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Creating a Culture of Learning: Improving Patient Mobility in a Medical-Surgical Unit

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Abstract

PROBLEM: Hospitalization, especially among older adults aged 65 or over, can result in decreased mobility and functional decline. This decreased mobility can lead to accelerated bone loss, falls, increased length of stay, and delirium. In this medical-surgical unit, a pattern reflecting lack of adequate patient mobility has persisted over one year.

CONTEXT: Northwest (NW), a 42-bed community hospital medical-surgical unit- part of an integrated regional health care delivery system, has not been maximizing the mobilization of their patients for the past year based on internal data. The improvement project described in this paper focused on creating a culture of continuous learning to identify evidence-based practices and to implement the use of a standardized progressive mobility protocol.

INTERVENTIONS: The project intervention consisted of a targeted educational series for nurse leaders and frontline staff that emphasized the need for early patient mobilization.

MEASURES: A set of metrics was developed to address outcome, process, and balancing measures. The outcome measure was defined as the calculated average daily mobility score. The regional organizational mobility score goal is 4.8 and the specific project aim for the medical-surgical microsystem was to meet or exceed that metric.

RESULTS: Over nine months, the practice change project resulted in improved patient and organizational outcomes as reflected in clinical, financial, and operational metrics. The unit mobility score increased from 4.3 in January 2018 to 5.1 in October 2018.

CONCLUSION: Mobilization contributes to improved outcomes of hospitalized patients. The intervention of early and progressive mobilization is the most significant and specific nursing measure to optimize quality outcomes and prevent costly complications related to immobility.

Keywords: early mobilization, progressive mobility protocol, immobility, hospitalization

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Creating a Culture of Learning: Improving Patient Mobility in a Medical-Surgical Unit

Introduction

According to the Joint Commission (JC), identification of patient mobility needs is a key priority for assessment of quality, safety, and equity in hospitals (Joint Commission, 2010). Hospitalization, especially among an elderly patient population, can result in decreased mobility and functional decline. Functional decline, defined as the inability to perform usual activities of daily living (ADL) due to weakness, reduced muscle strength, and reduced exercise capacity, has been identified as the leading complication of hospitalization for the elderly (Doherty-King & Bowers, 2013). Patients in acute care settings are at greater risk for immobility. Bedrest is a hazard of hospitalization that may predispose an already vulnerable patient population to an even more significant loss of physical function. Prolonged bedrest during a hospital stay has been associated with pressure ulcers, falls with injuries, and iatrogenic infections (Boltz, Resnick, Capezuti, Shuluk, & Secic, 2012). On average, hospitalized older patients aged 65 or over, spend just 43 minutes a day standing or walking which equates to remaining in a hospital bed for more than 80% of their length of stay (Brown, Redden, Flood, & Allman, 2009). Clearly, there is an imperative to improve patient mobility in hospitals to optimize patient-centered care, quality outcomes, and to decrease costs related to complications associated with extended length of stay.

Healthcare reform has reinforced the need to transform service delivery models to focus on value by emphasizing efficiency and efficacy. The impetus for system redesign, culture change, and the call for innovation presents an opportunity to overcome the long-standing challenges faced by teams who are trying to implement best practices in support of a multidisciplinary mobility program. The improvement project described in this paper focused on creating a culture of continuous learning to identify evidence-based practices and to implement

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the use of a standardized progressive mobility protocol in a 42-bed community hospital medical-surgical unit- part of an integrated regional health care delivery system. Over nine months, the mobility project resulted in better patient and organizational outcomes reflecting more functional independence, reduced length of stay (LOS), and improved clinical, financial, and operational metrics in the medical-surgical telemetry microsystem.

Problem description

Prolonged immobilization of patients results in functional decline, increases the risk of hospital-acquired pneumonia (HAP), and LOS (Drolet et al., 2013; Pashikanti & Von Ah, 2012; Stolbrink et al., 2014). Functional decline and deconditioning from a patient's baseline mobility status can occur as early as day two of hospitalization in older patients. Without adequate mobilization, an individual can lose up to 5% of muscle mass daily. This loss of muscle mass and strength significantly impacts nurse-sensitive outcomes such as hospital-acquired pressure ulcers and falls. The mobilization of hospitalized older patients is an often-overlooked aspect of nursing care. Frequently, nurses are relying on another interprofessional discipline such as physical therapy to mobilize the patients even though this activity is solely within the nursing domain of practice (Kneafsey, Clifford, & Greenfield, 2013).

During a microsystem assessment, improved patient mobility and ambulation was identified as one of the quality *metrics that matter* in Northwest (NW), a busy medical-surgical unit. Historically, the NW Daily Ambulation metric was calculated by the percentage of patients who ambulated during their hospital stay. A regional organizational goal of 80% had been established for daily ambulation rates. However, the focus of the metric was solely on patient ambulation. For this reason, in January 2018, the Daily Ambulation metric was retired and replaced by a new measure called Highest Level of Mobility scale (HLOM). HLOM represents a

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new framework that expands the current view of patient activity from ambulation toward a continuum of mobility activities from bed mobility to ambulation (see Appendix A for HLOM Scale). This scale reframes daily ambulation to progressive mobility in which every patient and every action counts. Since utilization of the new HLOM scale, NW has been performing below target with an average baseline mobility score ranging from 4.3 in January to 4.6 in March 2018. The regional mobility score goal is 4.8 for the medical-surgical unit. The direct impact of a low mobility score resulted in an increase in the patient's LOS. Although negative consequences of immobility are well known to medical-surgical registered nurses (RNs), gaps in the nurses' knowledge, expertise, and accountability for ownership of related care processes was observed and could have led to a patient's' decline in their ability to perform ADL after recovery from an acute illness. One solution for this problem is the development of standards of care for mobility in hospitalized adults to achieve more favorable patient outcomes (Padula, Hughes, & Baumhover, 2009).

Available knowledge

PICOT question

The search for evidence was initiated by developing a population, intervention, and outcome (PICOT) question. In one hospitalized adult medical-surgical unit (P), creating a culture of learning to educate frontline staff and managers to increase mobility (I) and compare rapid cycle tests of change/PDSA's (C) will increase the unit's mobility rate and decrease patient's' length of stay (O) over a nine-month timeframe (T).

Literature search

Based on the PICOT question, an electronic data search was conducted in the Cochrane Database, CINAHL, and Pub Med using the following terms: early ambulation, mobility

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protocol, and the length of stay. Search criteria were set to include English only, research that included a report of outcomes related to inpatient mobilization, and published between 2008 to 2018. The search yielded 312 articles of which twelve met search criteria and six articles were selected for the literature review (see Appendix B for the evaluation table). The evidence search includes three randomized controlled trial studies, two quasi-experimental studies, and one systematic review. The selected articles were evaluated using Johns Hopkins Evidence-Based Practice (JHEBP) research evidence appraisal tool (Johns Hopkins Medicine, n.d.).

There are five levels of evidence outlined in the JHEBP tool. Level I is an experimental study including randomized controlled trial (RCT) or systematic review of RCTs. Level II is a quasi-experimental study which includes a combination of RCTs and quasi-experimental, or quasi-experimental studies only. Level III is a non-experimental study or a qualitative study. Level IV is an opinion of respected authorities or nationally recognized expert committees/consensus panels based on scientific evidence; it also includes clinical practice guidelines. Level V is based on experiential and non-research evidence. It includes literature reviews, quality improvement, program or financial evaluation, and case reports (Johns Hopkins Medicine, n.d.). Three of six selected articles were rated as L I A, two were rated as L II A, and one was rated as L V A.

Synthesis of literature

Guerra, Singh, and Taylor (2015) conducted a systematic review and found that early mobilization in the first 24 hours after surgery was effective in reducing LOS in an acute healthcare facility by 1.8 days. Another quantitative study found that an accelerated perioperative care and rehabilitation intervention in total joint replacement patients is effective and advantageous to both the hospital and the patient (Larsen, Sorensen, Hansen, Thomsen, &

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Soballe, 2008). A systematic review demonstrated that multiple studies reinforced the clinical benefits of inpatient mobilization including pain relief, less deep vein thrombosis, less incidence of pneumonia, improved physical function and quality of life, decreased LOS and mortality (Kalisch, Lee, & Dabney, 2014).

In summary, all of the articles selected for this review confirmed a common theme that early and progressive mobilization can significantly improve patient outcomes and reduce LOS. The findings of this literature review are similar to other evidence from related research which validates the reliability, generalizability, and applicability of these studies. This literature review provided insight into the positive impact of inpatient mobilization on physical, psychological, social, and organizational outcomes. All studies in this review provided strong evidence to support the rationale for this mobility project initiative (Guerra et al., 2015; Kalisch et al., 2014; Labraca et al., 2011; Larsen et al., 2008; Stolbrink et al., 2014; Tayrose et al., 2013). These studies also provided proven evidence-based interventions that are practical to test and implement in a busy hospital unit.

Rationale

Change has become the norm in the healthcare industry. The application of change models in health care organizations aids leaders to deliver change through a systematic and strategic approach. As a master's educated nurse generalist, the Clinical Nurse Leader (CNL) is a change agent who is accountable for improving patient outcomes through the application of evidenced-based practices at the microsystem level (American Association of Colleges of Nursing, 2013). The CNL utilized the Institute for Healthcare Improvement (IHI) Model for Improvement (MFI) and Kurt Lewin's Theory of Change as a framework to guide this mobility project. Lewin's theory postulates that driving forces facilitate transformation because they push

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followers in the desired direction (Kritsonis, 2005). Lewin's Change Theory embraces three different phases identified as unfreezing, moving, and refreezing (see Appendix C for Kurt Lewin's Theory of Change).

The "unfreezing" stage is about assessing readiness to change and influencing people toward motivation for change (Burnes, 2004). The unfreezing stage of the mobility project was the driving force that stimulated team empowerment. Staff motivation was the key to behavioral change with respect to attitude and positive culture transformation. This unfreezing stage opened an opportunity to elevate awareness of gaps in practice through communication to the frontline staff to embrace new ways of learning and testing small tests of change in practice. The second, "moving" stage allowed team members to achieve new behaviors, values, and attitudes through educational sessions to address evidence-based guidelines for early and progressive mobility. The last, "refreezing" stage, establishes the change as the new habit so that it becomes the norm (Burnes, 2004). The purpose of the refreezing stage was truly on target to demonstrate the integration of an efficient mobility protocol as staff endeavored to practice sustainability with their new attitudes and behaviors. This new readiness to maintain change contributed to a culture of continuous learning and was accomplished through the routine use of daily unit huddles, bedside coaching, and multidisciplinary rounds.

