at nurse handoff is similar and applicable to the project.
Jones et al. (2015). Beyond Best Practice: Implementing a Unit Based CLABSI project	Used the Consolidated Framework for Implementation of researches 5 interacting domains. IOWA model	Quality Improvement process	Ortho/Trauma surg unit in a academic hospital setting	CLABSI Bedside reporting to include line maintenance	CLABSI rates and staff compliance observed by leadership and peers.	Reported process for implementing the plan with data reported as CLABSI rates per 1,000 patient days	ICUs Implemented bedside reporting and decreased CLABSI rates from 3.2 to 0.6 per 1,000 patient days.	LEVEL II-B Impactful knowing results suggest that Creating a culture of safety is an important

	implement intensive care unit (ICU) patient safety regarding CLABSIs using the Plan Do Study Act process.							part of healthcare associated infection improvement efforts and CLABSI reductions.

Communication

Article Citation	Conceptual framework & purpose	Design method	Sample/ setting	Major variables studied & definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to practice
Pothier et al. (2005), Pilot study to show the loss of important data in nursing handover.	No conceptual framework noted. Purpose was to identify lost information with various report styles	Observational	Observed the handover of 12 simulated patients over five consecutive handover cycles between nurses.	3 handover styles observed.	Observational	Three handover styles, amount of data loss was recorded for each style	A note-taking style resulted in 31% of data being transferred correctly after five cycles.	Level 5–B When a paper format was added to report less information loss was noted.
Laws & Amato, (2010), Incorporating bedside reporting Into shift change	No conceptual framework noted Purpose was to improve communication and include patients in decision making	EBP implementation	Stroke rehabilitation unit	Staff impressions with bedside reporting and patient communication	Qualitative evaluation	No data specifically reported	Inferred improved communication by qualitative reporting of staff involved.	Level 5-B Reinforced the importance of bedside communication and using EBP implementation theories for effective results

Street et al. (2011) Communication at the bedside to enhance patient care: a survey of nurses' experience and perspective of handover.	Communication with SBAR	Quality Improvement Project	259 nurses surveyed, and pilot of tool conducted	Pilot of SBAR tool	Cross-sectional survey	Audits/ monitoring involvement of patients, use of Situation-Background-Assessment-Recommendation, active patient checks and checking of documentation	Improvement of involvement of patients, use of Situation-Background-Assessment-Recommendation, active patient checks and checking of documentation	LEVEL II-B Mixed responses with variance between part time and full time staff perceptions noted.
Tidwell et al. (2011)	To evaluate the effectiveness of bedside nursing report	Quality Improvement and Process Improvement Project	Pediatric Neuroscience unit-convenience sample	Staff impressions with bedside reporting and patient communication	Patient and nurse satisfaction and nursing overtime were measured 6 months before and 6 months after the implementation of bedside reporting.	Data were analyzed using paired t test, chi-square test, and Fisher's exact tests to determine significant changes.	Patients, families, and nurses reported an increase in satisfaction after the implementation of bedside reporting. Overtime decreased and represented a potential cost savings of nearly $13,000 annually.	LEVEL II-A Good outcomes support clinical significance of maintaining good communication and taking it to the bedside to involve patients/families. Cost savings noted.
Tobiano, Chaboyer & McMurray (2011)	Case Study	Non-scientific case study	8 family members-convenience sample	Interviews and Case studies with family	Qualitative	Interviews with family members were recorded	Family members related improved satisfaction and	LEVEL III-B Family members reported

