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Communication Process Improvement among Bedside Nursing Staff on a Skilled Nursing Rehabilitation Unit

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Communication Process Improvement among Bedside Nursing Staff on a Skilled Nursing Rehabilitation Unit

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Dedication

I dedicate this final product of my Doctorate of Nursing Practice degree to my husband of 39 days, Zachariah. I prayed for you before I entered this journey and I feel so blessed to have met and married you moments before I finish this journey. You are my dream come true, my momentum to complete my education, and my amazing supporter; I love you. To Bradley, our son, I am so happy to soon be able to tell you that mom has “finished college” and can now put aside homework to spend more time with you. I am so proud of both of these boys; thank you for your perseverance with me along this educational road. To my parents, Randy and Lydia, words cannot express my gratitude for the dedication, effort, time, and sacrifice you both gave in raising me. You two have been the ones to spur me on toward completion of my DNP beginning even before I started the program. I thank you so much for your words of encouragement through the joys and tears of the last four years; I am proud to be your daughter. Lastly, I would like to thank my LORD and savior, Jesus Christ. I thank you for making this path for my life clear. I am looking forward to the doors you will continue to open, and I promise to work diligently to bring you glory in all I accomplish.
Acknowledgements

I would like to extend my deepest respect and gratitude to my committee members for your influential support, guidance, and encouragement along the process of developing the DNP final project. Thank you for the time you have dedicated to meeting with me, sharing ideas, and giving me feedback on my work. You have all challenged me to be a better scholar, change agent, and leader. To Mary, I thank you for your dedication to my success. Your support, time, approachability, and example have been inexpressibly valued and pivotal to my success. Lastly, I would like to thank Shawn for his last minute assistance in recovering this and many more documents from my crashed computer a week and a half before my final defense.
Abstract

Communication in healthcare is pivotal for transferring patient clinical information. Communication is important between and within disciplines and throughout the continuum of care. Poor communication has been found to be the third leading root cause of sentinel events (event which may cause death, permanent harm, or severe temporary harm) within hospitals behind human factors and leadership. Standardization of nursing handoffs using the Situation Background Assessment Recommendation (SBAR) model and conducting the handoff at the patient’s bedside have produced positive outcomes including improving patient safety, improving nursing and patient satisfaction, and increasing time efficiency for nurses. The PICO question for this DNP Project (DNPP) was “Will the implementation of an evidence-based communication process improvement project (at shift change using SBAR during bedside handoffs) decrease fall incidence; improve safety vigilance, patient satisfaction with nurse communication, and nurse satisfaction with handoffs; and promote time efficiency of nursing handoffs on a rehabilitative skilled nursing unit in the long-term care setting?” Project outcomes were: (a) fall incidence, (b) time efficiency of handoffs, (c) nurse satisfaction with handoffs, (d) patient satisfaction with nurse communication, and (e) safety double checks. An evidence-based communication process using SBAR during a bedside handoff had a positive impact on reduction in fall rates and prevention of adverse safety events in the long term care (LTC) setting. Fall rates at shift change were reduced by 87.5% and 14 patient safety events averted throughout the DNPP. Interventions resulting in fall prevention in the long term care setting are key to cost savings and patient safety promotion.

Keywords: communication process improvement, SBAR, bedside report, nursing handoff, long-term care, skilled nursing
Executive Summary

Without standardized and thorough communication between healthcare providers, patient safety may be in jeopardy. Patient safety is a key component in providing care that meets the Institute for Healthcare Improvement’s Triple Aim: high quality care for patients at a lower cost to improve population health outcomes (Institute for Healthcare Improvement, 2016).

This DNP project (DNPP) report highlights the improvements made in a long-term care facility rehabilitation unit through an initiative to improve nursing communication and patient safety. The first part of the improvement initiative included standardizing nursing handoffs using the Situation, Background, Assessment, Recommendation (SBAR) model for communication in healthcare (Safer Healthcare, 2015). The second part of the improvement initiative was moving the place of handoffs from the nurses’ station to the patient’s bedside. The move to the bedside was also evidence-based to reduce fall hazards through an environmental assessment, promote patient-centered care by discussing the plan of care with both the patient and the family, and improve nursing and patient satisfaction with the handoff process.

Outcomes demonstrated a significant reduction in fall rates in total and during the shift change hour while nurses were completing bedside handoffs. A reduction in falls at a long-term care facility rehabilitation unit demonstrates a potential for large cost savings (Roudsari, Ebel, Corso, Molinari, & Koepsell, 2005) due to current CMS reimbursement bundled payment models. Patient satisfaction with nursing communication was high before implementation and remained high after process implementation. Nursing satisfaction with the handoff process did not change across pre- and post-implementation conditions. This project may have the ability to impact other units at the LTC facility or other community LTC facilities admitting patients for rehabilitation.
Introduction and Background

In 2001, the Institute of Medicine (IOM) released a report entitled Crossing the Quality Chasm: A New Health System for the 21st Century, which identified six aims and six challenges to achieve them. Ultimately, the actualization of a healthcare system in the United States that meets patient needs will yield “safe, effective, patient-centered, timely, efficient, and equitable care” (Institute of Medicine [IOM], 2001, p.3) at the institutional, local, state, and federal levels. Two of the redesign imperatives of this report included reengineered care processes and coordination of care across patient conditions, services, and sites of care over time. The IOM identified communication in nursing handoffs as a point in patient care for potential breakdown and safety risk (IOM, 2001).

At the national and organizational level, communication in healthcare is believed to be pivotal for transferring patient clinical information. Communication is important between disciplines, within disciplines, and throughout the continuum of care. The Joint Commission on Accreditation of Hospital Organizations (JCAHO), the accrediting and certifying organization for the majority of the nation’s hospitals, noted communication in healthcare as an area in need of improvement in both 2005 and 2015 publications (Croteau, 2005; Joint Commission, 2015). In 2005, JCAHO released a report revealing that two-thirds of sentinel events occurring in healthcare facilities were related to breakdown in communication among healthcare providers (Croteau, 2005). Sentinel events were described by JCAHO as patient safety events causing either death, permanent harm, or severe temporary harm (Sentinel Event Policy and Procedures, 2016). In 2014, communication was found to be the third leading root cause of sentinel events within hospitals behind human factors and leadership (Joint Commission, 2015). Since 2005, the Joint Commission International and the World Health Organization (WHO) have joined forces to
ensure patient safety (World Health Organization, 2007) by recommending that all healthcare organizations standardize communication processes.

A nurse-to-nurse patient handoff for the purpose of this project will be operationalized using JCAHO’s definition: an “integrative process of transferring 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” (Patton, 2007, p.3). A standardized and evidence-based communication process for nursing report has produced outcomes including improved patient safety, nursing and patient satisfaction, and patient safety; and increased time efficiency for nurses (Chung, Davis, Moughrabi, & Gawlinski, 2011; Cornell, Gervis, Yates, & Vardaman, 2013, 2014; Eberhardt, 2014; Sand-Jecklin, & Sherman, 2013; Tidwell et al., 2011).

In 2012, the IOM released a report entitled Best Care and Lower Cost: The Path to Continuously Learning Healthcare in America (IOM, 2012). Recommendations included patient-centered care that involved patients and families in decisions regarding health and health care in order to fit their preferences, optimization of operations by streamlining care delivery, and broad leadership exemplified through a culture of continuous learning and improvement (IOM 2012).

The project coordinator (PC) for this process improvement project was a Doctor of Nursing Practice (DNP) student at Grand Valley State University’s (GVSU’s) Kirkhof College of Nursing (KCON). The PC identified the need as part of a broader immersion experience. The process improvement project described in this report discusses the steps taken to restructure the communication process on a designated post-acute rehabilitation unit (PARU) to promote quality and patient safety within a local continuing care retirement community (CCRC).
Problem Statement

During the Organizational Assessment (OA), which was completed in September 2015, the phenomenon of communication gaps between nursing staff was identified for this process improvement. Communication between staff as an area of improvement was identified by the licensed nurses (LNs), both registered nurses and licensed practical nurses, at an organizational all-nurse meeting one week before the beginning of the PC’s time within the organization. Following the identification of this phenomenon by the LN’s and the organization’s leadership, the problem statement was identified in the form of a PICO statement. A PICO question assists a researcher in determining the significance of a problem and allows for methodology to be designed to answer the question and bring significance to the phenomenon (Boswell & Cannon, 2014).

PICO Statement

The following PICO statement was examined: Will the implementation of an evidence-based communication process improvement project (at shift change using SBAR during bedside handoffs) decrease fall incidence; improve safety vigilance, patient satisfaction with nurse communication, and nurse satisfaction with handoffs; and promote time efficiency of nursing handoffs on a rehabilitative skilled nursing unit in the long-term care setting?

Evidence Based Initiative

The current state of knowledge was reviewed prior to proposing a standardized evidence-based nurse handoff process on the PARU at the area CCRC. Seven databases were queried with the key terms of: nurse-to-nurse report, nurse-to-nurse handoff, nursing report, SBAR, handoff, shift report, nursing report, nursing home, skilled nursing, nursing homes, or combinations of these terms. Inclusion criteria included: articles written in English; and studies conducted in the United States due to differences in health care systems internationally. Healthcare setting was
not predefined, therefore, acute care and long-term care literature were included in the search. Ten articles were selected as most relevant based on the search criteria of implementation of an intervention related to nursing report processes or the SBAR model. Interventions included but were not limited to process improvement, policy/protocol implementation, and interviewing of stakeholders.

Review of the literature revealed two processes pertinent to improving the communication process of nursing handoffs: a) Using the SBAR process to improve nursing handoffs, and b) conducting nursing handoffs in the patient’s room at the bedside. Melnyk’s hierarchy of evidence for treatment or intervention literature was used to organize the critical appraisal of the articles (Appendix A) (Melnyk & Fineout-Overholt, 2011, p.12)

SBAR

SBAR was originally created by the United States Navy for communication use on nuclear submarines (Safer Healthcare, 2015). Now, SBAR is used as a concise communication tool to outline a pattern of healthcare provider-to-provider communication. In the “S” component, the healthcare provider initiating communication states what is happening in the moment. The “B” component includes pertinent background information specific to the patient’s relevant history. The “A” component includes the current condition of the patient. The “R” is the desired response, plan of care, or intervention for the patient (Schroeder, 2011, p.53-54). The use of SBAR has been demonstrated multiple times in nursing research as a method of improving efficiency of nurses’ time, patient-centeredness, feeling of preparedness to care for patients, nursing satisfaction with the handoff process, and reducing fall rates (Cornell et al., 2013, 2014; Sand-Jecklin, & Sherman, 2013).