Project aims

Global aim

The global aim of this project was to create a culture of learning to support optimal patient mobility and reduce LOS by implementing the use of a standardized progressive mobility protocol in a medical-surgical unit.

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Specific aim

The specific aim of this project was to create culture change in support of maximizing progress for each patient's daily mobility in a medical-surgical unit and to improve the daily mobility score from a baseline of 4.3 in January 2018 to the regional organizational goal of 4.8 or above by December 2018.

Context

A thorough assessment of NW was completed using the Dartmouth Microsystem Assessment Tool and Institute of Healthcare Improvement (IHI) Clinical Microsystem Assessment Tool in order to guide the leadership team in determining improvement themes and aims. NW is a 42-bed medical-surgical unit that provides quality care for patients with a wide variety of acute illnesses, as well as post-operative surgical care for the adult population. Nearly 70% of the patient population is admitted due to medical reasons such as sepsis, pneumonia, congestive heart failure, altered mental status, and gastrointestinal bleed. The remaining 30% of patients are admitted for post-operative surgical care including orthopedic, bariatric, and urology surgeries. The largest population of the unit includes patients over the age of 65, who have a greater risk of complications from immobility. NW has an average daily census of 25 patients and the average LOS is three days according to internal documents that track metrics that matter in this unit.

NW has a total of 51 staff members including 35 RNs, nine patient care technicians (PCTs), and seven unit assistants (UAs). The staff includes many seasoned nurses. The department leadership team includes the nurse manager and five assistant nurse managers (ANMs), also referred to as nurse leaders. Although frontline staff retention is high, leadership, on the other hand, has a very high turnover rate, with three new ANMs hired within the past

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year. NW has not had consistent leadership for the past several years. Other members of the interdisciplinary team include physicians, physical therapists, medical social workers, pharmacists, patient care coordinators, patients, and their families.

Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis

There are multiple factors that can influence the implementation of a mobility improvement project. Therefore, a SWOT analysis was conducted to examine the unit's internal strengths and weaknesses, to identify opportunities for growth and improvement, and to assess any threats (see Appendix D for SWOT analysis). The percentage of satisfying teamwork and collaboration among staff, nurse leaders and physical therapists (PT) support, in addition to the availability of major equipment for safe patient handling were listed as some of the strong internal factors noted in the SWOT analysis. The major negative internal forces appeared to be staffing inadequacy; for example, frequent float staff who are not familiar with unit workflows, and lack of staff and/or patient engagement. Some of the opportunities for improvement include education and training; empowering and holding staff accountable for best practices and introducing new approaches to change patterns in the microsystem. Major threats in the implementation of this project are the potential for longer LOS, increase in readmission rates, an increase in patient falls, and staff disengagement.

Changing the status quo and cost avoidance

If nothing is accomplished to change the status quo and to improve patient mobility, there could be many significant risks to patients and to the organization over time. Immobility has been associated with falls and hospital-acquired pressure ulcers that can lead to further debilitation for the patient as well as an increase in LOS and associated healthcare costs (Boltz et al., 2012). The projected cost of the mobility improvement project is $4,164 for one year. This

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includes staffs' adjusted salaries and cost for education materials and supplies. One nurse educator would teach a total of two thirty-minute classes each year. The staff population consists of 35 RNs and nine PCTs. By optimizing patient's daily mobility, it is expected to reduce LOS in NW by 1% per month, which equates to nine days per month. The cost of patient per day is $3,500. The expected cost avoidance for this is $378,000 annually. With the improvement costs deducted, the overall return on investment (ROI) is $373,836 for the organization (see Appendix E for financial analysis of mobility improvement project). Clearly, the implementation of a well-designed mobility improvement project can change the status quo and contribute to positive outcomes by avoiding costly complications related to patient immobility.

Interventions

The CNL of NW recognized that unit mobility performance was low with a baseline mobility score of 4.3 in January 2018. An assessment was done to examine why the quality gap exists in the unit. As stated earlier, three of the five ANMs were hired within this past year, and they are all new to the organization. These ANMs have not had any formal education on mobility protocols and the HLOM scale. This reality was identified as one of the root causes and major reasons why NW was not meeting the mobility target. Nurse leaders must recognize the significance of early and progressive mobilization. They need to know and understand the mobility protocol as well as the HLOM scale for this improvement project to become successful and sustainable. The mobility protocol has been improved by the regional office to provide guidance on how to maximize and progress each patient's daily mobility, as well as when to consider a Physical Therapy consultation (see Appendix F for the mobility protocol). It has been updated to align staff care practices with the HLOM scale. Nurse leaders must have the knowledge and skills in order to lead and support staff in the regular application of the mobility

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protocol into routine care. Lack of collaboration and communication between nurse leaders, bedside nurses, and other healthcare professionals can also lead to missed opportunities for mobilizing patients (Czapluski, Marshburn, Hobbs, Bankard, & Bennett, 2014). Lack of staff education is another reason identified that contributed to unit performance below the mobility target goal. The updated mobility protocol and the HLOM scale were not previously or formally presented in detail during staff education activities. The change from a daily ambulation metric to the progressive mobility measure was briefly mentioned during a few staff meetings; however, attendance at staff meetings is low. In addition, NW has a frequent float and per diem staff (RNs and PCTs); these individuals are unfamiliar with the workflow and unit priorities for quality and operational metrics.

Sooner rather than later

In the current healthcare system where the focus is on positive patient outcomes while working with limited resources, it is important to incorporate mobility in the hospitalized patients' daily plan of care. Early and progressive mobilization has been suggested as one effective nursing intervention to prevent immobility-related complications and promote positive patient outcomes (Guerra et al., 2015; Larsen et al., 2008; Stolbrink et al., 2014). Early mobilization includes the movement of the patient ranging from passive range-of-motion exercises to active ambulation, depending on the physical capabilities of the patient, and is initiated within 24 hours of admission into an acute care setting. In the review of the studies, it was clear that mobility protocols which utilized a more standardized and structured format obtained the most significant results. The standardized format was introduced by implementing a progressive series of specific mobility interventions to help the patient achieve and maintain his or her baseline mobility status. These specific mobility interventions began within 24 hours of

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admission and were sustained throughout the inpatient stay. These studies demonstrated that a more standardized early mobilization protocol can significantly improve the functional status of hospitalized older adults, reduce the LOS for patients, promote faster recovery time, and reduce postoperative symptoms for surgical patients (Guerra et al., 2015; Labraca et al., 2011; Larsen et al., 2008; Padula et al., 2009; Stolbrink et al., 2014; Tayrose et al., 2013). In summary, when considering mobility in hospitalized patients, the key message is "sooner rather than later."

Education and documentation

Based on the best practices from the evidence, the mobility intervention for this improvement project is to provide educational training on an evidence-based mobility protocol, HLOM scale, and proper mobility documentation in the electronic health record (EHR) for ANMs, RNs, and PCTs. The CNL utilized the informational content of the mobility protocol and HLOM scale obtained from the regional parent organization to educate ANMs and staff through interactive, engaging PowerPoint presentations. The CNL educated the ANMs first so that they were empowered to act as staff resources. It is essential that ANMs model effective behaviors to remove barriers, reinforce mobility expectations, ensure consistent understanding and documentation of daily activities, and identify communication and education gaps. ANMs are expected to include the importance of patient mobility during daily unit huddles and during their 1:1 direct report rounding with staff. After leading the daily unit huddle, the ANM conducted a "mini PCT huddle" wherein PCTs were recognized for their important roles and to educate them by emphasizing and reinforcing the significance of mobility, patient safety, and to ensure understanding and application of the mobility protocol. This increases the staff's accountability and creates a culture of learning and improvement to answer questions and achieve team goals. A run chart of the mobility score was created and displayed in the unit's visual board; it was

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updated daily and used as a tracker to drive performance. This aid also serves as a constant reminder to everyone that patient mobility is important (see Appendix G for NW mobility score tracker). Copies of the mobility protocol and HLOM scale were posted for staff at the unit's visual board and nurse's station for reference. ANMs performed daily rounds to provide support to staff and monitor progress.

Study of the intervention

Population criteria for this mobility improvement project included all patients admitted to NW except patients listed as "brain dead" and patients on comfort care. Data was obtained from the EHR by completing a chart audit. Mobility data was extracted from a regionally generated patient daily mobility report. This report contains patient-level summary data for the medical-surgical unit using statistical data and graphs, and the patients' calculated average maximum score achieved. Patient fall data was also important to collect and correlate; this data is readily available from the internal and regional quality departments.

The first Plan-Do-Study-Act (PDSA) cycle was developed to provide educational training on the mobility protocol, HLOM scale, and mobility documentation in EHR for ANMs (see Appendix H for PDSA cycle 1). ANMs must comprehend the importance and impact of early and progressive mobilization on patients, staff, and the organization. They were responsible for completing the mobility audit tool provided by the quality department each shift to ensure consistent understanding of mobility activities and proper documentation in EHR (see Appendix I for mobility audit tool). The second PDSA cycle is to develop and provide educational training on mobility protocol, HLOM scale, and mobility documentation in EHR for RNs and PCTs. Directed education for frontline staff is essential to provide details of the mobility protocol and how patients are being scored so that staff understands the purpose of the task. Proper

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documentation of mobility in EHR was monitored and validated by ANMs (see Appendix J for PDSA cycle 2). ANMs utilized the big screen monitor at the nursing station during the daily unit huddle to reinforce expectations for patient mobility. The screen shows each patient's current level of function and the last documented patient activity. Lastly, a patient's current level of function and the progressive mobility plan was included as part of multidisciplinary rounds and staff handoff to ensure that all disciplines involved had access to the same information.

Measures

For this mobility improvement project, the CNL developed a comprehensive measurement strategy. Four measures were identified to collect data in this multidimensional initiative: one outcome measure, two process measures, and one balancing measure (see Appendix P for project charter). The outcome measure is the daily average maximum mobility score. The mobility score is calculated by taking the average of (up to) two maximum documented occurrences of patient activity, separated by at least two hours. Data was obtained from the mobility report that is sent out daily by the regional office. The target mobility score for NW is 4.8 or above.

The first process measure is the percentage of patients with an accurate assessment of the current level of function by RNs. Current level of function is defined as the current functional abilities of the patient related to mobility. In the EHR, options for documentation include: Level 1 (bed mobility), Level II (can sit), Level III (can stand/transfer), Level IV (can walk <50ft), and Level V (can walk > =50ft). RNs are expected to assess and document their patients' current level of function each shift. The second process measure is the percentage of patients with documentation of "Activity Type" and "Distance Walked" in EHR. "Activity Type" is the type of activity the patient performs (i.e. resting in bed, up in the chair, ambulated, or held). "Distance

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Walked" is the measurement of the distance walked by a patient during each activity. In the EHR, options for documentation include 1-20ft, 21-50ft, 50-100ft, 101-200ft, or over 200ft. Data was obtained from the EHR via chart audit. The unit goal is to achieve 90% documentation compliance on both process measures.