				members of patients			felt informed about the plan of care.	improved communications and patient satisfaction and felt more informed and valued in the patient care experience.
Freisen et al (2013) Developing a patient-centered ISHAPED handoff with patient/family and parent advisory councils.	Standardized communication tool development	Non-scientific Tool development	Hospital based unit	Conducted pilots of tools and modified based on what was needed at the specific site	Quasi-experimental	Lacked validation of the tool although improvements using the tool were noted.	Staff trial tools and worked within teams to implement communication techniques to improve patient care and safety	LEVEL III-B Tool development enhanced communication which was an expectation of the hospital
Boykin, Schoenhofer, & Valentine, 2014. Health care system transformation for nursing and health care leaders.	Organized presenting High level articles regarding the importance of standardizing report and handoff to improve patient safety	Literature Review	Varied articles	Focused on safety and bundles to promote standardized care	Varied among studies included.	None listed	Supportive research for standardized bundles and tools and consistent use of handoff communication	LEVEL V-B Supportive research for standardized bundles and tools and consistent use of handoff communication
Sand-Jecklin, K., & Sherman, J. (2014). A quantitative assessment of patient and nurse outcomes of	To quantify quantitative outcomes of a practice change to a blended form of bedside nursing report.	Quasi-experimental pre- and post-implementation design	Medical Surgical Research Utilization Team at West Virginia University	To implement a change in practice to a blended form of bedside nurse shift handoff, and to evaluate this new format in	Quasi-experimental	154 patients and 98 nurses completed the three-month post-implementation survey, and 54 completed the	The rebounding of nurses' perceptions about the effectiveness, efficiency and stressfulness of report to approximately	Level II-B Positive trending of outcomes suggest bedside report standardization is perceived as a positive

bedside nursing report implementation.				terms of patient and nurse satisfaction as well as impact on patient safety		13-month post-implementation survey.	baseline levels at the 13-month post-implementation data collection point would seem to indicate that it may take longer than three months for nurses to become comfortable with the practice of bedside report	improvement by patients and staff.
Jones et al. (2015). Beyond Best Practice: Implementing a Unit Based CLABSI project	Used the Consolidated Framework for Implementation of research 5 interacting domains. IOWA model.To implement intensive care unit (ICU) patient safety regarding CLABSIs using the Plan Do Study Act process.	Quality Improvement process	Ortho/Trauma surg unit in a academic hospital setting	CLABSI Bedside reporting to include line maintenance	CLABSI rates and staff compliance observed by leadership and peers.	Reported process for implementing the plan with data reported as CLABSI rates per 1,000 patient days	ICUs Implemented bedside reporting and decreased CLABSI rates from 3.2 to 0.6 per 1,000 patient days.	LEVEL II-B Impactful knowing results suggest that Creating a culture of safety is an important part of healthcare associated infection improvement efforts and CLABSI reductions.
Abraham et al. (2016). Characterizing the structure	The characterizatio n of communicatio	SCA (Sequential Conversationa l Analysis), a	Interviews of staff nurses.	Care transitions; Communicatio n;	SCA (Sequential Conversationa l Analysis), a	Qualitative information shared by nurses helped to	Nurses are very aware of time consuming activities such	Level III-B Applicability of the SCA approach as a

and content of nurse handoffs: A sequential conversational analysis approach.	n patterns highlights the relationships underlying the verbal content of nurse handoffs with specific emphasis on: the interactive nature of conversation, relevance of role-based (incoming, outgoing) communicatio n requirements, clinical content focus on critical patient-related events, and discussion of pending patient management tasks.	mixed-method approach		Communicatio n errors; Nurse handoffs; Intensive care; Shift report	mixed-method approach	determine communication patterns and human factors involved in and impacting report	as report and tended to worry about tasks being completed.	method for providing in-depth understanding of the dynamics of communication in other settings and domains.

Safety/CLABSI

Article Citation	Conceptual framework & purpose	Design method	Sample/ setting	Major variables studied & definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to practice
AHRQ (2009), Hospital survey on patient safety culture.	EBP to establish safety comparison information Toolkit 3	Quantitative	National and State voluntary hospital participants	Safety domains and variables impacting safety of patients and staff are evaluated.	Descriptive statistical and validation data are used and compared on a statewide and national basis for benchmarking.	Descriptive statistical and validation data are used and compared on a statewide and national basis for benchmarking.	A standardized report process at patient handoff reduces errors and improves patient safety	LEVEL I-A A standardized report process at patient handoff reduces errors and improves patient safety
Cronenwett et al. (2009), Quality and safety education for advanced nursing practice.	QSEN Safety	Quasi experimental	Student nurses and new graduates nurses less than 2 years' experience	Safety	National standards for safety	None	Safety initiatives can be taught to mitigate errors and improve patient outcomes to all nurses although novice nurses benefit from concept training in school	LEVEL V-B Informatics is the use of information and technology to communicate, manage knowledge, mitigate error, and support decision making
Costello (2010), Changing handoffs: The shift is on.	Report process failing	Opinion and Literature review	Varied	Different settings hospital and long term care	Inconsistent tool use	Descriptive data	Safety issues observed during report and literature found to	LEVEL V-B Inconsistent practice leave vital information