Bedside Handoffs
Researchers reporting on studies related to handoffs completed at the patient’s bedside have described the same outcomes as SBAR (Evans, Grunawalt, McClish, Wood, & Friese, 2012; Jeffs et al., 2013; Radtke, 2013). In addition, results from bedside handoff research have demonstrated improved patient safety through the LN’s ability to visualize patients at the beginning of the shift, intercept errors at time of report, improve prioritization of patient needs, and provide time for clarifying questions in the moment (Evans, Grunawalt, McClish, Wood, & Friese, 2012; Jeffs et al., 2013; Radtke, 2013). Additional benefits included less time spent on report and decreased incidental overtime (Evans et al., 2012; Klee, Latta, Davis-Kirsch, & Pecchia, 2012; Tidwell et al., 2011). Bedside handoffs have also been shown to improve family and patient involvement in care. Bedside handoffs have been supported by JCAHO to promote learning about the patient’s condition, medications, diagnosis, and plan of care as well as providing additional helpful information to healthcare providers (National Partnership for Women and Families, 2013). Synthesis of both SBAR and bedside handoff literature is found in Appendix B.

**Rationale**

The implementation of these two processes on the PARU at the CCRC was pertinent to both the IOM’s vision for patients to receive “safe, effective, patient-centered, timely, efficient, and equitable care” (IOM, 2001, p.3) and the IOM 2012 report *Care and Lower Cost: The Path to Continuously Learning Healthcare in America* (IOM, 2012). Redesign can result in standardization; improved patient safety by practicing safety double checks with both LNs in the patient room for the handover; and prioritized patient-centered care with patients and families included in the plan of care for the shift.

**Theoretical Framework and Conceptual Model**
To guide the project, two models were selected based on their suitability to communication as the phenomenon of interest. For the purpose of this project, a theoretical framework was defined as a nursing theory that provides a broad framework regarding a phenomenon, including concepts and relationships between concepts (Thompson, 2014). A conceptual model is a guide to conducting process improvement that provides a visual representation of theoretical concepts and variables within the project (National Center for Postsecondary Improvement, 2003). The theoretical model chosen was the Theory of Interpersonal Relations (TIR) (Peplau, 1997) and the conceptual model was the Plan Do Study Act (PDSA) cycle for process improvement (National Health Service [NHS] Institute for Innovation and Improvement, 2008). There are two diagrams in Appendices C and D for visualization of the models.

The TIR emerged as the chosen theory for the project based on the duality of the profession of nursing: science and art and KCON’s vision for both “The Science of Nursing…The Art of Caring” (Grand Valley State University, 2015, p.1). Artistically, nursing is composed of compassion, tender care, and advocacy. Scientifically, nursing applies knowledge of a broad range of disease states, psychosocial issues, and health and wellness. Much of a bedside nurse’s work revolves around the nurse-to-patient interaction (Peplau, 1997). Peplau described three phases in the nurse-to-patient relationship: orientation, working, and termination. The orientation phase is the process of introductions, discovering information about the patient’s health conditions, observing the patient’s behavior, and listening to his or her concerns. The working phase involves physical care, health teaching, and counseling. The termination phase is the time of summarizing the work accomplished by the nurse and patient and coming to closure either at the end of the shift, upon discharge, or in long-term relationships,
upon the patient’s death (Peplau, 1997). According to Peplau’s Theory, communication is assumed to be of utmost importance throughout the three relationship phases (Gonzalo, 2011).

The PDSA cycle is a conceptual model for piloting a change before fully implementing it (NHS Institute for Innovation and Improvement, 2008). The nature of the model as a cycle allows for modifications of interventions throughout the cycle based on unforeseen barriers or organization-specific needs. In Plan, the change to be tested out or implemented is coordinated. In Do, the change is carried out. Study is the analysis of outcomes and reflection on outcomes and lessons learned. Act is modifying the process before repeating if changes need to be made, or fully implementing the change (NHS Institute for Innovation and Improvement, 2008).

Both the TIR framework and PDSA model are applicable to the proposed project. Nursing communication, both with patients and other nurses, helps to foster a successful nurse-patient relationship. The nurse-patient relationship, as well as communication, is central to the TIR framework. The PDSA model fits well with the nature of a project focusing on process improvement. With any new process implementation, there is a need to view the change in a cyclical pattern. The Plan portion of the PDSA cycle allowed for inclusion of components such as an organizational assessment and integrative literature review as the project plan was created. As implementation of the project was completed, the other phases of the cycle, study and act, allowed for review, analysis, and lessons learned. Reflection on the implementation process allowed for project success through flexibility, a necessary component in ever-changing healthcare environments.

**Need and Feasibility Assessment of the Organization**

The CCRC participating in the DNPP was founded in 1906 as a not-for-profit organization. Care offerings include a continuum of healthcare for older adults spanning from in-home care to residential services at two sites (Clark Retirement Community, 2015). The
CCRC’s mission is “to create a community of dignity, compassion and respect centered on the lives of older adults and those who care for them” (Clark Retirement Community, 2015, para. 2). As a faith-based organization, the vision is:

To serve God by partnering with older adults in ways that add meaning and value to their lives. We will achieve a position of leadership as we strengthen our residential communities and reach beyond our walls through community partnerships, innovation, and a solid financial foundation. Our hallmark will be excellent service, delivered by our valued team of excellent employees. (Clark Retirement Community, 2015, para. 2).

The CCRC has nine established values with two pertinent to the proposed project: “a community where services are resident-centered, shaped by individual need and choice” and “high quality services are provided in the most effective and efficient manner” (Clark Retirement Community, 2015, para. 3). The goal of the organization is to provide person-centered living for all residents. This means “being part of a community where my voice is valued, my life has purpose and I make choices about how I live every day. [CCRC] nurtures my spirit and my need to be well-known, to be in meaningful relationships, to feel secure and to grow” (T. Hock, personal communication, September 16, 2015). The communication process improvement project aimed to involve patients in the plan of care for the day, tailoring the care to the patient’s needs, and coinciding with the organization’s person-centered vision.

Within the CCRC, there are four skilled nursing units, with one designated as a PARU. This is a unit for patients within the CCRC’s community or for a new admission who needs skilled nursing services, to include nursing care, physical therapy, occupational therapy, and/or speech therapy. Hospice care is also provided on a resident-specific basis, but the unit does not provide long-term care. The CCRC also provides independent living, assisted living, and dementia care which can be through assisted living or long-term care.
The rationale for the selection of the PARU is the identified need for process improvement efforts that align with the organization’s values and desire for quality. In addition, the patients on the PARU have shorter lengths of stay (LOS) than other residents who permanently live within the skilled nursing setting on other units. With the higher turnover of patients, who also have higher acuity medical conditions, there is more risk for safety errors to occur.

After meeting with the CCRC’s Vice President of Resident Living and Support Services (VPRLSS), a focus on communication gaps at shift change among nursing staff emerged. The VPRLSS shared with the PC that the nurses had identified the theme of communication between staff as an area of improvement on the PARU. The phenomenon was also discussed with GVSU’s KCON Affiliate Faculty embedded at the CCRC, who held the role of interim clinical care coordinator (CCC) on the PARU. Having the phenomenon specified based on the organization’s needs, the direction of the organizational assessment became clear, allowing for the target audience to be narrowed (Moran, Burson, & Conrad, 2014). Stakeholders were then identified and processes observed.

Identifying Key Stakeholders

There were internal and external stakeholders for this project. External stakeholders included the committee co-advisors as they were not direct recipients of the project outcomes or process. However, as the KCON Dean and KCON professor, they had a vested interest in the project, the mentorship of the DNP student, and the representation of GVSU to the CCRC as a community partner. Internal stakeholders were at the macro- and micro-level. Macro included those who held leadership positions within the organization, but were not as involved with the daily patient care activities of the PARU. Micro included those who were residents, resident caretakers, or leaders within the PARU.
At the macro-level, the KCON and CCRC collaboration had support from the CCRC’s President and CEO. The VPRLSS also expressed full support of the communication process improvement project. His support helped to narrow the focus of the phenomenon as well as open doors to facilitate meetings with other key stakeholders. Between August 2015 and November 2015, new administrative changes took place at the CCRC. Clark added new members to the administrative team: Administrator of Nursing and Rehabilitation Services (Administrator) and a Director of Nursing (DON). Both nursing leaders voiced support of the DNPP through all phases.

At the micro-level, the transitions coordinator on the PARU, who was responsible for patient orientation, education, and discharge planning, as well as the LNs, certified nursing assistants (CNAs), administrative assistant, physical therapy and occupational therapy staff, and the unit social worker were all directly or indirectly influenced by the DNPP. Most importantly, patients on the PARU were also key stakeholders. Conversations with patients yielded information pertinent to current state of practice and potential for improvement. With continued observation of processes and gathering of assessment information, all of the above individuals informed the project.

**Current Practice**

To demonstrate need for the project, the current process of nursing handoffs was observed, LN roles were shadowed for a week, and five of the total nine nurses were interviewed. When the observation process began in September 2015, nursing handoffs were being given and received at the nurses’ station at the beginning of each shift. During this time, the CNAs answered patient call lights. The off-going LN (one or two nurses, depending on the shift) gave the handoff to the oncoming nurse(s). The nurse to patient ratio during the night shift was typically one nurse to approximately 20 patients, depending on the census. During the day
shift, the ratio was one nurse to 10 patients. The verbalized handoffs were not standardized, and some patients were skipped or “glossed over” if the nurse “cared for the patient before” or “knows them.”

After the handoff, the nurses counted all of the medications before beginning the shift. On initial observation, the entire process took up to one hour before the nurses began rounding on patients. Without a standardized process for information transfer during report, important information (e.g., vital signs, labs, falls/incidents [skin tears, significant changes], blood glucose trends, medication changes, and new physician orders) was often omitted. The risk of errors increases when the nursing handoff does not offer opportunity for patient collaboration on plan of care, cross checking of information between nurses, and patient safety checks.