Lastly, a balancing measure is included to assess other parts of a system that might be affected during improvement activities. The balancing measure chosen for this project is the number of patient falls per month. A fall is an occurrence when the patient has an unexpected descent to the floor. This can include any assistance from a staff member to safely guide the patient to the floor without incurring additional injuries. Data related to patient falls was acquired from the quality department and the goal remains at zero falls per month. Clearly, the inclusion of a family of measures adds value for unit-based improvement strategies implemented by CNLs and their quality teams (see Appendix P for project charter).

Ethical considerations

The project was reviewed by faculty and is determined to qualify as an Evidence-based Change in Practice Project, rather than a Research Project. Institutional review board (IRB) review is not required and the project met exemption criteria (see Appendix K for IRB Non-research determination form).

Ethics are an essential and integral part of healthcare. Healthcare professionals are held to a higher standard of morals and ethics as they are expected to do what is best for the patient and make the right choices when providing care. One of the ethical principles applied to this project is beneficence. Beneficence addresses the idea that an action should promote good, mercy, and kindness while doing what is best for the patient (Kinsinger, 2009). Healthcare professionals have the foundational moral of doing what is right. By implementing the best practices on early

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and progressive mobility using evidence, this project employs beneficence by improving patient quality of care and outcomes.

An ethical issue that may arise during the implementation of this project occurs when the patient's autonomous decision conflicts with the healthcare professional's beneficent duty to advocate for the patient's best interests. For example, a patient who has been admitted to the hospital may refuse to ambulate or mobilize. Expressing respect for patients' autonomy means acknowledging that patients who have decision-making capacity also have the right to make decisions regarding their care, even when their decisions differ with clinicians' recommendations or conflict with best practices (Lachman, 2016). Such situations require healthcare professionals to respect patients' autonomy by giving them the information needed to understand the risks and benefits of early and progressive mobilization to facilitate independent decisions regarding self-management.

Fidelity, being loyal and faithful to commitments and accountable for responsibilities, may pose an ethical concern for this project (Beauchamp & Childress, 2001). Nurses and PCTs have multiple competing priorities each shift they work. Implementing the updated progressive mobility protocol may require an additional task to their already busy day; thus, some staff may not commit to the recommended actions for improvement. Fidelity is about building trusting relationships between nurse leaders, staff, and patients. Nurse leaders must be skilled and knowledgeable to oversee and support nursing staff members while coaching and mentoring them. Nurses and PCTs have a duty to treat patients with respect. They must be competent and capable of performing the duties required of their professional role. Patients must be able to trust and rely on their nurses and PCTs and anticipate that they will be mobilized and ambulated

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progressively as stated in their plan of care. In summary, healthcare professionals have a duty of care that extends to the patient, professional colleagues, and to society as a whole.

Results

Since the implementation of the mobility improvement project, NW's mobility score has improved. Data illustrate that the average mobility score increased from 4.3 in January 2018 to 5.1 in October 2018 (see Appendix L for NW mobility score). As a result of the project interventions, the mobility score pattern of improvement steadily trended up and was maintained above the regional goal of 4.8. A run chart of the mobility score is displayed in the unit and is used as a tracker to rally staff, drive performance, and serve as a constant reminder to everyone that patient mobility is important. The active participation and engagement of the unit staff at the daily unit huddles and staff meetings and the continuous identification of gaps in care have served to maintain improved patient mobility scores.

The adherence rates for routine patient mobility assessment and documentation by nurses showed positive results (see Appendix M for "Current level of function" documentation compliance). Similarly, the staff documentation of each patient's activities has increased and maintained metrics above the goal (see Appendix N for documentation compliance). Both process measures achieved the target goal of 90% compliance monthly since project implementation. These positive results were expected due to increased ANM and staff education and engagement, continuous reinforcement of patient mobility best practices, data driven processes, and heightened awareness of incorporating patient mobility as one of the higher priorities for nursing and ancillary staff.

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Discussion

Summary

The purpose of this improvement project was to introduce evidence-based practices to implement the use of a standardized progressive mobility protocol in a medical-surgical unit to promote functional independence, reduce LOS, and improve patient outcomes. The results of this project reinforce that ANMs and staff need to be continuously educated about any changes in the system processes and procedures of the organization such as the mobility protocol and the HLOM scale. Education and interactive training along with inclusive and positive frontline staff relations significantly impacted patient mobility knowledge, skills, and behavior relative to patient mobility by the nursing staff. The project interventions were effective and showed positive results on both outcome and process measures.

Key findings and success factors

The ANMs were key contributors to the successful change and new practice patterns in the microsystem. During the implementation, ANMs constantly removed barriers, reinforced mobility expectations, ensured consistent understanding and documentation of daily activities, and identified communication and education gaps. They patrolled and assessed patients' mobility in the unit and acted as a non-threatening, credible resource to staff. Gathering the PCTs and conducting a "mini PCT huddle" immediately after the daily unit huddle also significantly contributed to the engagement and positive recognition of PCTs' impact and accountability for patient mobilization. The ongoing multidisciplinary team rounds and bedside coaching sessions also supported real time communication and team motivation during the implementation process.

The mobility audit tool chosen for implementation ensures that nurses are accurately assessing patients' current level of function each shift and that staff are following the mobility

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protocol and documenting patients' activities in EHR. To operationalize a standardized and reliable process, ongoing staff monitoring, and feedback is required. Reinforcement of the process for completion of relevant tasks, reiterating staff accountability and ownership, and monitoring adherence to documentation all contributed to project results. Redesigning the interventions into standard clinical practice will support and sustain this positive trend. The CNL efforts to promote a work environment characterized by open, two-way communication, enthusiasm, education and continuous learning, data driven improvement and effective teamwork also contributed to sustaining momentum and results related to this project.

Lessons learned

Many lessons were learned during the implementation of this project. Baseline and reassessment of the microsystem is essential and valuable to understand the unit culture and trends. Such reassessment is significant to appreciate the current system by conducting a microsystem analysis and then employing a practical quality improvement process. The team manager needs to clearly define the role of each team member and discipline. Team members must understand and be able to clearly and easily articulate what is being proposed and why the initiative is important to the patient, staff, and the organization. To help team members understand, they must receive evidence-based literature and other relevant information. The implementation of the mobility improvement project required significant collaboration and commitment with the multidisciplinary team.

Implications for practice

Through this project, the CNL graduate student was able to apply and exercise different CNL roles. CNLs are in a prime position to collaborate with the bedside nurses, as well as other healthcare team members such as physical therapists, occupational therapists, and physicians to

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implement and sustain an ongoing program of early mobilization for medical-surgical inpatients. Frontline nurses and PCTs play a primary role in implementing a successful mobility protocol as they directly address the functional status of the medical-surgical inpatient population. Because of the sustained results and success of the mobility improvement project in NW, it has recently been replicated in 4-South (4S) and Southeast (SE), both telemetry units of the hospital. The data showed an overall positive result of the average mobility score of the combined medical-surgical and telemetry units (NW, 4S, and SE) (see Appendix O for medical-surgical/telemetry mobility score).

Sustainability

The sustainability of this project can be facilitated through continued bedside coaching sessions, daily unit huddles, as well as, nurse managers and ANMs who remain invested in the success of the unit and improved patient outcomes. Annual competency review through constant reinforcement and quarterly check-ins by the nurse managers and nurse educators should be completed. Moving forward, the novice nurses, traveler RNs, and new hire staff on the unit need to receive proper education on the patient mobility protocol as part of the onboarding process and be re-evaluated as part of periodic and annual performance appraisals to promote the sustainability of the project.

Conclusion

In conclusion, prolonged immobility can be detrimental to the health of all hospitalized patients, especially older adults. Early mobilization is one nurse-driven intervention that has consistently demonstrated positive outcomes for patients with a variety of medical diagnoses and surgical conditions. In the current healthcare system, where achieving positive patient outcomes while working with limited resources remains the norm, it is crucial to engender team

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engagement to incorporate mobility in the hospitalized patients' daily plan of care. The mobilization of inpatients should become a higher priority for nurses practicing in the acute care setting and should not be neglected. Fostering a culture of learning to support optimal patient mobility requires continuous microsystem reassessment, increased frontline and management education, team engagement, and proven interventions to reduce misconceptions. These actions will serve to reinforce the vital importance of quality, patient-centered outcomes and evidence-based nursing practice today.

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Appendix A

Highest Level of Mobility (HLOM) Scale

Mobility Level	Scale	Nursing Flow Sheet Activity Types	Definition
Walk	7	Over 200 feet 101-200 feet	Ambulate away from bed with assistance of care provider, and assistive devices as needed
	6	51-100 feet	
	5	21-50 feet	
	4	1-20 feet ambulated to bathroom (++) - Retire as Null effective 2/28/2018	
Stand / Transfer	3	stood at bedside up to commode up in chair (++)	Transfer to chair/commode Stand at edge of bed March in place/ side step at edge of bed
Sit	2	sitting, edge of bed/dangle (++)	Sit at edge of bed, with feet on solid surface Scoot self laterally along the edge of bed with or without assistance
AROM, Bed Activity	1	up in cardiac chair (++) **Active Range of Motion** on LUE, RUE, LLE, RLE Bilateral Upper and Lower Extremities	Transfer to cardiac chair for patients who lack strength, alertness, or trunk stability to sit at edge of bed. Active ROM: Patient is able to repetitively move extremities on command (extend, flex, etc) Active rolling or turning Active participation in bed mobility during nursing care
No mobility	0	PROM resting in bed no documentation of active mobility	Documentation of resting in bed Passive Range of Motion No documentation of active mobility
Null	Null	activity adjusted per tolerance activity encouraged activity minimized bed in chair position held other (see comments) patient refuses activity spent time outdoors (++) up ad lib up in lounge/playroom (++) ambulated to bathroom (++) - Retire as Null effective 2/28/2018	Due to a lack of consistent definitions, these activities are not assigned to any mobility levels.

Note: Internal HLOM document from regional office

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Appendix B

Evaluation Table

PICOT Question: In one hospitalized adult medical-surgical unit (P), creating a culture of learning to educate frontline staff and managers to increase mobility (I) and compare rapid cycle tests of change/PDSA's (C) will increase the unit's mobility rate and decrease patient's' length of stay (O) over a nine-month timeframe (T).