							support the use of a handoff tool	out of shift report and nurse is missing crucial care information
Pronovost PJ, Goeschel CA, Colantuoni E, et al., (2010). Sustaining reductions in catheter related bloodstream infections in Michigan intensive care units: observational study. BMJ. 340:309..	Examined sustainability of CLABSI reductions in a MHA, Johns Hopkins, and various hospital ICU's in the Michigan Keystone initiative.	Prospective cohort study collaborative study	Initially, baseline period (18 months) included 103 Michigan hospital based ICU's with 300,175 (central line catheter days) and 18 month sustainability included 90 Michigan hospital based ICU's with 300,310 (central line catheter days)	Maintain a team, Orient new staff, collect monthly data, and report infec-tion rates to appropriate stakeholders in addition to basic infection rate reporting, surveillance activities and information reported during the Keystone initiative.	The study compiled rates of bloodstream infection as medians and interquartile ranges and as means and stan-dard deviations. Generalized linear latent and mixed models,1314 with a Poisson distribution, to compare the quarterly bloodstream infection rate from baseline to the end of the initial 16-18 month evaluation period and for the subsequent 18 month timeframe providing a robust sustain-ability period (from 19-21	The mean rate of bloodstream infection decreased significantly by 12% (95% confidence interval 9% to 15%) per quarter during the entire post implementation period.	Markedly reduced rates of bloodstream infection achieved in the initial evaluation period of the Keystone ICU project were sustained for an additional 18 months.	Level II A Impactful knowing that continued attention to the issue provides and environment of sustainability when it is ingrained into the daily workflow and practices of the ICU.

Citation	Purpose	Design/Method	Sample/Setting	Variables	Results	Analysis	Findings	Level of Evidence/Conclusion
					months to 33-36 months Post-implementation).			
Weingart, et al. (2013). Making good better: Implementing a standardized handoff in pediatric transport.	Examines the communication failures associated with transferred pediatric patients	Quality improvement project	Akron Children's Hospital & associated transport services 85 surveys pre and post implementation	Safety and handoff	Trending positive for improvement, but no statistically significant information	Descriptive statistical and validation data are used	A standardized report process at patient handoff reduces errors and improves patient safety	Level V-A Overall improvement in process of handoff report and safety at low cost.
The Joint Commission 2014, National Patient Safety Goals.	Never event reporting Patient safety monitoring Patient Safety Goals list	Quantitative study	National and State voluntary hospital participants	Safety domains and variables impacting safety of patients and staff are evaluated.	Aggregate data is used to collect information on safety issues and to issue safety alerts if trending and causative risks are attributable to the issue.	Descriptive statistical and validation data are used and compared on a statewide and national basis for benchmarking	A standardized report process at patient handoff reduces errors and improves patient safety	LEVEL I-A A standardized report process at patient handoff reduces errors and improves patient safety
Boykin, Schoenhofer, & Valentine, 2014. Health care system transformation for nursing and health care leaders.	Organized presenting High level articles regarding the importance of standardizing report and handoff to improve patient safety	Literature Review	Varied articles	Focused on safety and bundles to promote standardized care	Varied among studies included.	None listed	Supportive research for standardized bundles and tools and consistent use of handoff communication	LEVEL V-B Supportive research for standardized bundles and tools and consistent use of handoff communication
Cornell et al. 2014, Impact	SBAR	Quasi experimental	Medical Surgical unit	Focused on safety and	Quantitative & Qualitative data	Positive findings support the use of	Positive findings	LEVEL II-B