**Project Timing**

Leadership changes occurred at Clark during the time this project was being conducted. Therefore new stakeholders were considered as needed for the project. The DON and Administrator spearheaded the changes in nursing staff scheduling. On December 25, 2015, nursing shifts changed from eight-hour to twelve-hour shifts. It was anticipated that this would align well with the proposed project to improve communication and nursing handoffs. With longer shifts, patient involvement in the plan of care, continuity of care, and nurses’ attentiveness to detail would be important. A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was used to identify potential barriers as well as successors before implementing this process (Table 1).
### SWOT Analysis

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>Internal</td>
<td><em>Friendliness of staff</em>&lt;br&gt;<em>Openness to having PC shadow LNs and CNAs</em>&lt;br&gt;<em>Supportive leadership for project</em>&lt;br&gt;<em>Staff’s support for interim CCC</em>&lt;br&gt;<em>New leadership creating a culture of change in order to implement new process</em>&lt;br&gt;<em>Both LNs and CNAs have identified “communication” and “teamwork” as areas they would like improved at Clark</em></td>
<td><em>Inefficient processes</em>&lt;br&gt;<em>Staff’s lack of willingness to accommodate new changes</em>&lt;br&gt;<em>No team-based mentality</em>&lt;br&gt;<em>Lack of belief in leadership due to numerous turnovers</em>&lt;br&gt;<em>LNs “taking shortcuts” than best practice</em>&lt;br&gt;<em>Gaps in nursing staff knowledge about evidenced-based practice</em>&lt;br&gt;<em>Approx. 100 safety incidents over the last 9 months on PARU including skin tears and falls.</em></td>
</tr>
<tr>
<td>External</td>
<td><em>CCRC’s collaborative partnership with GVSU. Goal is to implement PARU as a dedicated education unit for evidence-based practice by Fall 2017 so there is incentive for PARU to update policies and processes before nursing students begin clinical rotations.</em>&lt;br&gt;<em>Both site mentors have approved Prospectus and are in full support of communication process improvement project</em>&lt;br&gt;<em>CCRC’s excellent reputation in the community as a premier care provider for older adults</em>&lt;br&gt;<em>Individualized care which includes families</em>&lt;br&gt;<em>Low/no-cost project to be implemented</em></td>
<td><em>Limited research in long-term care related to communication process improvement (mostly conducted in acute care)</em>&lt;br&gt;<em>This project will not be funded by the organization. As a non-profit, the organization at large will have a more unstable financial economy than a for-profit organization.</em>&lt;br&gt;<em>With many new leadership changes there may not be continuity and project support may dwindle without sustainability</em></td>
</tr>
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Project plan

Purpose of Project with Outcome Measures

The purpose of this project was to answer the PICO question and bring sustainability and meaningful change to the CCRC. The outcomes measured were: a) fall incidence, b) time efficiency of handoffs, c) nurse satisfaction with handoffs, d) patient satisfaction with nurse communication, and e) safety double checks.

Safety double checks were defined as the process of a LN verifying a medication, patient situation, or decision point with another LN. The auditing of safety double checks occurred by the PC during the handoff process. If a safety adverse event was found, LNs on the PARU were notified and assisted with troubleshooting the issue. The auditing process was complementary between the LNs discovering safety concerns and the PC observing safety concerns.

Quality Improvement Project

The communication process improvement project was a quality improvement project, focused on improving the communication process between nurses during handoffs. As discussed by Moran et al. (2014), a quality improvement project focuses “on analyzing elements of specific areas of performance in order to gain some measure of improvement” (p.129). In addition, process improvement projects have the ability to reflect national goals in healthcare. As the IOM report *Crossing the Quality Chasm* outlines, improvements in healthcare need to be safe, effective, patient-centered, timely, efficient, and equitable (IOM, 2001). This project encompassed the IOM national goals on the small scale of the PARU at the CCRC.

Setting and Needed Resources

The PARU was a 27-bed unit with three semi-private rooms. The patient rooms were set up as “households” with nine patient rooms per household and the center of the household contained dining tables and chairs and couches. One wall of the household contained a supply
cabinet/cupboards, sink, and locked medication drawers. The CCC’s office was adjacent to the nurses’ station. The nurses’ station was in a separate office decentralized to the patient rooms. Staff included nine LNs (5 RNs and 4 LPNs) and a group of five to ten therapy staff including physical, occupational, and speech therapists.

The additional resources needed for this project were printed SBAR handoff forms to have available at the centralized nursing station in an easily accessible file folder. The printing responsibility was delegated to the LNs, with the assistance of the administrative assistant to type the patient information into the SBAR forms. The forms were saved on the community drive for any newly admitted patients during the work day. Patients admitted on the night shift had their information typed into the SBAR form, saved on the community drive, and then printed by the night shift LNs.

The other resource used was the PC’s time. This time was not accounted for monetarily as the PC was a DNP student and conducted this project without monetary gain. Time allotted to this project was approximately 10-15 hours on site per week during the implementation phase.

**Design for the Evidence-Based Initiative**

The design for the DNPP was two-fold. First, the current handoff template that the LNs were using for handoffs was reviewed by the PC and changes were made to place the information in the SBAR format. Once the new SBAR Handoff Form was created, the LNs were able to practice using it and give feedback. The SBAR forms were utilized for four weeks before the second portion of the DNPP was initiated.

The second component of the project was to implement the bedside handoff process. This entailed the LNs meeting at the nursing station at the beginning or end of their shift. The on-coming nurse and off-going nurse joined up as a team and together they would round on all assigned patients until the handoff process was completed. Following the handoffs, the LNs
counted medications as was the current practice. The goal time for the handoff process to be completed was 30 minutes. If the patient was awake and verbalized consent for a bedside handoff, both LNs would enter the room and give the handoff. If the patient was sleeping or had requested not to be awakened for handoff, the LNs were instructed to tell the patients that the two LNs would come into the room to verify that the patient had their call light within reach and do an environmental scan for fall risks.

The handoff was intended to be a time where the off-going LN would wrap up their shift by saying goodbye to the patient and introduce the on-coming nurse. The LNs were to introduce the process of bedside handoffs and communicate with the patient that as they were discussing the plan of care the patient could ask questions. Finally, the family, if present, was invited to participate in the conversation and ask questions.

Licensed nurses were engaged with the project through the identification of the process issue of communication, interviewed by the PC, and had the opportunity to trial the SBAR Handoff Form and give feedback. Assessment of staff satisfaction with handoffs including recommendations, and empowerment to help refine the tool was intended to be done at an all-staff meeting one month prior to implementation.

Participants

Participants in this project were LNs on the PARU. LN perceived benefit of this DNPP was identified before implementation to be pivotal to its success. Patients on the unit at the time of implementation were involved in the project by participating in the patient survey and contributing to the bedside handoff process. Families were also encouraged to participate in the bedside handoff.

Measurement: Source of Data and Tools
Measurement of LN satisfaction with handoffs came from the Nursing Handoff Communication Process Survey (Appendix E). This tool was modified by the PC from the original survey entitled the Handover Evaluation Scale by Dr. Beverly O’Connell of University of Manitoba, Winnipeg, Canada. Modifications were made with permission (Appendix F) to suit the needs of the long-term care setting. The Handover Evaluation Scale is a valid and reliable scale used to assess the effectiveness and quality of nurse-to-nurse handovers in an acute care setting, using the 20-item self-report scale (O’Connell, Ockerby, & Hawkins, 2014). Modifications made by the PC to fit the needs of this DNPP were not assessed for validity or reliability.

Questions 2, 3, 4, 6, and 7 of the survey assessed LNs’ feelings of preparedness to care for assigned patients; thoroughness, pertinence, and timeliness of information received; consistency of report received with a patient’s true condition upon assessment; and involvement of patients with handoffs. Questions were asked using a Likert Scale with one signifying strongly disagree to five signifying strongly agree. Questions one and five asked for a numeric answer to: how much time they took to prepare for handoffs and how many minutes after arriving for their shift did it take to lay eyes on all patients. Question eight was open-ended and asked the LN to comment on ways the handoff process could be improved.

The Patient Perception of Nurse Communication was a four-question survey (Appendix G) suggested by the VPRLSS to capture patient’s perception of how LNs at the CCRC communicated with them before and after implementation. This survey aligned with the mailed survey all patients are sent following a stay on the PARU. This survey was also scored on a Likert Scale (1-5). An answer of 1 signified “Never,” 2 “Rarely,” 3 “Sometimes,” 4 “Most of the Time,” and 5 “Always.”
The SBAR Handoff Form was guided by the evidence-based process of SBAR (Appendix H). This report format was not replicated from any existing form, but created with considerations from the literature, the CCC’s recommendations, LN input, and modified based on LN feedback after practicing with the form. All project tools were reviewed by the interim CCC on the PARU as well as CCRC representatives, VPRLSS, Administrator, and the DON. Full support of the project tools was obtained and critique and feedback were given.

**Steps for Implementation of Project and Timeline**

**Phase one.** The project implementation plan had three phases. Phase one began with Pre-Assessment. This phase included staff familiarization with the SBAR Handoff Form and education on bedside handoffs. In December 2015, LNs on the PARU received the SBAR Handoff Form for review, familiarization, and feedback. Education about the SBAR process was provided to approximately 10 LNs on an individual basis by the PC throughout their work shifts, capturing many of the regular staff as well as nurses from agencies contracted to work at the CCRC and nurses pulled from other units at the CCRC. Licensed nurses pulled from other units were educated on the new process to create a PARU-wide culture of adoption of the DNPP.

The education for the LNs was based on PC availability. A list of LNs regularly working on the PARU was created by the PC to ensure that all nurses were educated on the communication change before it was initiated. Signs communicating the upcoming changes were posted on the nursing unit’s “Board of Knowledge”. The Board of Knowledge is a centralized board used to communicate news, events, organization policy updates, etc. with the nursing staff on the PARU.