Study	Design	Sample	Outcome/Feasibility	Evidence rating
Guerra, M. L., Singh, P. J., & Taylor, N. F. (2015). Early mobilization of patients who have had a hip or knee joint replacement reduces length of stay in hospital: A systematic review. *Clinical Rehabilitation*, *29*(9), 844-854. doi:10.1177/0269215514558641	Quantitative Meta-analysis of randomized controlled trials (RCTs)	Five randomized controlled trials included for review – total of 622 participants (63 to 68 years) who have had total joint replacement surgery (hip or knee)	Early mobilization in the first 24 hours was effective in reducing length of stay (LOS) by 1.8 days Early mobilization after hip or knee joint replacement has been shown to lead to improvement in outcome measures without an increase in adverse events or other poor outcomes. Useful for developing ideas on early mobilization program using evidence-based practices.	L I A
Larsen, K., Sorensen, O., Hansen, T., Thomsen, P., & Soballe, K. (2008). Accelerated perioperative care and rehabilitation intervention for hip and knee replacement is effective: A randomized clinical trial involving 87 patients with 3 months of	Quantitative Randomized clinical trial	87 patients who were planned to undergo elective total joint replacement surgery (hip or knee)	LOS reduced ($p<0.001$) from 8 days in the control group to 5 days in the intervention group. More patients in the intervention group	L I A

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follow-up. *Acta Orthopaedica, 79*(2), 149-159.		Orthopedic Clinic of Hostebro Regional Hospital, Denmark, from June 2004 to May 2006	were discharged at or before the fifth day ($p < 0.001$) Greater gain in QOL in the intervention group ($p=0.03$) Useful for developing ideas in the use and implementation of accelerated interventions in both hip and knee replacement.	
Tayrose, G., Newman, D., Slover, J., Jaffe F., Hunter, T., & Bosco, J. (2013). Rapid mobilization decreases length-of-stay in joint replacement patients. *Bulletin of the Hospital for Joint Diseases, 71*(3), 222-226.	Quantitative Quasi Experimental	900 consecutive patients who were planned to undergo hip and knee arthroplasty	Group 1 had an average LOS of 3.9 days, and Group 2 had an average LOS of 4.4 days ($p < 0.001$) Rapid rehabilitation reduces the overall LOS for over 70% of patients Rapid rehabilitation resulted in direct savings considering fewer hospital resources were utilized over the decreased time in-house Useful for developing ideas in the use and implementation of rapid rehabilitation program in both hip	L II A

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			and knee replacement.	
Labraca, N. S., Castro-Sanchez, A. M., Mataran-Penarrocha, G. A., Arroyo-Morales, M., Sanchez-Joya, M. M., & Moreno-Lorenzo, C. (2011). Benefits of starting rehabilitation within 24 hours of primary total knee arthroplasty: Randomized clinical trial. *Clinical Rehabilitation*, *25*(6), 557-566. doi:10.1177/0269215510393759	Quantitative Randomized clinical trial	306 patients undergoing primary total knee arthroplasty for osteoarthritis Hospital in southern Spain, from January 2005 to May 2007	Experimental group showed significantly: 1.shorter hospital stay ($p<0.001$) 2.fewer rehabilitation sessions until medical discharge ($p < 0.001$) 3.lesser pain ($p < 0.027$) 4.greater joint range of motion in flexion ($p<0.012$) and extension ($p<0.035$) 5.improved strength in quadriceps ($p<0.042$) and hamstring muscles ($p< 0.041$) 6.higher scores for gait ($p< 0.047$) and balance ($p< 0.045$) Initiation of rehabilitation within 24 hours reduced the hospital stay and the number of sessions required for patients to achieve Useful for developing ideas on early rehabilitation program using evidence-based practices.	L I A
Stolbrink, M., McGowan, L., Saman, H., Nguyen, T., Knightly, R., Sharpe, J., ... Turner, A. M.	Quantitative Quasi Experimental	Total N=1179. Intervention	HAP incidence was significantly lower in the intervention	L II A

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(2014). The early mobility bundle: A simple enhancement of therapy which may reduce incidence of hospital-acquired pneumonia and length of hospital stay. *Journal of Hospital Infection, 88*(1), 34-39. doi:10.1016/j.jhin.2014.05.006		N=678. Control N=501. Setting: Two wards (one elderly, one respiratory) received intervention and were compared to control patients on two similar specialty wards at a different hospital. Three hospital sites, Birmingham, UK.	group ($P < 0.0001$). Activity levels were higher ($P = 0.04$) and patients' LOS was more likely to fall in the lowest quartile ($P = 0.009$) in the intervention group. The Early Mobility Bundle demonstrates a promising method to reduce the incidence of HAP and to increase activity in medical inpatients. This trial has a real-life design, suggesting feasible implementation and results generalizable to hospitals. Useful for developing ideas on implementation of early mobility bundle.	
Kalisch, B. J., Lee, S., & Dabney, B. W. (2014). Outcomes of inpatient mobilization: A literature review. *Journal of Clinical Nursing, 23*(11), 1486-1501. doi:10.1111/jocn.12315	Systematic review	The electronic databases of MEDLINE (Ovid), CINAHL, and PubMed were accessed. After duplicates were removed, 10,528 titles and abstracts	The various studies suggested physical benefits of inpatient mobilization including pain relief, less deep vein thrombosis, less incidence of pneumonia, improved in physical function and quality of life, decrease length of stay and mortality.	L V A

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		were screened for relevance to inpatient mobilization by the authors, of which, 36 studies were selected for inclusion in this review.	The findings of this literature review provided insight into the positive impact of inpatient mobilization (physical, psychological, social and organizational outcomes). The mobilization of inpatients should become a higher priority for nurses practicing in the inpatient setting and should not be neglected.	

Note: Adapted from Johns Hopkins Medicine (n.d.). The key finding of this literature search reinforced that mobilizing older patients within 24 hours of hospital admission significantly and positively impacts patient outcomes.

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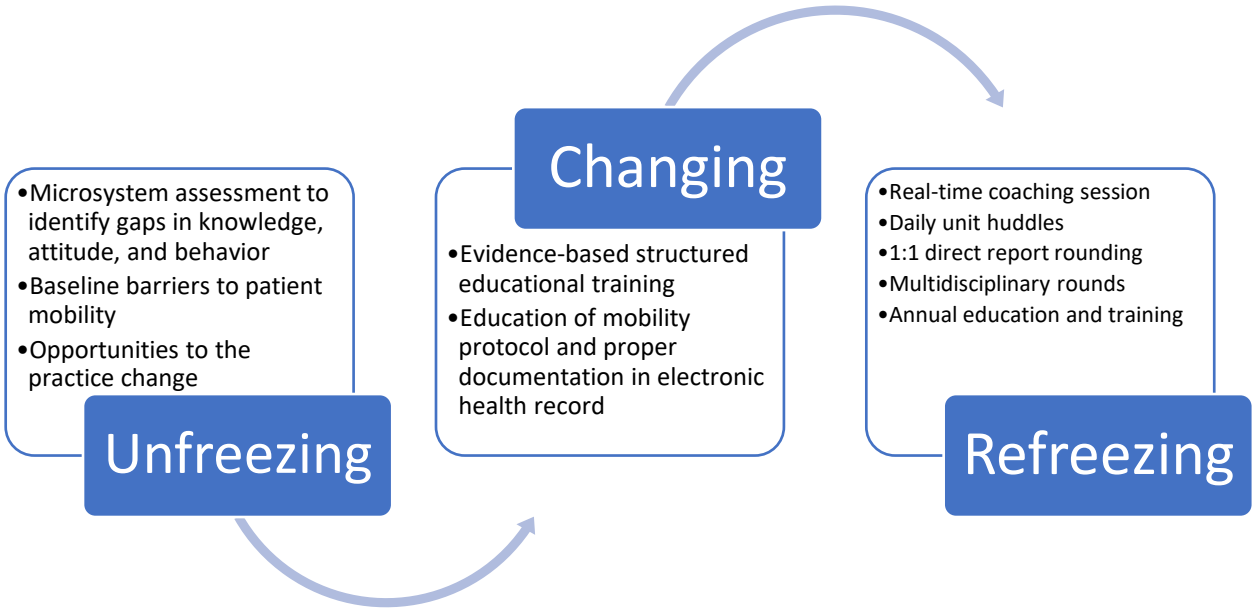
Appendix C

Kurt Lewin's Theory of Change



Note: Adapted from Burnes (2004). Pictorial created by author, July 2018

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Appendix D

Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis

INTERNAL FACTORS	
STRENGTHS (+)	**WEAKNESSES (-)**
• Teamwork and collaboration among Registered Nurses (RNs) and Patient Care Technicians (PCTs) • Willingness to learn • Result-oriented staff • Nurse leaders' support • Data readily available • Major equipment available • Support from Physical Therapists	• Frequent float RN and PCTs • Medical devices, such as drains, chest tubes, and IV lines • Staffing inadequacy • Small inpatient rooms • Not enough patient chair in patient rooms • Staff fear of patient falling • Lack of patient motivation

EXTERNAL FACTORS	
OPPORTUNITIES (+)	**THREATS (-)**
• Education and training of all staff levels • Increase accountability, responsibility, and recognition of staff • Bring awareness to unit, making progressive mobility as one of the top priorities • Increased patient-centered care and quality of care • Improve patient and staff satisfaction • Cost avoidance • Consider incentives for sustainability	• Longer length of stay • Increase in readmission rate • Increase in patient falls • Patient noncompliance • Increase in hospital-acquired pressure ulcer (HAPU) • Continuous turnover of assistant nurse managers • Loss of revenue

Note: Pictorial created by author, June 2018

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Appendix E

Financial Analysis of Mobility Improvement Project

Improvement Revenue (cost avoidance)	**Days/Month**	**Cost/Day**	**Annual Cost**
Total average of LOS in NW per month	900	$3,500	$37,800,000
Total Reduction of LOS	9	$3,500	**$378,000**
Improvement Costs	**Number**	**Hourly Rate + .3 Benefit**	**Annual Cost (30 mins x2 class sessions)**
Nurse Educator	1	$104.00	$104.00
Registered Nurses	35	$104.00	$3,640.00
Patient Care Technicians	9	$30.00	$270.00
Education materials/supplies			$150.00
Total Cost for 2 class sessions (30 mins each)			**$4,164.00**
Project Savings/Cost Avoidance (ROI)	**Reduced Days**	**Annual Cost Avoidance**	**Project Savings**
Reduce LOS in NW by 1% per month	9	$378,000	**$373,836**