of SBAR on nurse shift reports and staff rounding.				bundles to promote standardized care	collected	SBAR for shift report and rounding	support the use of SBAR for shift report and rounding	Generally applicable information for the improvement of standardized care and safety
McAlearney & Hefner (2014). Facilitates central line-associated blood stream infection qualitative study comparing perspectives of infection control	CLABSI bundle tool	Quasi experimental	50 frontline nurses and 26 Infection Control Practitioners	There was disagreement among the nurses and practitioners about the definition of CLABSI	Qualitative data using interviews and survey methods were collected.	Interview methods were used with excellent statistical significance and clinical significance.	Measured and identified barriers and facilitators of implementing and sustaining CLABSI reductions using the CLABSI bundle	LEVEL III-B Use of CLABSI bundles reduces infections and improves patient satisfaction. Faciliatators and barriers may be encountered by the EBP project team.
Tavianini, Deacon, Negrete,& Salpaka (2014). Up for the challenge: eliminating peripherally inserted central infections in a complex patient	PICC lines	Product and Literature meta-analysis	Across a 2-year period (July 2011-July 2013), 100 devices were inserted with a total of 1,705 line days without any reported CLABSI.	Antimicrobial PICC lines were implemented	Quantitative data collected using line days, surveillance tools and insertion techniques.	The PICC team evaluated the effects of an antimicrobial PICC device in an effort to further reduce the Incidence of CLABSI. Upon initiation of the evaluation phase, a database was created to track infection/thrombus rate, insertion-related	Data collection and reporting was managed by the PICC team.	LEVEL II-A Based on 100 insertions yielding no infections this new product appears to improve patient safety and quality of care. Relative to these results sole use of this product has become their

					complications, dwell time, diagnosis, tip location, infuscate, vein used, and catheter size.			institutional standard for long-term intravenous needs
Watkins & Patrician, 2014, Handoff communication from the emergency department to primary care.	Monitored Gaps in handoff	Observational data and Qualitative data collected	Hospital based Emergency department	Handoff communication tools and lapses in care	Observational data and Qualitative data collected	Observational data and Qualitative data collected	Retrospective review was also conducted	LEVEL III_B Nurses and practitioners have varied forms of handoff communication and would benefit from a standardized tool.
Weaver, Weeks, Pronovost, & Pham (2014). On the CUSP: Stop BSI: Evaluating the relationship between central line blood stream infection rates and patient safety climate profile.	To investigate the relationship between intensive care unit (ICU) patient safety climate profiles and CLABSI rates.	Secondary analyses of data collected from 237 adult ICUs	Hospitals involved in CUSP (78% on-rural and 50% of those were teaching hospitals)	CLABSI definition caused disagreement among frontline staff and ICP.	Hospital Survey on Patient Safety results. Each of the 10 dimensions is calculated as the average percentage of positive responses	Combination of inductive and deductive methods & exploratory data analysis. CLABSI data were collected during a 12-month baseline period before the start of the intervention for each cohort	ICUs with conflicting climates and nonpunitive climates had a significantly higher CLABSI risk compared with ICUs with generative leadership climates.	**LEVEL III-B** Impactful knowing results suggest that Creating a culture of safety is an important part of healthcare associated infection improvement efforts and CLABSI reductions improved outcomes and lower morbidity and

								mortality rates.
Colvin, Eisen, & Gong (2016). Improving the patient handoff process in the intensive care unit: Keys to reducing errors and improving outcomes.	To examine the overall scope of the problem; provide the most up-to-date evidence on the handoff process; and identify ways to perform handoffs in an accurate, safe, and efficient manner to provide high-quality patient care	Literature review	Articles from 1990-2014 focused on key words of handoff - handover - critical care - patient safety - communication - continuity of care - medical error - quality improvement	Optimization of the handoff process has become even more critical to ensure patient safety.	Varied among studies included.	None listed	Supportive research for standardized bundles and tools and consistent use of handoff communication to increase patient safety	LEVEL V-B Supportive research for standardized bundles and tools and consistent use of handoff communication to increase patient safety.

Appendix E

Checklist for Prevention of Central Line Associated Blood Stream Infections

Based on 2011 CDC guideline for prevention of intravascular catheter-associated bloodstream infections:
http://www.cdc.gov/hicpac/pdf/guidelines/bsi-guidelines-2011.pdf

For Clinicians:

Promptly remove unnecessary central lines

- ☐ Perform daily audits to assess whether each central line is still needed

Follow proper insertion practices

- ☐ Perform hand hygiene before insertion
- ☐ Adhere to aseptic technique
- ☐ Use maximal sterile barrier precautions (i.e., mask, cap, gown, sterile gloves, and sterile full-body drape)
- ☐ Perform skin antisepsis with >0.5% chlorhexidine with alcohol
- ☐ Choose the best site to minimize infections and mechanical complications
  - ○ Avoid femoral site in adult patients
- ☐ Cover the site with sterile gauze or sterile, transparent, semipermeable dressings