The involvement of the LNs in giving feedback on the SBAR Handoff Form was essential to the modification of the tool to meet staff needs according to the PDSA conceptual model. Following Human Research Review Committee (HRRC) designation of exemption by
the GVSU committee, the LNs were asked to complete the Nursing Handoff Communication Process Survey.

**Phase two.** Phase two was implementation. Implementation was a seven-week pilot period for the revised SBAR handoff format and bedside handoff. During this time, all nurse handoffs were expected to be conducted at the bedside by the LNs, every handoff exchange used the revised SBAR Handoff Form (Appendix H). The PC was present at four shift change handoffs the initial week of implementation. The PC set the goal of being present at two to three shift change handoffs in subsequent weeks to promote staff motivation, answer any questions, and to time the handoff process.

**Evaluation.** Phase three was evaluation. Evaluation began at the end of the seven week pilot and entailed post-implementation completion of the nursing handoff survey. Incident reports were analyzed for falls during the implementation phase comparing rates pre-implementation and intra-implementation. Data from safety double check audits and patient perception surveys were synthesized for final project reporting and dissemination of outcomes at the CCRC and GVSU. The project timeline is outlined in Table 2.
### Table 2

**Project Timeline**

<table>
<thead>
<tr>
<th>Month</th>
<th>Tasks</th>
</tr>
</thead>
</table>
| December 2015    | 1. Proposal at GVSU  
                   2. GVSU IRB Application  
                   3. Introduce SBAR Handoff Form for LN review, familiarization, and feedback  
                   4. LN education on bedside handoffs and the use of the SBAR Handoff Form |
| January 2016     | 1. Further LN review, familiarization, and feedback on SBAR Handoff Form  
                   2. Pre-implementation LN survey  
                   3. Pre-implementation patient survey |
| February 2016    | 1. Implementation phase on Monday, February 1, 2016. (Time report, ensure LNs move to the bedside to conduct handoffs, gather LN feedback)  
                   2. Analyze patient fall rate data/safety double check audit data  
                   3. Post-implementation LN survey  
                   4. Post-implementation patient survey |
| March 2016       | 1. Complete data collection phase Friday, March 18, 2016 at end of pilot trial of SBAR Handoff Form and bedside handoffs.  
                   2. Post-implementation patient survey |
| April 2016       | 1. Present findings to CCRC (April 8 and April 15, 2016)  
                   2. Present findings to GVSU through DNPP defense April 14, 2016  
                   3. Present findings at poster symposium at GVSU April 21, 2016 |

### Budget

The stakeholders incurred limited expenses during the implementation of the DNPP on the PARU. The resources required were five minutes of the LNs’ time to complete pre-implementation surveys as well as time taken to educate the LNs on the implementation.

To calculate LN time costs, the starting salary of an RN was obtained from a nursing leader in the organization. RN starting salary is $25.48 per hour. The LPN starting salary was not disclosed after being requested through human resources. Considering five minutes of survey completion time and 25 minutes of dedicated time from the PC, approximately $12.74 was spent per nurse for start-up costs of this intervention. Ten LNs were educated on the reason for initiating the project, the evidence behind the project, and the goals of the project. Total cost for
all nurses educated was $127.40. Cost savings related to project outcomes will be discussed further in a subsequent section of the final report. No additional costs to staff were incurred from this project as the PC followed the project through all PDSA phases.

**Ethics and Human Subjects Protection**

Prior to initiating this project, the HRRC reviewed the project proposal for considerations of ethics and human subject protection. The project was deemed exempt and was considered not research. This exemption was decided because the results were not generalizable and were setting specific. There were no ethical objections to the project, as the project was quality improvement based and there was no treatment or condition administered or withheld between groups. No identifying information for patients or nurses was recorded on the surveys, thus anonymity was maintained. The project did not require additional review at the organization. The CCRC involved with the DNPP did not have an HRRC or Institutional Review Board (IRB).

The ethical considerations for this project included the patients and the PARU LNs. LN information remained confidential as the pre- and post-implementation surveys were kept in a locked box with no identifying information required to complete the surveys. SBAR Handoff Forms with patient identifying information were not kept for use in the data analysis period. Patients’ identifying information or protected health information was not directly involved in the DNPP.

Scrutiny was kept to abide by the Health Insurance Portability and Accountability Act (HIPPA) with the bedside report process. HIPPA supports normal health care organization operations in which health information for the treatment of patients is shared among healthcare personnel to improve care and safety (National Partnership for Women and Families, 2013). If a patient objected to having family or roommates (in the case of a semi-private room) overhear the handoff process, the nurses were able to resume report at the nurses’ station.
Project Outcomes

Outcome Measures and Processes for Evaluation

The outcomes measured were: a) fall incidence: compare patient fall rates pre- and intra-implementation; b) time efficiency: compare length of nursing handoffs between pre- and intra-implementation; c) nurse satisfaction with handoffs: compare survey results pre- and post-implementation; d) patient satisfaction with nurse communication: compare survey results pre- and post-implementation; e) safety double checks: auditing of preventable safety concerns by PC during project implementation.

Total implementation period for the bedside handoffs was seven weeks. Fall incidence was examined for 2 months prior to implementation and two months during implementation due to time constraints to evaluate these outcomes post-implementation. A fall was defined as an unplanned descent to the floor (American Nurses Association, 2005) with or without injury. To calculate fall incidence, a report was generated by KCON’s embedded faculty from the CCRC’s electronic health record (EHR). Total falls was examined by the PC as well as falls occurring during the hours of shift change (0600-0700, 1400-1500, 2200-2300).

Timeliness of handoffs was examined seven times two months prior to implementation and seven times two months during implementation. Timing was done on a cell phone stopwatch and the LNs were unaware of being timed to reduce potential changes in performance. Timing of handoffs pre-implementation included the verbal exchange of information given between LNs at the nurses’ station. Timing of handoffs intra-implementation included the exchange of patient information completed during the bedside handoffs as well as the counting of medications. The nurses included counting medications into their reporting process. After giving the handoff on a household (hallway of patients), the LNs counted the residents’ medications in that household before moving on with the next handoff. This addition of counting
medications into the handoff routine was nurse-driven and based upon perceptions of time efficiency, as the LNs were already centrally located to the medications while in the households rounding on patients.

Nursing satisfaction was evaluated using the Nursing Handoff Communication Process Survey. The survey was administered one week prior to implementation and one week post-implementation to LNs working on the PARU. Surveys were placed in a centralized location on the unit for LNs that were working on the PARU from other units or outside nursing agency. For LNs who regularly worked on the PARU, surveys were placed in their mailbox. LNs were instructed to place the survey in a locked survey box at the nurses’ station (instructions given at top of form, a sign was placed above the survey box, and LNs were asked by PC). Following the implementation phase, mean scores from the surveys were calculated pre- and post-implementation.

The Patient Perception of Nurse Communication Survey was administered one week prior to implementation and one week post-implementation. Patient surveys were administered by the PC and then placed in the locked survey box. Patient identifying information was not collected on the survey and answers were kept anonymous.

Auditing of safety double checks was completed by the PC during the seven weeks of implementation. Audits were conducted seven times during the implementation phase. The audit was conducted during the observation of the handoff process. During each audit, the PC observed the LN handoff process, going room to room with the LNs to observe information exchanged between LNs and record any safety concern observed or averted during the bedside handoff. These observations were written down and placed in the locked survey box until post-implementation data analysis. Encouragement was given to the nurses during handoffs for
following the bedside process, preventing a patient fall, correcting incorrect information, and answering family concerns.

**Results of Project Implementation**

**Fall incidence.** Falls decreased throughout implementation of the DNPP, potentially attributable to the increased vigilance of LNs during the implementation phase (Table 3). By completing a visual check on the patient during handoffs, LNs were able to assess for factors associated with fall risk: visualize if the patient had any needs at the time of handoff, ensure that their call lights were within reach if they needed to call for assistance ambulating, and verify that there were no safety hazards in the patients’ rooms. Although it is acknowledged that reasons for patient falls are multifactorial, there were no other initiatives occurring on the unit aimed at preventing falls other than the current practice. The months of September 2015 and October 2015 were chosen for the pre-implementation fall data because those were the last two months without leadership change.
Table 3

**Shift Change Fall Data Pre- & Intra-Implementation**

<table>
<thead>
<tr>
<th>Shift Change Fall Data Pre &amp; Intra-Implementation</th>
<th>Decrease in Falls at Shift Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Months Pre-Implementation</td>
<td>2 Months Intra-Implementation</td>
</tr>
<tr>
<td>N=19 (Total Falls)</td>
<td>N=8 (Total Falls)</td>
</tr>
<tr>
<td><strong>Total Fall Rates decreased by 58%</strong> from before implementation to during Implementation (19-8)/19</td>
<td></td>
</tr>
<tr>
<td>8 Falls during shift change</td>
<td>1 Fall during shift change</td>
</tr>
<tr>
<td><strong>Incidents of Falls during shift change decreased by 87.5%</strong> (8-1)/8</td>
<td></td>
</tr>
<tr>
<td>42% of Total Falls occurred during shift change</td>
<td>12.5% of Total Falls occurred during shift change</td>
</tr>
<tr>
<td>(8/19)</td>
<td>(1/8)</td>
</tr>
<tr>
<td><strong>Percentage of falls occurring at shift change decreased by 29.5%</strong> from before implementation to during implementation (42% - 12.5% = 29.5%)</td>
<td></td>
</tr>
</tbody>
</table>

**Time efficiency.** Timeliness of handoffs declined throughout project implementation. The mean time to complete the handoff process was 32 minutes pre-implementation and 40 minutes intra-implementation. One consideration for this decline was that although the mean timeliness of handoffs was larger intra-implementation, the nurses also included the counting of medications in the handoff process and were expected to be giving a more thorough report at bedside handoffs using the SBAR format. A limitation of this outcome measure was that the PC did not take into account number of patients handed off between nurse correlating to the total time for the handoff.
Figure 1. Time to Complete Handoffs Throughout Implementation Phase. This table illustrates the improvement in time-efficiency of PARU nurses during the implementation of the process improvement.

**Nursing satisfaction with handoffs.** Nursing satisfaction with the current handoff process was assessed pre- and post-implementation. Surveys were administered to LNs on the PARU one week prior to implementation (n=9) and one week following implementation (n=7). Survey results revealed no change between pre- and post-implementation phases.