Note: Chart created by author, July 2018

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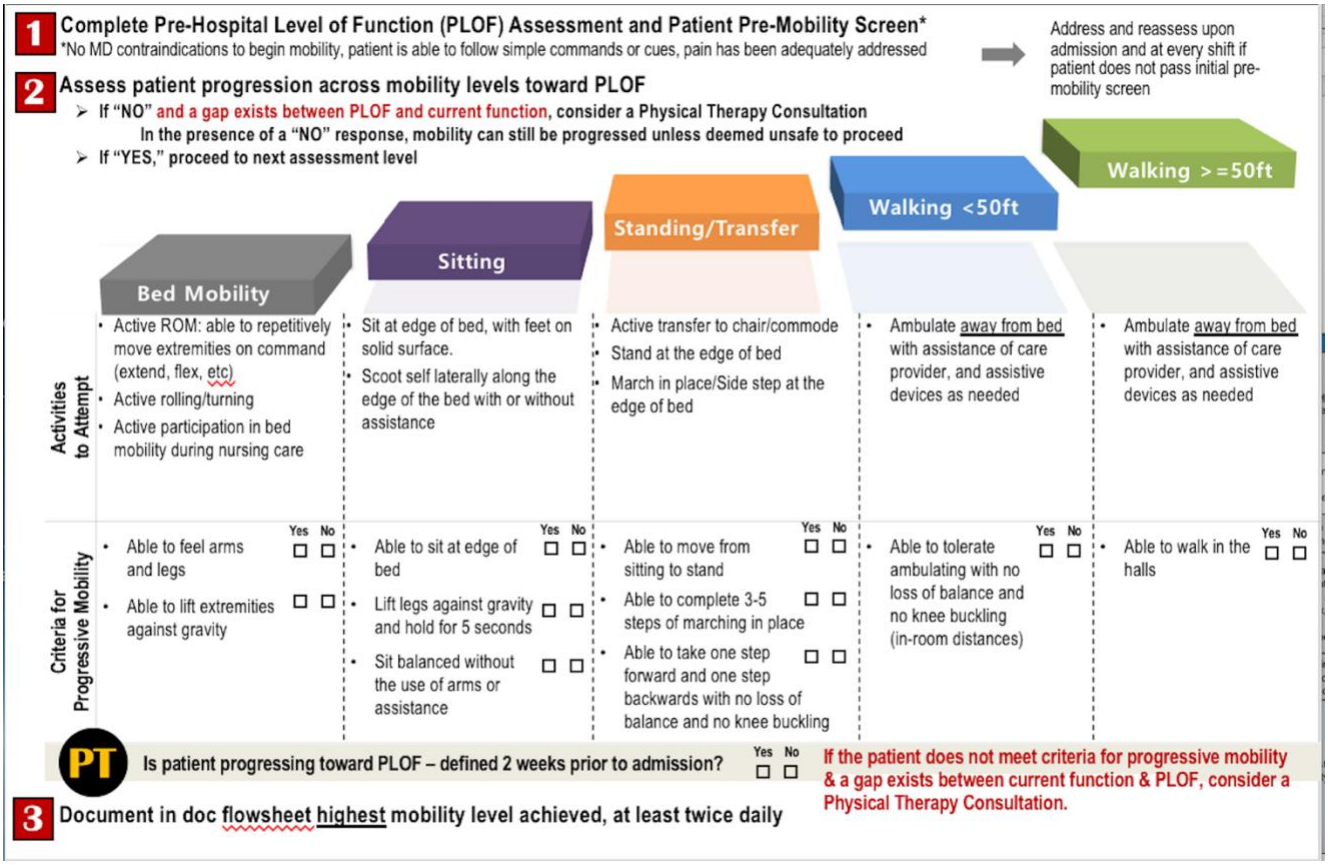
Appendix F

Mobility Protocol



Note: Internal document from regional office

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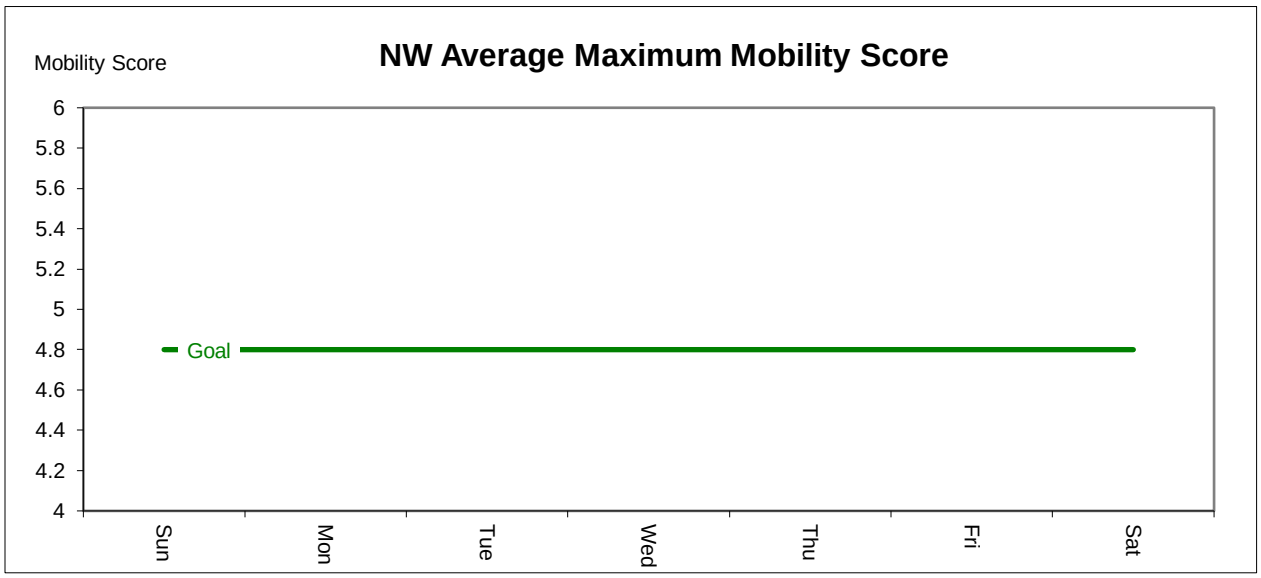
Appendix G

Northwest (NW) Mobility Score Tracker



Note: Chart created by author, June 2018. This chart is displayed in the unit's visual board and updated daily. The tool is used as a tracker to drive performance and serves as a constant reminder of the importance of patient mobility.

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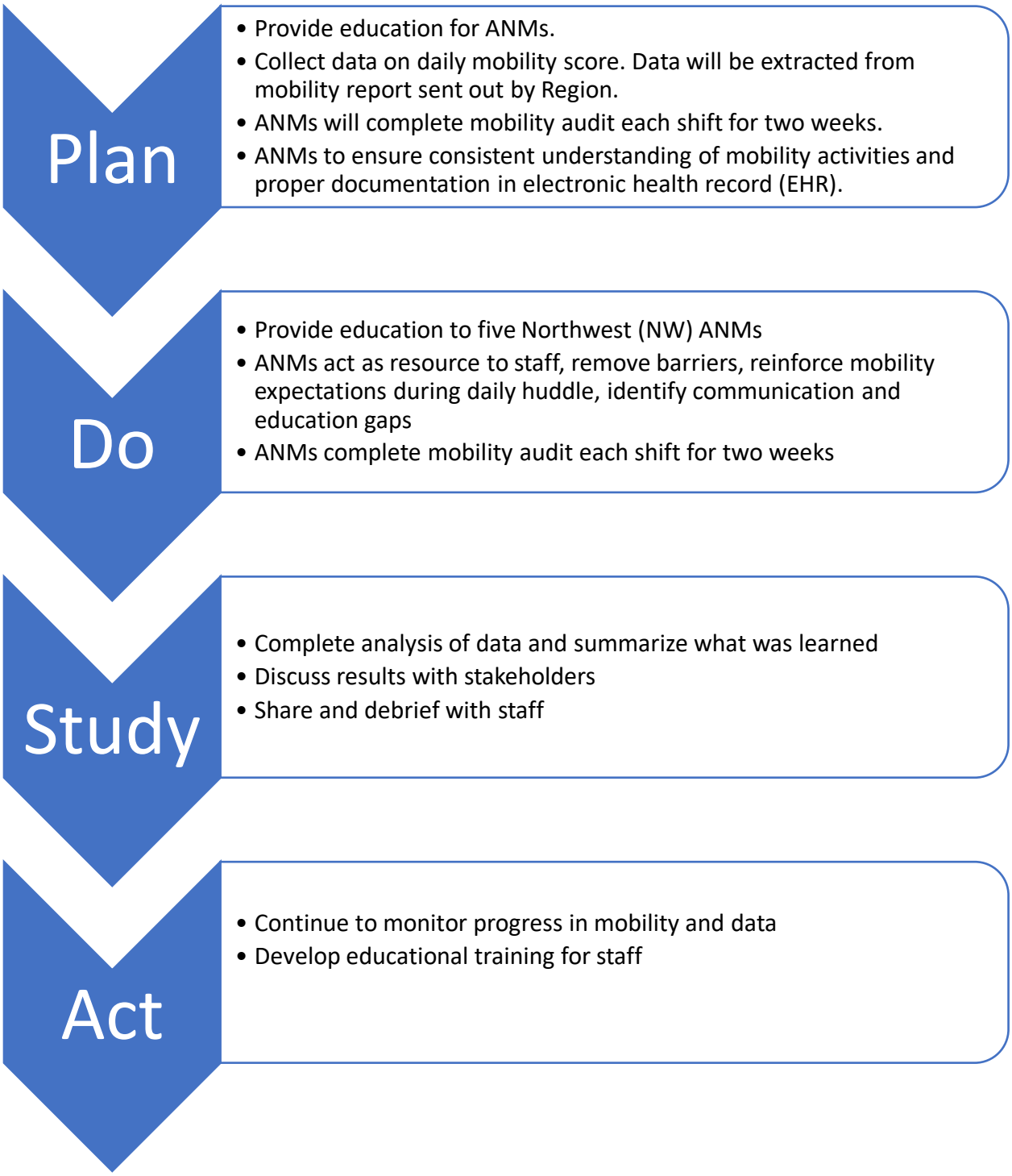
Appendix H

PDSA Cycle 1: Education for Assistant Nurse Managers (ANMs)



Note: Pictorial created by author, May 2018

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Appendix I

Mobility Audit Tool

MOBILITY AUDIT TOOL (Non-ICU)					DATE:			(Audit Results)			
							Distance Walked		Activity Type		
Rm	date		Current level of function				document pt walked on the flowsheet? (Yes/No)		Activity Type documented on flowsheet?		Comments/Staff Name
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
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		1	2	3	4	5	No	Yes	No	Yes	
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		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	
		1	2	3	4	5	No	Yes	No	Yes	