Handle and maintain central lines appropriately

- ☐ Comply with hand hygiene requirements
- ☐ Scrub the access port or hub immediately prior to each use with an appropriate antiseptic (e.g., chlorhexidine, povidone iodine, an iodophor, or 70% alcohol)
- ☐ Access catheters only with sterile devices
- ☐ Replace dressings that are wet, soiled, or dislodged
- ☐ Perform dressing changes under aseptic technique using clean or sterile gloves

For Facilities:

- ☐ Empower staff to stop non-emergent insertion if proper procedures are not followed
- ☐ "Bundle" supplies (e.g., in a kit) to ensure items are readily available for use
- ☐ Provide the checklist above to clinicians, to ensure all insertion practices are followed
- ☐ Ensure efficient access to hand hygiene
- ☐ Monitor and provide prompt feedback for adherence to hand hygiene
  http://www.cdc.gov/handhygiene/Measurement.html
- ☐ Provide recurring education sessions on central line insertion, handling and maintenance

Supplemental strategies for consideration:

- • 2% Chlorhexidine bathing
- • Antimicrobial/Antiseptic-impregnated catheters
- • Chlorhexidine-impregnated dressings

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

CDC

Appendix F

Agree Tool

Agree II-Overall Assessment
Title: Practice guidelines for central venous access. A report by the American Society of
Anesthesiologists Task Force on Central Venous Access.
Overall quality of this guideline: 5/7
Guideline recommended for use? Yes.
Notes:
Physician Experts served on the panel and the information was supported by EBP and peer
surveys.
Domain Total
1. Scope and Purpose 20
2. Stakeholder Involvement 18
3. Rigour of Development 43
4. Clarity of Presentation 20
5. Applicability 8
6. Editorial Independence 4
 URL of this appraisal: http://www.agreetrust.org/appraisal/18905

Agree II-Overall Assessment
Title: Guidelines for the Prevention of Intravascular Catheter-Related Infections, 2011
AGREE Advancing the science of practice guidelines. 1
Overall quality of this guideline: 6/7
Guideline recommended for use? Yes.
Domain Total
1. Scope and Purpose 21
2. Stakeholder Involvement 20
3. Rigor of Development 45
4. Clarity of Presentation 20
5. Applicability 23
6. Editorial Independence 11
URL of this appraisal: http://www.agreetrust.org/appraisal/19598

Appendix G

Agency Permission

Wright State University-Miami Valley College of Nursing and Health

AGENCY PERMISSION FOR CONDUCTING DOCTORAL PROJECT

THE _Pro Medica Bay Park Hospital_ GRANTS TO

Heidi Shank, MSN, RN, DNP-C, a student enrolled in the joint

Doctor of Nursing Practice Program at Wright State University—University of Toledo, the

privilege of using its facilities in order to conduct the following project:

The conditions mutually agreed upon are as follows:

1   The agency (may) (may not) be identified in the final report.

2   The names of consultative or administrative personnel in the agency (may) (may not) be
     identified in the final report.

3   The agency (wants) (does not want) a conference with the student when the report is
     completed.

4   Other:

_1-8-2016_   _Paula Grub, RN, DNP/COO-CNO_

Date   Signature of Agency Personnel/Title

MSN, RN, DNP-C _____

Student Signature   Project Chair Signature

Appendix H

AHRQ Patient Brochure

You are invited

You are invited to take part in nurse bedside shift report. You can also invite a family member or friend to take part with you.

Nurse bedside shift report happens every day between 6:45 and 7:15 a.m. and 6:45 and 7:15 p.m..

Let us know if you have any questions. We are partners in your care.

Nurse Bedside Shift Report

What is it?
How can you get involved?

Being a partner in your care helps you get the best care possible in the hospital. Taking part in nurse bedside shift report is one way you can be a partner.

This brochure explains what nurse bedside shift report is and how you can get involved.

AHRQ
Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov

What is nurse bedside shift report?

Nurse shift changes occur when nurses who are going off duty share information about your care with nurses coming on duty. At ProMedica Bay Park Hospital, we want you to be involved in shift changes to make sure you get high-quality care.