Lack of improvement on scores may have been the variation in the sample of LNs between pre- and post-implementation. Due to turnover rate and short staffing, LNs were pulled from various units and inconsistent staff from nursing staffing agencies was used. Due to the quality improvement nature of the project, participants in the survey were not identified. Therefore, it was difficult to ascertain how many of the LNs who took the pre-implementation survey also took the post-implementation survey and if there was any individual perception.
change. *Figure 2* and *Figure 3* identify the questions asked to the nurses and the responses received. *Figure 3* includes an outlier, which would have skewed all post-implementation results. This outlier may be attributed to a misunderstanding of the question by the LN. The post-implementation averages with and without the outlier are calculated.

The Nursing Handoff Communication Process Survey also asked nurses to share ideas of ways that shift handoffs could be improved. This qualitative data was placed into a table for review by themes. The themes of thoroughness, timeliness, support of nursing handoff process, and indifference or negative comments about nursing handoffs are visible in Table 4. The nurses had fewer comments on the post-implementation survey related to thoroughness of report. Two negative comments were made post-implementation. Fewer comments made may be attributable to perception that handoffs became more thorough following the use of the SBAR format and bedside handoffs. However, Questions 2 and 3 on the survey regarding thoroughness of report did not improve between phases, making this explanation unlikely. The greater number of nurse comments may be attributable to the different sample of nurses who completed the surveys pre- and post-implementation. Comments may also be attributable to pre-implementation optimism that the handoff process could be improved and lack of comments post-implementation may be attributable to lack of perceived change.
Figure 2. Nursing Handoff Communication Process Survey Pre- (n=9) and Post-Implementation (n=7) Results. This graph shows no change in results.

Questions: Question two referred to satisfaction with thoroughness of information during handoff; Question three referred to provision of sufficient information; Question four referred to patient information provided in a timely fashion; Question six referred to the information received matching the patient’s condition; and Question seven referred to patients’ involvement in handoff.

Likert Scale (1-5): An answer of 1 signified “Never,” 2 “Rarely,” 3 “Sometimes,” 4 “Most of the Time,” and 5 “Always.”
Figure 3. Nursing Handoff Communications Process Survey Results continued. This graph demonstrates the change in numerical answers among nurse survey questions. Question 1 referred to minutes spend preparing for handoff before report, and Question 5 referred to the total minutes to complete visual check on patients once beginning shift.
Table 4: Nursing Handoff Survey Open-Ended Comments. This table represents themes identified. The open-ended comments were responses about how handoffs could be improved.
**Patient satisfaction with nurse communication.** Patient perception of nurse communication score also did not change from pre- (n=9) to post-implementation (n=8) period. Patient scores were four or five on the Likert scale (“Most of the Time” or “Always”) in both phases of data collection. A potential contributor to this data may be an inconsistent patient population pre- and post-implementation. No change in results may also be out of fear that the nurses would know how they answered the surveys, lack of information about best practice concerning communication in healthcare, or perception of excellent care with no need for improvement. *Figure 4* identifies the questions asked in the survey and the responses received.

*Figure 4.* Patient Perception of Nurse Communication Survey Pre- (n=9) & Post-Implementation (n=8) Results. This graph shows no change in results.

Questions: Question one referred to courtesy and respect of nurses; Question two referred to nurses informing patients about their care in an understandable way; Question three referred to
nurses answering questions in an understandable way; and Question four referred to nurses listening to concerns.

Likert Scale (1-5): An answer of 1 signified “Never,” 2 “Rarely,” 3 “Sometimes,” 4 “Most of the Time,” and 5 “Always.”

**Safety double checks.** Safety double checks revealed three themes identified in *Figure 5*. Themes included falls, patient-to-nurse communication, and treatment. A total of 14 safety concerns were found by either the PC or LNs during the 7 safety audits of the bedside handoffs as identified in Table 6.

Table 6: Safety Audit: Identified Themes and Explanation.

<table>
<thead>
<tr>
<th>Safety Audit: Identified Themes and Explanation</th>
<th>Safety Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme</strong></td>
<td><strong>Safety Concern</strong></td>
</tr>
</tbody>
</table>
| Falls | • Patient admitted to nurses that he turned off his chair alarm and ambulated across the room to get a candy bar without assistance  
• Patient in chair and call light on bed out of reach  
• During bedside handoff found patient who needed assistance to transfer had independently gotten himself up to the commode  
• Tubing for oxygen tank too short creating fall hazard in room  
• Unlocked chair/bed wheels  
• Patient’s bed alarm went off as we were standing outside the room, able to prevent fall by being in the room to prevent patient from standing up without help |
| Patient-to-Nurse Communication | • Call light on the floor  
• Call light hanging off end of bed out of patient’s reach  
• Call light on the floor  
• Call Light wrapped around patient’s leg  
• Call light not within reach |
| Treatment | • Blood sugar not passed along/updated  
• Off-going nurse incorrectly informed on-coming nurse how patient’s medications were taken and family present to correct nurses  
• Orthostatic blood pressure order written in MAR but not treatment book |
The goals of this project were to align with the IOM’s 2012 report, *Best Care and Lower Cost: The Path to Continuously Learning Healthcare in America* (Institute of Medicine, 2012); align with the CCRC’s mission, vision, and values; and bring about an evidence-based sustainable practice change. The safety double checks highlighted safety errors that were prevented due to the two nurses verifying information and patient safety. This project aligned with organization goals by providing more patient-centered care by allowing nurses to begin and end their shift with communication to patients. Families that were present at the handoff were informed of their loved ones plan of care and were able to correct any potential misinformation passed along between nurses.

### Project Success

An important success with this communication process improvement was the reduction in patient falls. Noted in Table 3, the total fall rates decreased by 58 percent (19 pre-implementation to 8 intra-implementation), the number of total fall incidents occurring during
shift change decreased by 87.5 percent (8 pre-implementation to 1 intra-implementation), and fall rates occurring at shift change decreased by 29.5 percent (42 percent pre-implementation to 12.5 percent intra-implementation). Although nurse perception of improvement did not occur, the significant reduction in patient falls and safety concerns give a strong argument to continue the bedside component of nursing handoffs at this CCRC. The argument to continue the process improvement stems from a significant cost savings.

Residents in Skilled Nursing Facilities (SNFs) have higher risks for falls due to many factors. Factors include memory problems, difficulty ambulating, side effects from medications due to polypharmacy, and frailty. Environmental hazards account for 16 to 27 percent of falls among long-term care residents (Centers for Disease Control and Prevention [CDC], 2015b). In 2004, Roudsari et al. (2005, p.1319) identified mean costs of emergency department (ED) visits following a fall among older adults in the United States. In 2005, the mean ED visit cost following a fall was $236. In 2010, the mean hospitalization costs for older adults age 65 and older was $39,190 (CDC, 2010). In 2013, the direct medical costs for falls among older adults totaled $34 billion (CDC, 2015a).

Looking at the fall data obtained by this project, the cost savings analysis is as follows: if each of the pre-implementation falls (n=8) at shift change resulted in a hospitalization, using cost data from the Centers for Disease Control and Prevention (2010), the total expenditure for the falls would total $313,530 ($39,190 x 8=$313,520). The cost savings of hospitalizations by reducing falls from 8 to 1 would be $274,330 ($313,520-$39,190=274,330). If each of the eight falls at shift change resulted in an ED visit, per Roudsari et al. (2005), the total cost would be $1,888 ($236 x 8 =$1,888). Cost savings of ED visits by reducing falls from 8 to 1 intra-implementation would be $1,652 ($1,888-$236=$1,652). Table 7 demonstrates the cost analysis.
Table 7. Cost Analysis of Falls

<table>
<thead>
<tr>
<th>Falls</th>
<th>Potential Cost</th>
<th>Potential Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 pre-implementation</td>
<td>$313,520 (hospitalizations) $1,888 (ED visits)</td>
<td>N/A</td>
</tr>
<tr>
<td>1 intra-implementation</td>
<td>$39,190 (hospitalizations) $236 (ED visits)</td>
<td>$274,330 (hospitalizations) $1,652 (ED visits)</td>
</tr>
</tbody>
</table>

If the patient does not need to leave the SNF for evaluation, there are still the costs for tests such as an x-ray and labs that a provider may order following a fall. In addition, there may be long-term complications from a fall such as further debilitation, setbacks in plan of care, and delayed discharging from facility. LN time costs are also increased with falls through frequent vital sign monitoring, neurological checks, and coordination of care with the provider.

The payer system in long-term care has moved from fee-for-service reimbursement to bundled payments to promote quality of care (Centers for Medicare & Medicaid Services [CMS], 2014). Centers for Medicare & Medicaid Services (CMS) announced this switch in 2013. PARUs participating in bundled payments are now reimbursed by CMS retrospectively based on patient outcomes pre-set to 90 days. Reimbursement is billed based on historical fee-for-service rates to physicians, post-acute providers, and related readmissions. Durable medical equipment as well as medications are part of this payment. If a CCRC discharges a patient home before the set discharge date without any complications, they will receive the remainder of the pre-set costs set by CMS. However, if the patient care costs exceed the given rate by CMS, all costs above the pre-set costs will be assumed by the CCRC and are not reimbursable. Any costs incurred from ED visits or re-hospitalizations within the 90-day timeframe results in potential lost profit for the organization. This payment system gives impetus to decrease fall rates at the CCRC on the
PARU (CMS, 2014) and to consider further use of this quality improvement project on other skilled nursing units.

**Unintended Negative Consequences**

Difficulties will be encountered in any change initiative. The importance is to monitor difficulties, limitations, and barriers, and reflect on them, troubleshoot, and learn from failure. These recommendations are especially key in learning the DNP project process (Moran et al., 2014). Difficulties with this project implementation were multifactorial. Two main reasons identified were the CCRC’s leadership changes and staff turnover.

**Leadership changes.** Throughout the DNPP, there were three changes in CCCs on the PARU. The first interim CCC was a KCON embedded faculty, whose role as CCC ended mid-December 2015. Although project support had been encouraged by the first interim CCC, the subsequent CCC (mid-December 2015 to February 2016) focused on other initiatives within the PARU. A DON as well as an Administrator began at the CCRC in October 2015. Both leaders supported the project but with numerous responsibilities were not able to be present on the PARU during the implementation phase. In March 2016, the DON took the interim CCC role. With her responsibilities as DON and interim CCC, prioritization was required within the context of the CCRC at the time (such as the state survey).