Note: Internal document from hospital quality department

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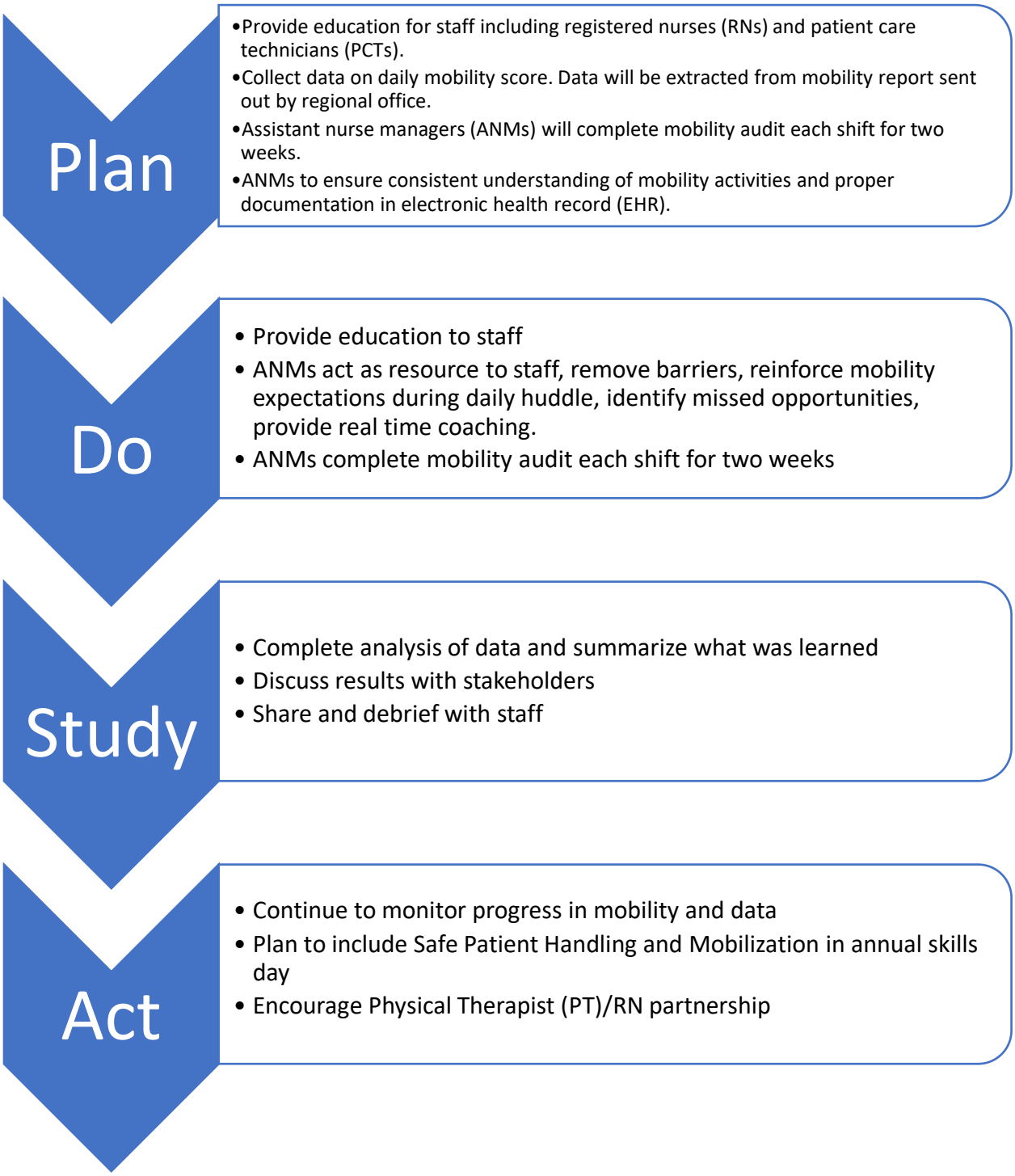
Appendix J

PDSA Cycle 2: Education for Staff



Note: Pictorial created by author, May 2018

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Appendix K

IRB Non-Research Determination Form

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CNL Project: Statement of Non-Research Determination Form

Student Name: Camille Cabalsa

Title of Project: Creating a Culture of Learning: Improving Patient Mobility in a Medical-Surgical Unit

Brief Description of Project:

A) Aim Statement:
To maximize and progress each patient's daily mobility in a medical-surgical unit and improve the daily mobility score from a baseline of 4.3 in January 2018 to the regional goal of 4.8 or above by December 2018.

B) Description of Intervention: The mobility intervention for this improvement project is to develop educational training on Mobility Protocol, Highest Level of Mobility scale, and proper mobility documentation in electronic medical record for Assistant Nurse Managers, nurses, and patient care technicians.

C) How will this intervention change practice? Developing and providing an educational series on mobility protocol and mobility scale, and training on proper documentation related to mobility will give staff better foundation and understanding of the importance of progressive mobility. Nurse leaders must comprehend the importance and impact of early and progressive mobilization on patients, staff, and the organization. It is essential to educate the details of the mobility protocol and how are patients being scored so that staff understand the purpose of the task. These interventions may potentially create a culture change in the unit that can lead to better patient outcomes and reduced length of stay.

D) Outcome measurements:
Outcome measure – daily average maximum mobility score. Data source will be obtained from Regional Daily Mobility Report. Target score is 4.8 or above.

Process measure – the percentage of patients with proper documentation related to mobility in electronic medical record ("activity type" and "distance walked"). Data source will be through chart audit in HealthConnect. Target is 90% compliance.

Balancing measure – the number of patient fall per month. Data will be obtained from the Quality department. Target is zero falls.

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To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used: (http://answers.hhs.gov/ohrp/categories/1569)

☒ This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	**YES**	**NO**
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is **a part of usual care**. ALL participants will receive standard of care.	X	
The project is **NOT** designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does **NOT** follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., **not** a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: *"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."*	X	

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ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME: Camille Cabalsa
Signature of Student:

_____Camille Cabalsa_____DATE___5/27/2018___

SUPERVISING FACULTY MEMBER NAME: Dr. Nancy Taquino
Signature of Supervising Faculty Member

_____DATE_____

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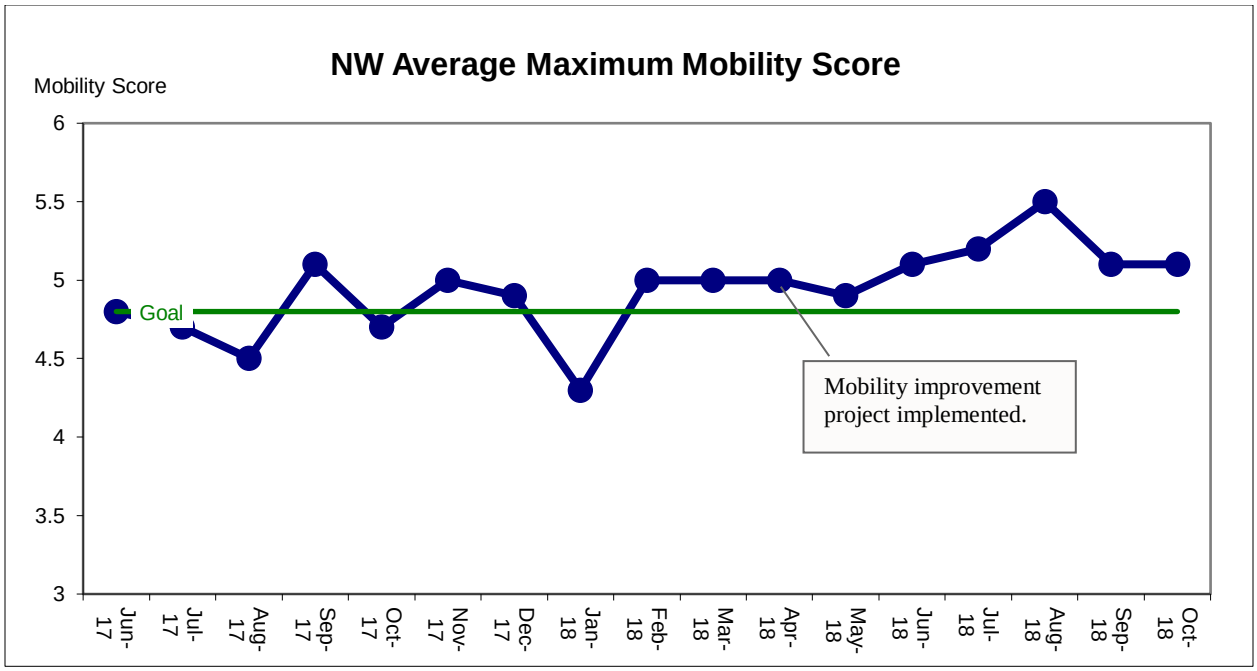
Appendix L

Northwest (NW) Mobility Score



Note: Chart created by author, October 2018

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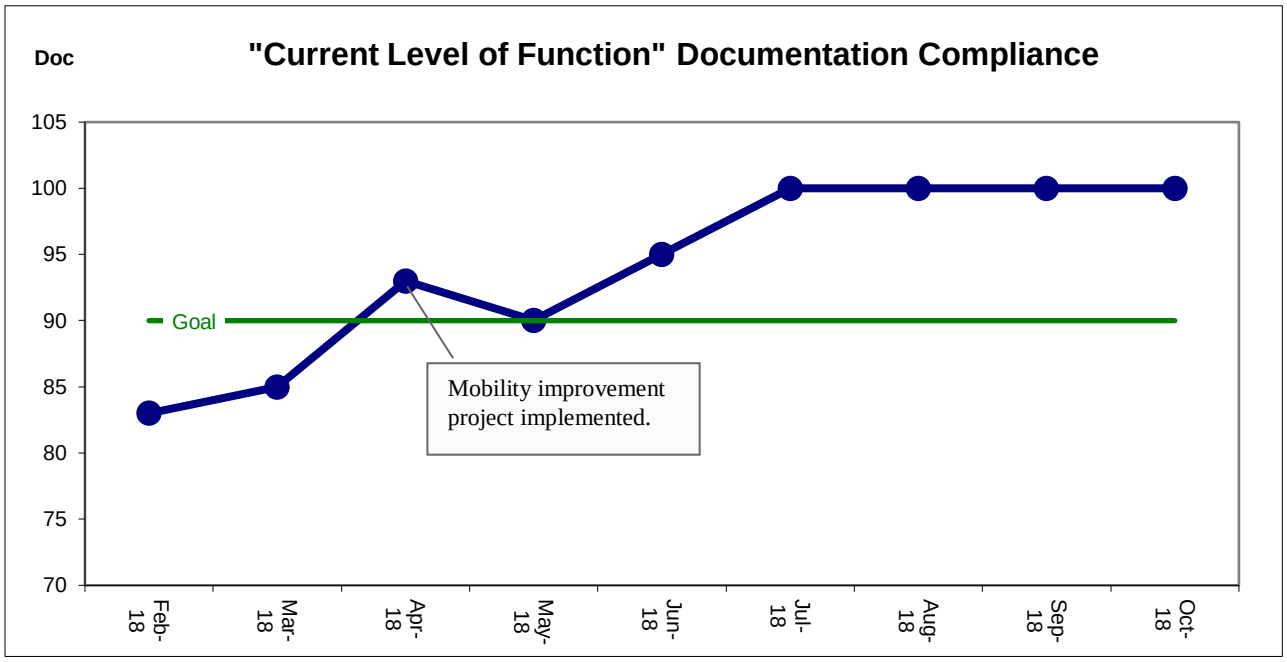
Appendix M