Nurse bedside shift report is when the nurses going off and coming on duty meet by your bedside to talk about your care. This gives you a chance to meet the nurse taking over your care, ask questions, and share important information with your nurses. Nurse bedside shift report does not replace the conversations you have with your doctor.

You can invite a family member or friend to stay during nurse bedside shift report. We will only talk about your health with others when you say it is okay.

When is nurse bedside shift report?

Nurse bedside shift report happens every day between 6:45 and 7:15 a.m. and 6:45 and 7:15 p.m.. It usually lasts 5-10 minutes.

What should I expect?

During nurse bedside shift report, the nurses going off and coming on duty will:

- **Introduce themselves to you and anyone with you.** The nurse coming on duty will write his or her name and phone number on the white board in your room.
- **Invite you to take part in the nurse bedside shift report.** You should decide who else can take part with you.
- **Talk with you about your health,** including the reason you are in the hospital and what is going on with your care. The nurses will look at your medical chart.
- **Check the medicines you are taking.** The nurses will look at your IVs, injuries, and bandages. They will also follow up on any tests that were done or lab work that was ordered.
- **Ask you what could have gone better** during the last shift and what you hope to do during the next shift. For example, you may want to get out of bed or just sleep. The nurse will try to help you meet this goal.
- **Encourage you to ask questions and share your concerns.** If needed, the nurse coming on duty may come back after the bedside shift report to spend more time discussing your concerns.

What should I do?

- **Listen.** You are an important part of the health care team. We want to make sure you have complete and timely information about your care.
- **Speak up.** If you have questions or concerns, nurse bedside shift report is the perfect time to raise them.
- **Ask questions if something is confusing.** If the nurses use any words or share any information you don't understand, feel free to ask them to explain it.

- ProMedica Bay Park Hospital wants to make sure that you get the best care possible.
- If you have any concerns about the quality or safety of your care during your hospital stay, please let your nurse or doctor know.
- If you are still concerned, call our charge nurse at extension 8650.
- If nurse bedside shift report does not happen, call the charge nurse at extension 8650.

Appendix I

Nurse Assessment of Shift Report Survey

Nurse Assessment of Shift Report Survey is a 17-item nurse satisfaction survey. Your response is de-identified. Please return your completed survey to the envelope near the House Supervisor office.

Directions: Please fill in the blanks of the demographic section.

Demographic Information	
Age	
Number of years in practice	
Education	
Typical shift worked	

Please complete the survey by marking an x in the box that coincides with your desired response.

Survey Item	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
Report is effective means of communication					
Report is efficient means of communication					
Report helps identify change in patient condition					
Report helps assure accountability					
System ensures professionalism					
Report is relatively stress-free					
Report gives opportunities for mentoring					
Report promotes patient involvement in care					
Report prevents delatys in patient care and discharge					
Report helps prevent patient safety problems					
I feel adequately informed after report					
I feel informed about patient plan of care after report					
I feel informed about patient discharge plan after report					
I feel informed about patient teaching needs after report					
Report is completed in a reasonable time					
Nurses on the unit keep patients informed about care					
There is good teamwork between shifts on the unit					

(Sand-Jecklin & Sherman, 2014) *Permission to use obtained 1/31/2016 from John Wiley & sons

Appendix J

Permissions

Nurse Satisfaction Survey Tool Permission:
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Ms. Shank

As requested on January 30, 2016, you have permission to use a copy of the 1998 Iowa Model of Evidence-Based Practice to Promote Quality Care in your student/paper assignment/project.

Copyright of the Iowa Model of Evidence-Based Practice to Promote Quality Care will be retained by the University of Iowa Hospitals and Clinics.

Please include the following statement with the figure: "Used/Reprinted with permission from the University of Iowa Hospitals and Clinics, Copyright 1998. For permission to use or reproduce the model, please contact the University of Iowa Hospitals and Clinics at 319-384-9098 or uihcnursingresearchandebp@uiowa.edu." The reference for the Iowa Model is listed on the attached.

If you have any questions, please feel free to contact me at 319-384-9098 or kimberly-jordan@uiowa.edu. Thank you.

Kim Jordan
Administrative Services Coordinator
Office of Nursing Research, Evidence-Based Practice and Quality
Department of Nursing Services and Patient Care
T100 GH
4-9098