At the time of pre-implementation (January 2016), the current CCC on the PARU did not approve the PC’s request to meet with the LNs regarding this process improvement. The PC intended in the project plan to hold an LN meeting with PARU LNs to discuss the next phases of the project, best practice and the reason for the project improvement, staff expectations, the PC’s role, and anticipated results. Allowing staff to role-play bedside handoffs before implementing
may have helped alleviate hesitancy with implementation, dissatisfaction with the process, and staff familiarity with the PC.

Monthly staff meetings were a priority of the DON, but due to many other initiatives, meetings did not start until February 2016. However, CCRC leadership did not have time within the February meeting for the PC to conduct the educational session for LNs as planned. Because time was not available in an LNs meeting, the PC met with LNs individually and in pairs before project implementation and in the beginning weeks of implementation to discuss the project. The perception of forced change without LN contribution and lack of recognition by LNs that this process improvement was a priority for increasing patient safety within the CCRC may have increased resistance to change.

The PDSA cycle process was helpful when the PC experienced some resistance to the change. The LNs had a chance to review and suggest modifications to the SBAR Handoff Form before implementation but still resisted giving handoffs using the SBAR method when implementation began. After observing handoffs for two weeks, the PC created an “SBAR cheat sheet,” a key created of all the elements on the SBAR Handoff Form so the LNs were knowledgeable about what elements were recommended to be given in handoffs.

**Staff turnover.** Throughout the DNPP, there were many inconsistencies with LN staffing. These inconsistencies were linked to LNs finding new positions within the CCRC or other local CCRCs and filling staffing gaps with healthcare agency nurses. Agency nurses had a brief orientation to the PARU, but were not present for the DNPP through all phases. Although the CCRC had changed from eight-hour LN shifts, due to staffing shortages, there were consistently three nurse handoffs per day throughout the safety audit and timing of handoffs.
phase by the PC. The inconsistencies in LNs produced project barriers with consistency of project implementation and LN buy-in.

**Unintended Positive Consequences**

The strengths of the DNPP were threefold: the DNPP aligned with organization goals by providing more patient-centered care; the culture change of bedside handoffs impacted families; and fall rates were reduced, promoting patient safety and costs savings.

Bedside handoffs allowed patients to be involved in the plan of care. It offered a touch point where patients could ask pointed questions to the LNs. Before implementation of the DNPP, family members came to the nurses’ station desk on multiple occasions asking to speak with their family member’s nurse. The nurses responded that they were busy receiving handoffs, and would find the family after handoffs were completed. Nurse leadership reported to the PC that the nurses adopted the bedside handoff process 50 percent of the time when the PC was not onsite. This percentage of implementation allowed for enough of a culture change to be felt on the PARU by the families. One family member knew that handoffs would begin at 1800 and came to her father’s room at that time for an update on his plan of care. Reduction of falls through prioritizing patient safety demonstrated to LNs that their efforts in the bedside handoff process were worthwhile.

**Project Weaknesses**

The DNPP presented challenges for data collection. With multiple shifts per day, it was difficult for the PC to champion the project at all shift changes. The PC attended shift change handoffs (0600 and 1800) four times the first week, and then one to three times in subsequent weeks. Identifying nurse champions to take ownership for the project and assist the PC in implementing the project would have been a stronger way to conduct the process improvement.
Further analysis should have been conducted by the PC through a formal survey to assess LN’s understanding of nursing handoffs and information expected to be exchanged between nurses during handoffs. Although observations were made as to the current state of the handoff process and its lack of time efficiency, an assumption was made by the PC that by giving the nurses a more thorough tool for handoffs, handoffs would naturally become more thorough.

Based on personal observations by the PC during the project implementation, many bedside handoffs did become more thorough as a result of the LNs visualizing the patient and following the SBAR format. As reflected in the LN surveys, however, LNs did not perceive an improvement in thoroughness of handoffs from pre- to post-implementation. If a baseline knowledge assessment had been conducted, the focus of the DNPP may have been redirected to educate and track improvements from baseline to post-implementation of LN’s perception of necessary elements to be included in handoffs and confidence giving handoffs.

Finally, had the PC been given time to educate the nurses about the elements of the DNPP prior to implementation, less time may have been spent modifying the SBAR sheets (at least four modifications made to formatting) to meet the LNs’ needs. Because communication was fragmented between the PC and the LNs by having to meet with the nurses individually, LNs had no chance to collectively evaluate the project and get ideas and support from one another about the process improvement.

**Sustainability**

The goal for sustainability of this DNPP was LN persistence in use of the bedside and SBAR handoff process. With the intended outcome of improving LN satisfaction with the SBAR Handoff Form and bedside handoff process, the goal was to make the process a nurse-driven effort worth sustaining. By LNs feeling more prepared for their shift, making visual checks on
patients within minutes of starting their shift, and improving patient safety and thoroughness of handoffs, the hope for this DNPP was to create a desire by the PARU LNs to continue to use this process. Nursing satisfaction with the handoff process stayed the same between implementation phases and did not improve from pre- to post-implementation. Nurse driven sustainability for this project was not achieved within the time frame of the DNPP.

For sustaining adoption of this DNPP on the PARU, a nurse champion would need to be identified. At the closing of the working relationship with the PC and the CCRC, an internal candidate was chosen to be the new CCC on the PARU. The PC touched base with the new CCC and explained the DNP project and results. The new CCC voiced support for the project, and at her request, an educational handout created with the PC was given to her. The handout will be used for LNs working on the PARU who are not the consistent staff, including agency LNs and LNs pulled from other units at the CCRC. The new CCC along with the DON have the vision to continue the use of the DNPP on the PARU and with other units.

Given the CCRC’s continued partnership with GVSU, there is additional opportunity for future DNP students to make an impact with other DNPPs within this CCRC. Other project ideas were highlighted throughout the PC’s seven-month immersion experience, which included: staffing based upon acuity and not geography within the PARU; continued work on interdisciplinary teamwork; identification of a LN leader each shift as a point person during emergencies and admissions and for family questions as well as planning LN assigned patients. Enforcement of staffing and attendance policies for LNs will also be important with provision of excellent patient care. In addition, a recommendation for further sustainability is to include this process in the new hire orientation curriculum and training, which is currently being created by GVSU’s embedded faculty, in order to embed this process into the culture at the CCRC.
**Relation to Healthcare Trends**

As the aging population increases, more elderly people will be living in long-term care facilities. In the US population living in nursing homes over the age of 65, 20% of deaths in this population are related to fall injuries. Due to many environmental safety hazards in the long-term care setting, fall rates are higher than for elderly people living in the community (CDC, 2015b).

As communication in healthcare has been linked to two-thirds of sentinel events reported in a variety of healthcare settings (Croteau, 2005; Joint Commission, 2015), it is imperative that the link between ineffective communication and falls be examined. CCRC organizations should target initiatives to reduce fall rates, promote patient safety, and improve communication between patient care providers and recipients. Doing so will help reduce cost and promote positive patient outcomes. This quality improvement process provides a format for making such a change in the long-term care setting.

This quality improvement process may be useful to additional units at the CCRC or other long-term care facilities in the community as a potential initiative to reduce falls in their organizations patient population. With reimbursement models changing from fee-for-service to quality-based, quality improvement initiatives such as this DNPP are important. Quality improvement initiatives can be made in the SNF setting to reduce costs and align with the organization’s mission, vision, and values.

The Agency of Healthcare Research and Quality (AHRQ) recognizes the need for improved care at lower costs in the long-term care setting. The outcomes from this quality improvement project highlight one potential initiative to reduce falls through bedside handoffs, however more processes are needed. AHRQ provides additional initiatives and toolkits to make sustainable change in nursing facilities (AHRQ, 2013).
Reflection on Enactment of DNP Essential Competencies

As identified in the IOM’s 2012 report, healthcare in America is growing in knowledge and technology, but failing to deliver on outcomes (IOM, 2012). One of the strengths a nurse with the DNP degree can contribute is the ability to bring evidence-based practice to a healthcare clinic, organization, or system to improve outcomes by monitoring the impact of process improvement projects. Such processes can result in innovation of new strategies to achieve the triple aim within organizations while aligning with the mission, vision, and values of the organization: high quality care at lower cost to improve population health (Institute for Healthcare Improvement, 2016; Terhaar & Sylvia, 2016, p. 165).

The evidence-basis of this quality improvement initiative demonstrated the scholarship a DNP prepared nurse can bring to the clinical setting. By implementing a process change and monitoring for outcomes, quality and safety events could be tracked. Influenced by the DNP education, the PC had a systems view, which brought awareness of other processes contributing to decreased patient safety and inefficiencies in the handoff process.

The role of the DNP has been enacted throughout the project process, as the DNP has been able to act in the role of scholar through aligning current evidence to bedside nursing practice. Specifically related to the DNP project, the DNP essentials used in the DNP project are:

a) Essential II: Organizational and systems leadership for quality improvement and systems thinking,
b) Essential VI: Interprofessional collaboration for improving patient and population health outcomes,
c) Essential VII: Clinical prevention and population health for improving the nation’s health, and

d) Essential VIII: Advanced Nursing Practice. Specific activities accomplished through the DNP project included guiding, mentoring, and supporting other nurses to achieve excellence in nursing practice; using advanced communication skills/processes to lead
quality improvement and patient safety initiatives in healthcare systems; and leading intraprofessional teams in analysis of complex practice and organizational issues.

Throughout the immersion experience as part of the DNP degree curriculum, the other five essentials also achieved improved competency. Through the immersion experience of being in the CCRC setting, Essential VII: Clinical prevention and population health for improving the nation’s health was obtained through implementing and evaluating an intervention to improve population health among the long-term care geriatric population. In addition to the DNP competencies, other professional skills were strengthened, such as: networking; building rapport with stakeholders; exemplifying leadership by action with humility; following through on staff feedback and requests; and increasing personal growth through perseverance in many challenging opportunities.