"Current Level of Function" Documentation Compliance



Note: Chart created by author, October 2018

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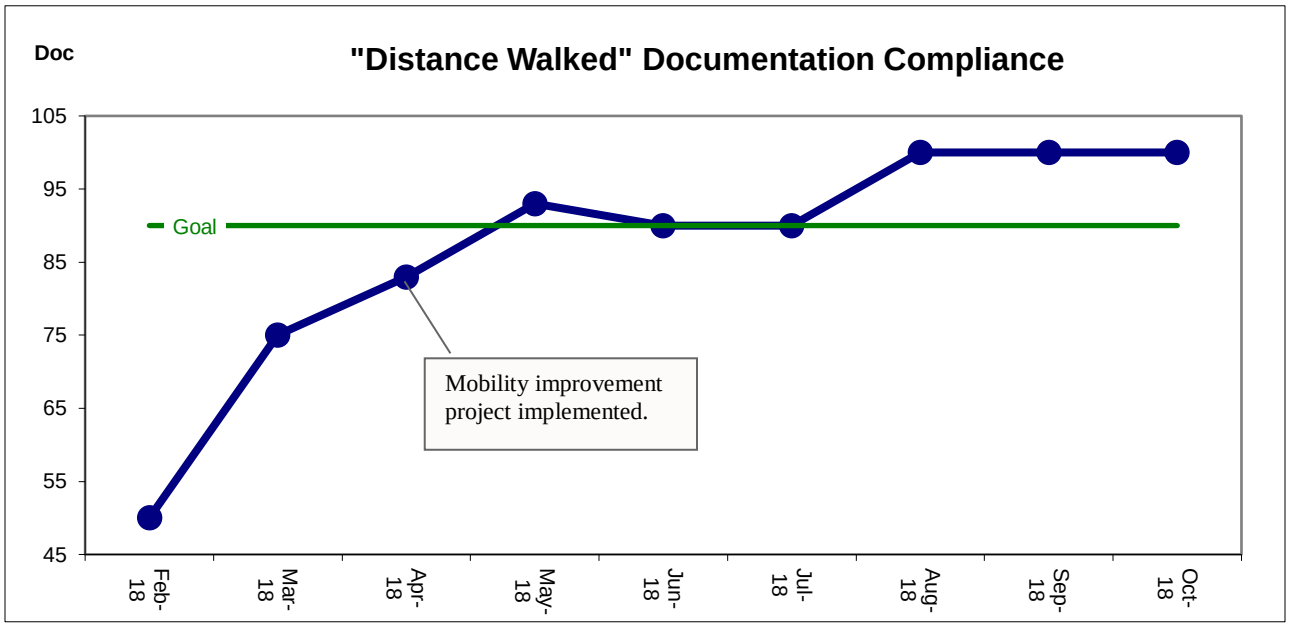
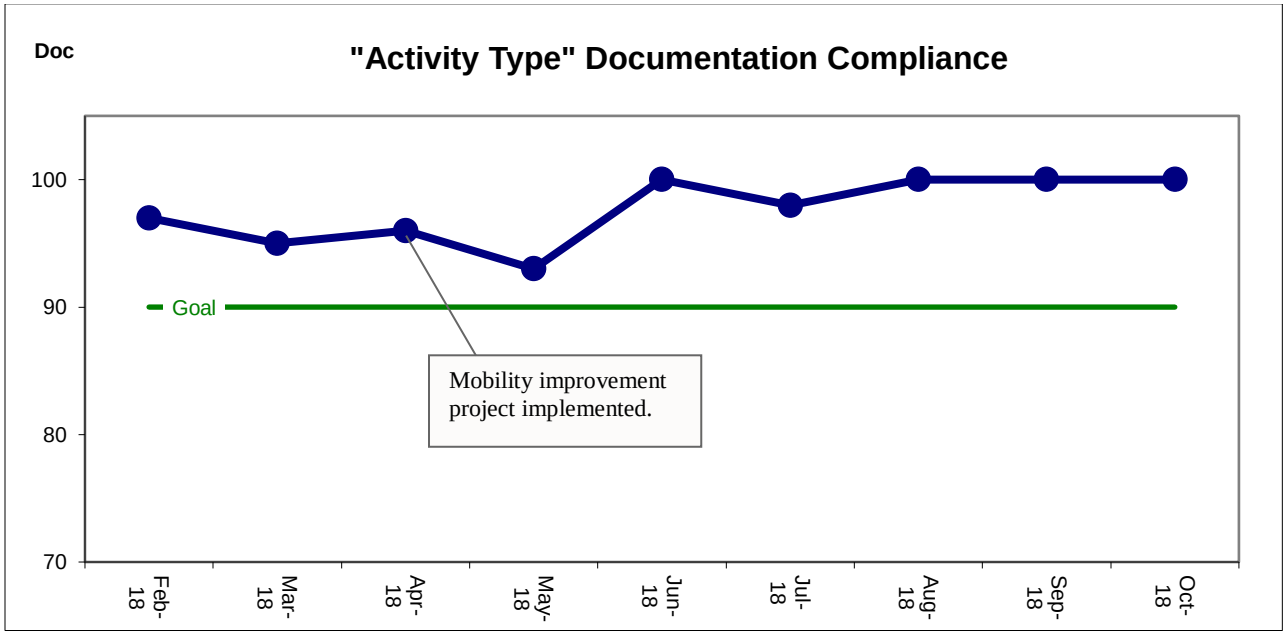
Appendix N

Documentation Compliance





Note: Chart created by author, October 2018

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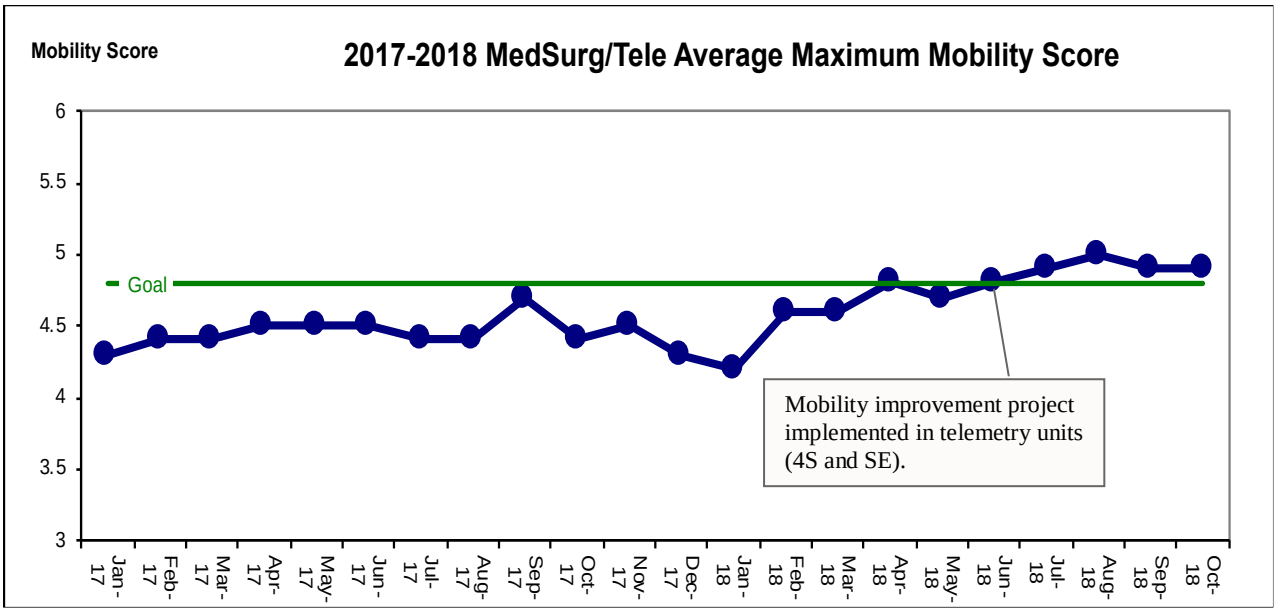
Appendix O

2017-2018 Medical-Surgical/Telemetry Units Mobility Score



Note: Chart created by author, October 2018

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Appendix P

Project Charter

Project Charter: Creating a Culture of Learning: Improving Patient Mobility in a Medical-Surgical Unit

Global Aim: To create a culture of learning to support optimal patient mobility and reduce length of stay by implementing the use of a standardized progressive mobility protocol in a medical-surgical unit.

Specific Aim: To create culture change in support of maximizing progress for each patient's daily mobility in a medical-surgical unit and to improve the daily mobility score from a baseline of 4.3 in January 2018 to the regional goal of 4.8 or above by December 2018.

Background:
Hospitalization, especially among the elderly, can result in decreased mobility and functional decline. On average, hospitalized older patients spend just 43 minutes a day standing or walking which means that they are in bed more than 80 percent of their hospital stay (Brown, Redden, Flood, & Allman, 2009). Functional decline and deconditioning from a patient's baseline mobility status can occur as early as day two of hospitalization of elderly patients. Without adequate mobilization, an individual can lose up to 5% of muscle mass daily (Kneafsey, Clifford, & Greenfield, 2013). Decreased mobility during hospitalization can lead to accelerated bone loss, falls, increased length of stay, and delirium (Czapluski, Marshburn, Hobbs, Bankard, & Bennett, 2014). A study found that the greatest and most direct impact on patient functional status occurred through standardized early mobilization protocols. These protocols include a series of specific mobility interventions implemented in a progressive manner throughout the inpatient stay to help promote and sustain the patient's baseline mobility status (Padula, Hughes, & Baumhover, 2009).