Dissemination of Outcomes

In conclusion, the DNP plans dissemination of outcomes on the PARU unit, within the CCRC organization, at the university, and within the community. In April 2016, outcomes were discussed with CCRC leaders including the KCON embedded faculty, new CCC on the PARU, VPRLSS, and other nurse leaders. Results were displayed on the PARU on the Board of Knowledge for the LNs to review. A poster was presented at the GVSU KCON poster symposium as another source for dissemination of findings.

The DNPP was defended at a final defense at GVSU KCON, where community members, KCON faculty, and other students attended. Further dissemination in a journal such as the *Annals of Long-term Care* may be appropriate to demonstrate the work of a DNP in the long-term care setting and the potential impact on patient care. The final project write-up will be
available on Scholar Works for access to all for further guidance in communication process improvements in the long-term care setting.
References


Grand Valley State University. (2015). *Doctorate of Nursing Practice scholarly project handbook 2015-2016*. Retrieved from https://mybb.gvsu.edu/webapps/blackboard/content/listContent.jsp?course_id=_49927_1&content_id=_900205_1


Institute of Medicine. (2012). *Best care at lower cost: The path to continuously learning health care in America.* Retrieved from
https://iom.nationalacademies.org/~media/Files/Report%20Files/2012/Best-Care/Best%20Care%20at%20Lower%20Cost_Recs.pdf


National Health Service Institute for Innovation and Improvement. (2008). *Plan, Do, Study, Act (PDSA).* Retrieved from


## Literature Review Analysis Table

<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Purpose</th>
<th>Sample</th>
<th>Method</th>
<th>Measures</th>
<th>Outcomes</th>
<th>Level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chung (2011)</td>
<td>Description of a unit-based demonstration project, developed by nurses, implementing a standardized, evidence-based tool</td>
<td>Nurses on an intermediate care medical-surgical unit at a large tertiary care center</td>
<td>Observation, baseline pre-intervention (standardized report) survey and staff interviews</td>
<td>Project goals were: more thorough shift reports, decreased frequency of missed information, less time spent by nurses searching for missed information, fewer delays in shift starting time, &amp; less overtime</td>
<td>Improvement in shift-reporting process: Statistically significant increase in response of nurses “I feel that implementing a standard change-of-shift report will provide a more thorough and accurate report about the patient.” After the intervention nurses time required to organize the shift and prioritize their work decreased significantly. Non-significant decrease in nurse overtime was found.</td>
<td>VI</td>
</tr>
<tr>
<td>Cornell (2013)</td>
<td>Assess the impact and value of SBAR in shift reports</td>
<td>75 nurses, Four medical-surgical units (48 beds) in a mid-south suburban hospital</td>
<td>Paper-based SBAR tool developed as a script initially, then an electronic version was</td>
<td>Decreased time to complete report, improved time on task, less transcribing of</td>
<td>Time on task during report was improved, however overall time spent for the report process did not</td>
<td>VI</td>
</tr>
<tr>
<td>Study</td>
<td>Intervention</td>
<td>Setting</td>
<td>Baseline Observations</td>
<td>Post-Intervention Observations</td>
<td>Outcome</td>
<td>Notes</td>
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<tr>
<td>Cornell (2014)</td>
<td>SBAR protocol was used on a medical-surgical unit to improve shift reports and interdisciplinary rounding</td>
<td>48 bed medical-surgical unit in a suburban hospital</td>
<td>Baseline and post-intervention observations SBAR tool was developed by nurse managers and shift RN’s</td>
<td>Report time, use of paper forms, report consistency, improved quality of information tested on both a handwritten SBAR protocol and an electronic protocol</td>
<td>Both shift reports and interdisciplinary rounds were significantly shorter and more consistent following implementation. SBAR enabled more focused and efficient communication, less paper was used during SBAR</td>
<td></td>
</tr>
<tr>
<td>Eberhardt (2014)</td>
<td>Improve patient handoff by implementing an evidence-based protocol for SBAR for report</td>
<td>Medical Surgical Units and Operating Room at large hospital</td>
<td>Using IOWA model for evidence-based practice, baseline data was obtained random medical record audits of patients transferred</td>
<td>Improved documentation of patient handoff following SBAR method documented in EHR</td>
<td>At 1 mo. 50% of transfers to the OR were documented using the SBAR transfer note. After 4 months, 100% of the patient transfers</td>
<td></td>
</tr>
<tr>
<td>Evans (2012)</td>
<td>The primary motivator for this study was staff dissatisfaction with nurse-to-nurse report and the inability to complete the shift at the scheduled end time. Specific issues included report occurring in large, noisy conference rooms, making it difficult for nurses to hear and understand the report.</td>
<td>Acute care medical-surgical nursing unit with 42 full-time RN’s</td>
<td>Bedside report was implemented: Nurse leaders maintained log books of observations during the change process, baseline data was collected by leadership team (charge nurses, nursing manager, supervisor,</td>
<td>Time spent in report, nursing satisfaction with the report process, facilitation of a clear transition of patient care</td>
<td>Observational evaluation: nurses were slow to adopt the process, rapid response teams were called 3 times during the implementation phase which could have avoided a patient adverse event due to bedside report. Patients would sometimes</td>
<td></td>
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</tbody>
</table>
difficult for staff to hear accurate details and information; staff frequently leaving late as nurses waited to hand off to nurses who were receiving report from another shift member or socializing; no patient-family involvement during report; and the movement of the institution to computerized charting.

Nurses also completed a survey about their satisfaction with the nursing report process. Assessed baseline and 6mo post intervention.

monopolize the report conversation (nurses had to learn to tell patients that first nurses had to discuss a few points and then would address patient concerns), Due to semi-private rooms, infectious disease, patient demographics, or psychosocial matters could be discussed in private between nurses). Empirically: results suggested that bedside report increased nursing satisfaction, helped nurses prioritize their workflow better, and decreased the amount of time for report.

<p>| Klee (2012) | Described the use of continuous performance improvement (CPI) | Seattle Children’s Hospital | Using the Plan-Do-Check-Act procedure, these changes were made | Goals were to: Standardize the content and process of shift handoff, Nurses reported that safety measures of the standardized report at the bedside | VI |
| Methodology to standardize nurse shift-to-shift handoff communication | Over a 4-year period. 2006, an assessment of current handoff practice revealed many opportunities for improvement. Leadership team developed a standardized paper tool for shift report, and “Super-users” were identified among the nurses and trained. Following training they enforced the process on their units. Weekly audits were completed on each unit through anonymous self-report questionnaire assessing thoroughness and standardization of the report process. | Improve patient safety, increase patient and family involvement in the handoff process, and decrease end-of-shift overtime. Safety check portion helped them to correct incorrect IV flow rates, missing bedside emergency equipment, unlocked emergency supply boxes at bedside, missing armbands, allergy bands that needed updates, and incorrect monitor settings. 3 years later in 2009, staff had maintained used of the standardized handoff process 83% of the time. However families were not consistently included in bedside safety check. Families were then audited revealing that 70% were included in discussion of plan of care, and &gt;50% of caregivers found increased involvement in the patient safety phase of the handoff process. |</p>
<table>
<thead>
<tr>
<th>Author</th>
<th>Methodology</th>
<th>Location</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radtke (2013)</td>
<td>Determine if standardizing shift report using SBAR improves patient</td>
<td>Medical-Surgical intermediate care unit</td>
<td>Patient satisfaction was positive: noting they could make sense of their patients conditions sooner, could prioritize their day around patient needs</td>
</tr>
<tr>
<td></td>
<td>satisfaction with nursing communication</td>
<td></td>
<td>Patient satisfaction increased from 75% to 87.6%</td>
</tr>
<tr>
<td>Sand-Jecklin (2013)</td>
<td>Change practice on medical surgical units to promote safety and nursing</td>
<td>Medical-Surgical intermediate care unit</td>
<td>Increased patient satisfaction and nurse perception of accountability and patient involvement but reduced nurse perceptions of efficiency and effectiveness of report. Patient falls</td>
</tr>
<tr>
<td></td>
<td>satisfaction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
mo. pre and post-implementation data were recorded. Training video was made for the nurses. (The Nursing Assessment of Shift Report instrument) about satisfaction with shift change report. (35% reduction rate) at shift change and medication errors (50% reduction rate) were reduced. Nurse overtime remained unchanged.

| Smeulers (2014) | To determine the effectiveness of interventions designed to improve hospital nursing handovers & to identify which nursing handover styles are associated with improved outcomes for patients in the hospital setting and which nursing handover styles are associated with improved nursing process outcomes | Databases including OVID, Embase, CINAHL, Web of Science, and grey literature websites were searched through March of 2013 | 2 review authors independently assessed trials quality and extracted data | Randomized controlled trials (RCT’s or cluster-RCT’s) evaluating any nursing handover style between nurses in a hospital setting with the aim of preventing adverse events or optimizing the transfer of accurate essential information required for continuity of care, or both. | The search identified 2178 citations, 28 which were considered potentially relevant. After independent review of the full text of these studies, no eligible studies were identified for inclusion in this review due to the absence of studies with a randomized controlled study. Per current knowledge, principles that should be applied when redesigning the nursing handover process include face-to-face communication, structured documentation, patient involvement | I |
| Taylor (2015) | Purpose was to recognize how the implementation of a standardized bedside handoff can improve patient safety and satisfaction on an inpatient surgical oncology unit. | Inpatient surgical oncology unit, 43 beds, 17 RN’s | Review of the literature, survey data from a convenience sample of nurses and patients was gathered and analyzed. Nurses printed a standardized medical record handoff addressing diagnosis, comorbidities, activity level, diet, advance directives, vital signs, vascular access, fluids, pain, laboratory results, and a brief summary of the patient’s systematic and psychological concerns. “Walking rounds” were synonymous with bedside report. | Patient and nursing satisfaction | Qualitative survey data revealed: walking rounds not always completed due to unit distractions, concerns with HIPPA violations, and prioritization of patient needs. 12 of 17 RNs reported moderate satisfaction with the bedside handoff. 2 RN’s reported they were highly satisfied. Benefits to the nurses included: introduction to the patient and family at the beginning of the shift, improved communication from nurse to nurse and nurse to patient, improved patient satisfaction and adherence in care, and task | VI |
Thomas (2012) | In a multihospital system, the goals were to a) standardize the format of the nursing report, b) standardize the process of the intershift report, and c) invite patient and family to participate in the handoff. | 7 hospitals in a multihospital system selected 1 medical-surgical unit for implementation, number of RN’s involved not given | Nurse managers developed a standardized nursing report tool “I PASS the BATON” representing: introduction, patient, assessment, situation, safety concern, background actions, timing, ownership, and next. 1 hour education session for nurses | Outcome measures: monitoring the change in nursing reporting process and metrics reflecting nurse and patient satisfaction baseline and after implementation over 3 months | Nurses perceived that they had adequate time for nursing report, appropriate information was being transferred, and relationships between shifts had improved. Patient satisfaction score significantly improved with the implementation of bedside report.

Tidwell (2011) | Evaluate the effectiveness of bedside nursing report implementation on a pediatric neuroscience unit. | All patients and families admitted to the Neuroscience Unit from April 2007-September 2007, all RN’s on | Measurements 6 months before and 6 months after the implementation of bedside reporting. Data was analyzed using paired t test, | Patient and nurse satisfaction and nursing overtime | Patients, families, and nurses reported an increase in satisfaction after implementation. Patient satisfaction indicators included

prioritization by visualizing the patient. Per patient report, the top 2 benefits of bedside handoff were nursing introductions and enhanced communication.
the neuroscience unit participated in chi-square test, and Fisher’s exact tests to determine significant changes. (level of concern for patient and family, teamwork, how well nurses kept patient and family informed.) Pre-implementation staff comments included, “time-consuming, unorganized.” Post-implementation included “efficient, individualized, collaborative.” Overtime decreased and represented a potential cost savings of nearly 13,000 dollars annually.

Notes:
Level* refers to level of evidence as described in Melnyk & Fineout-Overholt (2011)
Level I: Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCT’s)
Level II: Evidence obtained from a well-designed RCT
Level III: Evidence obtained from well-designed controlled trials without randomization
Level IV: Evidence from well-designed case-control and cohort studies
Level V: Evidence from systematic reviews of descriptive and qualitative studies
Level VI: Evidence from single descriptive or qualitative studies
Level VII: Evidence from the opinion of authorities and/or reports of expert committees
<table>
<thead>
<tr>
<th>Major Themes</th>
<th>Reference Derived From</th>
<th>Implications for Practice</th>
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</thead>
<tbody>
<tr>
<td>SBAR report format improved nursing satisfaction</td>
<td>(Chung at al., 2011; Ebderhardt, 2014; Sand-Jecklin, &amp; Sherman, 2013)</td>
<td>More satisfied nurses may yield better patient care and higher retention rates for nurses</td>
</tr>
<tr>
<td>SBAR was efficient: decreased nursing time spent giving</td>
<td>(Chung et al., 2011; Cornell et al., 2014)</td>
<td>More time available to devote to patient care</td>
</tr>
<tr>
<td>SBAR improved time on task during report</td>
<td>(Cornell et al., 2013)</td>
<td>Less wasted time or time socializing during report</td>
</tr>
<tr>
<td>SBAR increased patient satisfaction</td>
<td>(Sand-Jecklin, &amp; Sherman, 2013)</td>
<td>More patients choosing given institution for care</td>
</tr>
<tr>
<td>SBAR decreased adverse events such as falls and</td>
<td>(Sand-Jecklin, &amp; Sherman, 2013)</td>
<td>High quality care which prioritizes patient safety</td>
</tr>
<tr>
<td>SBAR increased patient satisfaction with report</td>
<td>(Evans et al., 2012)</td>
<td>High quality care which prioritizes patient safety</td>
</tr>
<tr>
<td>Bedside report allows for avoidance of patient adverse</td>
<td>(Evans et al., 2012; Tidwell et al., 2011)</td>
<td>Nurses can give and receive report which is in-the-moment, accurate, and has less distractions</td>
</tr>
<tr>
<td>SBAR allowed for prioritized workflow</td>
<td>(Evans et al., 2012)</td>
<td>Bedside report allows for patient initial assessment through visually checking on the patient at the beginning of the shift</td>
</tr>
<tr>
<td>SBAR allows families and patients to be involved with care</td>
<td>(Klee et al., 2012; Sand-Jecklin, &amp; Sherman, 2013; Tidwell et al., 2011)</td>
<td>Families and patients can stay updated on plan of care and have a dependable time to ask questions and meet the incoming RN</td>
</tr>
<tr>
<td>SBAR improved patient satisfaction in communication and</td>
<td>(Radtke, 2013; Taylor, 2015; Thomas &amp; Donohue-Porter, 2012; Tidwell et al., 2011)</td>
<td>More patients choosing given institution for care</td>
</tr>
<tr>
<td>SBAR decreased nursing time spent on report</td>
<td>(Evans et al., 2012)</td>
<td>More time available to devote to patient care</td>
</tr>
<tr>
<td>SBAR decreased incidental overtime</td>
<td>(Klee et al., 2012; Tidwell et al., 2011)</td>
<td>Cost savings for given institution</td>
</tr>
</tbody>
</table>
Appendix C
Theoretical Framework-Theory of Interpersonal Relationships
Appendix D
Conceptual Model-PDSA Cycle

ACT
Plan the next cycle
Decide whether the change can be implemented

PLAN
Define the objective, questions and predictions. Plan to answer the questions (who? what? where? when?)
Plan data collection to answer the questions

STUDY
Complete the analysis of the data
Compare data to predictions
Summarise what was learned

DO
Carry out the plan
Collect the data
Begin analysis of the data

NHS (2012)
Appendix E  
Nursing Survey  

**Nursing Handoff Communication Process Survey**  
Circle your response and return to the survey box. Your responses will remain anonymous. Do not place your name anywhere on this form. Thank-you for your participation in this process improvement!

1. **On average, how much time do you spend preparing for shift change handoff before giving report?**  

   _____ Hour(s)   _____ Minutes

2. **I am satisfied with the thoroughness of the information I am given during shift change handoff.**

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</table>

3. **I am provided with sufficient information about my patients during shift change handoff.** (E.g. vital signs, labs, falls/incidents, skin tears, significant changes, blood glucose trends, medication changes, and new physician orders)

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</table>

4. **Patient information is provided in a timely fashion (30 minutes or less).**

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</table>

5. **I am able to complete a visual check on all of my assigned patients within _____ hour(s), _____ minutes upon arriving to the unit to begin my shift.**

   _____ Hour(s)   _____ Minutes

6. **The information I receive is up to date, matching the patient’s condition, plan of care, and orders.**

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<td>5</td>
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</table>
7. Patients are involved in the shift change handoff process.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</table>

8. Please comment on what ways nursing shift-change handoffs could be improved:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Appendix F
Permission Letter

Lauren Dice
DNP Student
KCON Teaching Assistant
Grand Valley State University
Grand Rapids MI
19 December 2015

Dear Lauren,

Thank you for your interest in our handover research and, in particular, our staff survey.

We hereby provide you with permission to use our survey. We also provide you with permission to make adjustments to the survey, as necessary, to suit your local context.

Our original work using this survey was published in 2008 [O'Connell, B., Macdonald, K., & Kelly, C. (2008). Nursing handover: It's time for a change. Contemporary Nurse, 30(1), 2-11]. Since then we have conducted further analyses to establish the psychometric properties of the survey. A second paper was published in the Journal of Clinical Nursing and we suggest that you include this reference when acknowledging the source of the survey. We have not made any changes to the survey since this publication.


Please find attached a PDF copy of the survey which is titled the Handover Evaluation Scale (HES). Our recent analysis has focused on Section C: Perceptions of Handover.

If you would like further information, please contact me via email: beverly.oconnell@ad.umanitoba.ca.

Kind regards,

Dr Bev O'Connell

Dean, Faculty of Nursing, University of Manitoba, Winnipeg, Canada.
Honorary Professor, School of Nursing and Midwifery, Deakin University, Australia.
Appendix G
Patient Communication Survey

Patient Perception of Nurse Communication Survey

Please answer the following four questions regarding how well the nurses at Clark communicate with you. Our goal with these survey results is to make our care the best possible. Your responses will remain anonymous. Do not place your name anywhere on this form. Thank-you for your participation!

1. Nurses at Clark treat me with courtesy and respect.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5</td>
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</table>

2. Nurses at Clark keep me informed about my care in a way I can understand.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>Always</th>
</tr>
</thead>
<tbody>
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</table>

3. Nurses at Clark answer my questions in a way I can understand.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>Always</th>
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</table>

4. Nurses at Clark listen to my concerns.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>Always</th>
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<tbody>
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## Appendix H
SBAR Handoff Form—Original Version 1 and Following Edits Version 2 (Not to Scale; Original Size 8.5 x14in)

<table>
<thead>
<tr>
<th>Pt. Name:</th>
<th>Rm:</th>
<th>Age:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr.:</td>
<td>ISO:</td>
<td>SO:</td>
</tr>
</tbody>
</table>

### Admitting Diagnosis:

### New Orders (this sheet):

#### Reason for admission:

#### Diagnostics/events since last admission:

### Vital Signs:

- Ht:
- Wt:
- Pain:

### Respiratory:

- A&O:
- I&O:

### Skin (incisions, wounds, tx's):

### Lines, tubes, drains & care:

- Turn:

### GI:

- Fall risk:

### Diet:

- Activity:

### Meds:

- GU(continence, catheter, pvr):

### Labs:

### Appointments/care conference:

### D/C plan & date:

### Bed alarm

### Call light

### Notes:

### Bed alarm

### Call light

### Lines, tubes & drains

### Bed alarm

### Call light

### Lines, tubes & drains
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| S | Rm: 2503B | Pt. Name: | DOB: | B | Medical Hx: Click here to enter text. | A | Vital Signs: | Wt: | Meds, Pain, Abx: | R | Notes: | Discharge Education: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Admission Date | Dr. | | | | | | | | | | |
| Admitting Diagnosis | Respiratory: | A&O: | I&O: | Labs: | | | | | | | |
| New Orders: | Events since admission | | | | | | | | | | |
| Code DNR | ISO: | Allergies: | Turn: | | | | | | | | |

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