Sponsors

Clinical Adult Services Director	
Nurse Manager	

Goals

1. Provide educational training on progressive mobility protocol for assistant nurse managers (ANMs), nurses, and patient care technicians
2. Implement the progressive mobility protocol and maximize patients' daily mobility and functional levels
3. Employ a multidisciplinary focus on early mobilization as part of the daily clinical routines
4. Accurate and consistent documentation of the patients' highest mobility achieved in electronic health record (EHR), at least twice daily

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Measures

Measure	**Data Source**	**Target**
Outcome		
Daily average maximum mobility score	Daily Mobility Report	4.8 or above
Process		
% of patients with assessment of current level of function	Chart audit – EHR	90%
% of patients with documentation of "Activity Type" and "Distance Walked" in EHR	Chart audit – EHR	90%
Balancing		
# of patient fall per month	Quality Department	0

Team Members

Clinical Nurse Leader Student / Team Manager	
Nurse Manager	
Assistant Nurse Managers	
Clinical and Informatics Educator	
Senior Data Consultant	
Quality Nurse Consultant	
Staff Nurse Champions	
Patient Care Technician Champions	
Physical Therapy Manager	
Patients and families	

References

Brown, C. J., Redden, D. T., Flood, K. L., & Allman, R. M. (2009). The underrecognized epidemic of low mobility during hospitalization of older adults. *The American Geriatrics Society*, *57*(9), 1660-1665. doi:10.1111/j.1532-5415.2009.02393.x

Czapluski, T., Marshburn, D., Hobbs, T., Bankard, S., & Bennett, W. (2014). Creating a culture of mobility: An interdisciplinary approach for hospitalized patients. *Hospital Topics*, *92*(3), 74-79. doi:10.1080/00185868.2014.937971

Kneafsey, R., Clifford, C., & Greenfield, S. (2013). What is the nursing team involvement in maintaining and promoting the mobility of older adults in hospital? A grounded theory study. *International Journal of Nursing Studies*, *50*(12), 1617-1629. doi:10.1016/j.ijnurstu.2013.04.007

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Padula, C. A., Hughes, C., & Baumhover, L. (2009). **I**mpact of a nurse-driven mobility protocol on functional decline in hospitalized older adults. *Journal of Nursing Care Quality*, *24*(4), 325-331.

Measurement Strategy

Population Criteria: All patients admitted to the medical-surgical unit except: patients listed as "brain dead" and patients on comfort care.

Data Collection Method: Data will be obtained from EHR by completing chart audit and from a regionally generated patient daily mobility report. This report contains information of all patients admitted to the medical-surgical unit and their calculated average maximum score achieved. Patient fall data will be obtained from the quality department.

Data Definitions

Data Element	Definition
Electronic health record (EHR)	A comprehensive health information system that provides healthcare professionals with access to patient information and the latest best practices all in one place to further enhance patient safety and quality care while increasing convenience and coordination
Daily Mobility Report	A report generated from the regional level of this organization. It contains patient-level data and monthly and month-to-date summary for medical-surgical unit using statistical data and graphs
Highest level of mobility	A framework that expands the view of patient activity toward a mobility continuum, from bed mobility to ambulation
Average maximum mobility	Average of (up to) two maximum documented bouts of activity, separated by at least 2 hours, adhering to existing time on unit rules
Pre-hospital level of function	Level of function prior to the hospitalization
Current level of function	Current functional abilities of the patient related to mobility. In EHR, options for documentation include: Level 1 (bed mobility), Level II (sitting), Level III (standing/transfer), Level IV (walking <50ft), and Level V (walking > =50ft)
Activity type	Type of activity the patient performs (i.e. resting in bed, up in the chair, ambulated, or held)

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Distance walked	Measurement of the distance walked by patient on each bout of activity. In EHR, options for documentation include 1-20ft, 21-50ft, 50-100ft, 101-200ft, or over 200ft.
Staff population	Includes all nursing staff (nurses and patient care technicians) and physical therapists (PT). Nurse Leaders will be responsible for chart audit.
Patient fall	An occurrence when the patient has an unexpected decent to the floor. This can include any assistance by a staff member to safely guide the patient to the floor without incurring additional injuries.

Measure Description

Measure	Measure Definition	Data Collection source	Goal
Daily average maximum mobility score	Average score of the two highest achieved mobility bouts for the day	Daily Mobility Report	4.8 or above
% of patients with assessment of current level of function	N = number of patients with assessment of current level of function D = number of patients admitted	Daily chart audit – EHR	90%
% of patients with documentation of "Activity Type" and "Distance Walked" in EHR	N = number of patients with "Activity Type" and "Distance Walked" documentation D = number of patients admitted	Daily chart audit – EHR	90%
# of patient fall per month	Number of patient falls per month	Quality department	0

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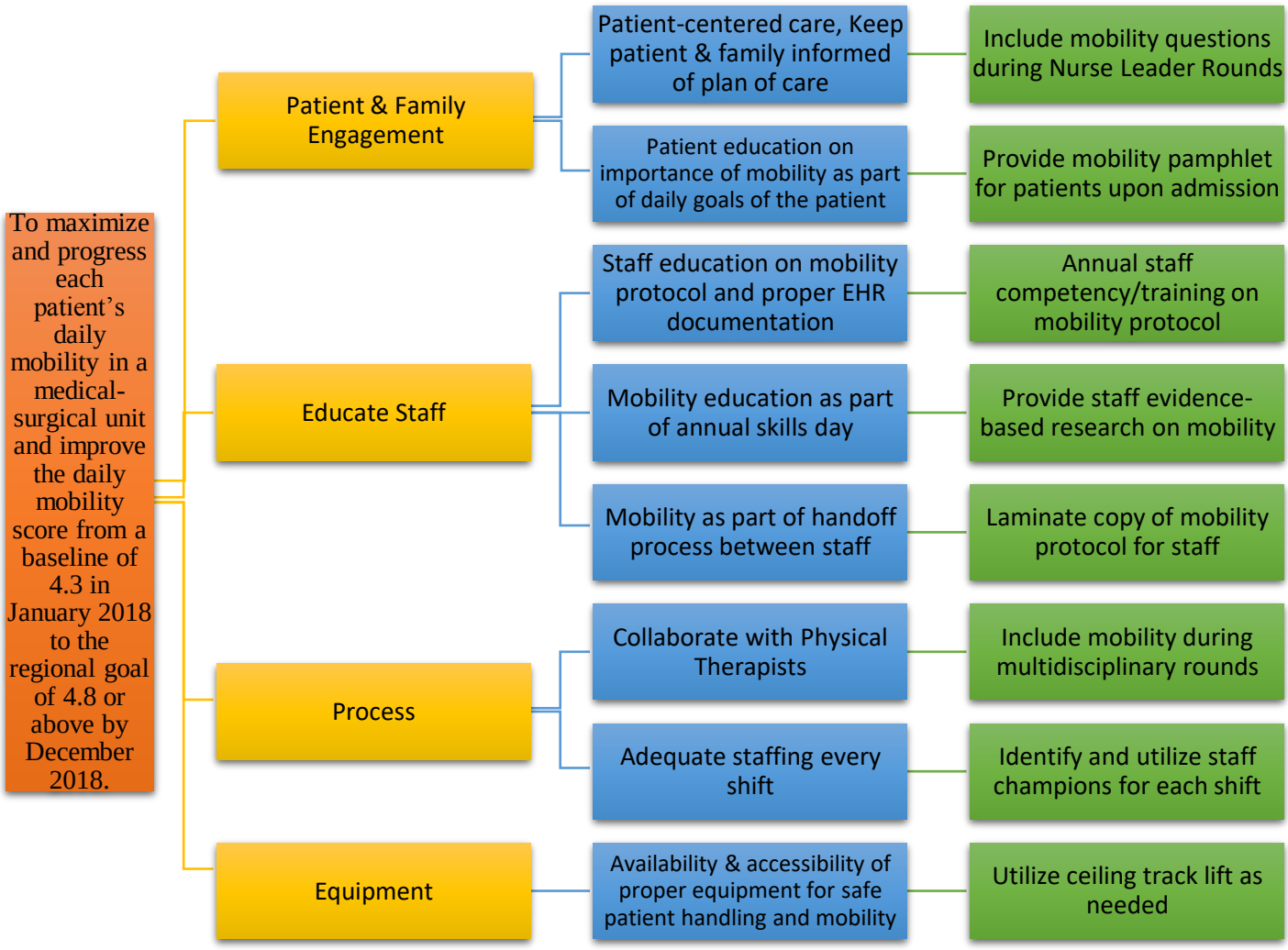
Driver Diagram



Note: Chart created by author, April 2018

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Changes to Test

- The team will develop an educational training for ANMs and staff that will discuss the progressive mobility protocol in detail, Highest Level of Mobility (HLOM) scale, and provide training on proper documentation related to mobility in EHR.
- ANMs will utilize the big screen monitor at the nursing station during the daily huddle to identify expectations for patient mobility. The screen will show each patient's current level of function and the last documented activity.
- After leading the daily unit huddle, the ANM will conduct a "mini PCT huddle" wherein PCTs are gathered and pulled aside to receive special recognition, to emphasize the significance of mobility, to ensure that they understand the mobility protocol and are able to put it into practice safely, and to answer any questions they may have.
- Patient's current level of function and the progressive mobility plan for each patient will be included as part Nurse Knowledge Exchange and PCT handoff to ensure that all disciplines involved have the same information.

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Project Timeline - 2018

Tasks	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Microsystem assessment									
Define topic, aim statement, literature review									
Informational interview with nurse manager, adult care services director, ANMs, nursing staff, physical therapists, and quality consultant									
Identify sponsors and team									
Propose business plan									
Meet with team to discuss strategy for reinforcing mobility protocol and adherence to its documentation									
Conduct education series/classes for staff on mobility protocol and documentation									
Provide education to ANMs									
Meet with stakeholders and staff meeting update									
Collect and analyze data									
Evaluation and re-evaluation of intervention									
Finalize project Prepare presentation									
Final presentation									

Note: Chart created by author, March 2018

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CNL Competencies

The Clinical Nurse Leader (CNL) competencies utilized in this project are:

- Team Manager
    - Properly delegates and manages the nursing team resources
    - Works with the interdisciplinary team to design, coordinate, and evaluate plans of care
    - Leads a multidisciplinary team meeting
- Educator
    - Provides an education intervention based on identification of a need at the point of care for patients, families, caregivers, or professional team
    - Uses appropriate teaching principles and strategies as well as current information, materials and technologies to teach clients and healthcare professionals
- Outcomes Manager
    - Synthesizes data, information, and knowledge to evaluate and achieve optimal client outcomes (American Association of Colleges of Nursing, 2013).

Note: From American Association of Colleges of Nursing (2013).

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