

EARLY MOBILITY IN HOSPITALIZED OLDER ADULTS: NEEDS ASSESSMENT,  
ANALYSIS, AND PROPOSED INTERVENTION

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## ABSTRACT

Dana L. Kouchel: Early Mobility in Hospitalized Older Adults: Needs Assessment, Analysis and Proposed Intervention  
(Under the direction of Anna Beeber)

Despite decades of evidence suggesting that mobility is an important preventative measure, older adults continue to experience functional decline while hospitalized. The consequences of functional decline are far-reaching, and burden the patient and the healthcare system with unwanted outcomes. Due to the complex barriers involved in mobilizing patients, it is important to evaluate care staff's knowledge, attitude and behaviors surrounding mobility in order to recommend interventions that combat immobility.

This project consisted of a systematic needs assessment in order to provide recommendations for mobility practices in an adult medical unit at a large academic medical center. After completion of the needs assessment, data were analyzed and interventions addressing each of these needs were proposed. Care staff members (registered nurses, nursing assistants, and clinical support technicians) on this unit were surveyed online regarding their attitudes, knowledge and behaviors related to mobility. Staff were also observed over four shifts to collect data on mobility practices and unit-specific metrics were compiled into a profile. The needs assessment provided insight into the unit's existing mobility practices as well as potential barriers to implementation of guidelines that would create change.

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## LIST OF ABBREVIATIONS

ACE	Acute Care for the Elders
AIR	Acute Inpatient Rehabilitation
CAPP	Communication and Patient Planning
CMAG	Clinical Microsystems Action Guide
CN IV	Clinical Nurse Four
CNS	Clinical Nurse Specialist
CST	Clinical Support Technologist
DNP	Doctor of Nursing Practice
FFA	Force Field Analysis
FTE	Full Time Equivalent
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
IP	Internet Protocol
ICU	Intensive Care Unit
IRB	Institutional Review Board
MD	Medical Doctor
NA	Nursing Assistant
OT	Occupational Therapy
PT	Physical Therapy
RN	Registered Nurse
UNC	University of North Carolina
SNF	Skilled Nursing Facility
WES	Workforce Engagement Survey

## CHAPTER 1: INTRODUCTION

Functional decline is a serious consequence of hospitalization that occurs in 16% to 59% of hospitalized older adults, defined as adults aged 65 or older (Doherty-King & Bowers, 2011). It can occur by the second day of hospital admission and often remains persistent. For the patient, immobility associated with functional decline leads to a number of problems, such as pressure ulcers, falls, re-hospitalization, and new nursing home placement (Boltz et al., 2012; Hoogerduijn, Grobbee & Schuurmans, 2013). Additionally, functional decline takes a toll on the healthcare system in the form of financial cost, higher mortality rates, longer lengths of stay, increased rehabilitation needs, and increased need for professional nursing care at home and in facilities (Boltz et al., 2010). In-hospital mobility has been shown to correlate with post-hospitalization functional outcomes and is an area where nursing staff can intervene (Zisberg et al., 2011; Brown, Friedkin & Inouye, 2004).

**Problem Statement:** Despite evidence that demonstrates that hospitalized older adults need to stay mobile, functional decline continues to occur. This problem was prevalent on an inpatient medicine unit at the University of North Carolina (UNC) Healthcare and the proposed setting of this project. After exploration of the topic through discussions with staff members and unit leadership, it appeared that functional decline in older adults on this unit occurred neither because of a lack of education, but because of staff and system level barriers. This Doctor of Nursing Practice (DNP) project consisted of a structured needs assessment, participant observation of care rounds and mobility activities, an analysis of these data, and proposal of an intervention that addressed these needs.

Purpose of the Project: The purpose of this DNP project was to conduct a needs assessment to develop a unit-based intervention aimed at improving mobility in hospitalized older adults on a medical unit.

Clinical/Practice Question: What factors influence mobility in older adults hospitalized on medical units? What strategies can be utilized to improve the rates at which patients get up and out of bed?

## CHAPTER 2: REVIEW OF THE LITERATURE

### **Background and Significance**

When older adults are admitted to the hospital they are at high risk for many problems, including falls, delirium, nosocomial infections, adverse drug reactions, skin breakdown and functional decline (Graf, 2006). Functional decline, defined as “the reduced ability to perform tasks of everyday living due to a decrement in physical and/or cognitive functioning” is a common outcome of hospitalization in older adults (Inouye et al., 1993, p. 1354). Advanced age, acute and chronic illnesses, functional limitations and deconditioning all contribute to the development of functional decline during acute hospitalization. As a result, improving and maintaining the functional status of hospitalized older adults has been a prevalent research problem for over three decades (Malone, Capetuzi, & Palmer, 2014). Mobility, or “the ability to move or be moved freely and easily,” is a potentially modifiable aspect of function that will be the central focus of this investigation (“Mobility,” 2016, para. 1).

Many hospitalized older adults are discharged with functional decline, meaning that their function is significantly worse than their baseline (Ehlenbach, Larson, Curtis, and Hough, 2015; Covinsky et al., 2003; Brown, Friedkin & Inouye, 2004; Zisberg et al., 2011). This occurs due to immobility and acute illness during hospitalization (Graf, 2006). Evidence suggests that 30-60% of hospitalized older adults experience functional decline during their hospital admission (Shearer & Guthrie, 2013) and these functional deficits are not likely to improve (Inouye et al., 1993). Deconditioning and functional decline have been found to occur as early as two days after admission in older adults (Winkelman, 2009). The changes associated with immobilization

of muscles, such as contractures can occur within eight hours of inactivity (Rousseau, 1993). Hospitalized older adults are at risk for functional decline due to acute illness, diminished mobility, pressure ulcers, pain, dehydration, and malnutrition associated with bed rest, medication side effects, competing care demands, and treatment measures, such as lines and tubes (Boltz, 2012).

Currently, hospital environments aim to deliver effective and efficient care by managing patient's illness states (Graf, 2006). This leaves little room for focusing on improving patient function. Functional decline in hospitalized older adults is avoidable. Unlike many personal and illness-related risk factors, mobility is a potentially modifiable part of patient care that could have far-reaching implications for hospitalized older adults (Zisberg et al., 2011). By considering functional status in conjunction with their health status, hospitals could significantly improve patient outcomes and prevent the negative outcomes associated with immobility. Thus, this project aimed to address this problem by conducting a needs assessment and using it to develop a unit-based intervention to improve mobility.

### **Consequences of Immobility**

The consequences of functional decline are far-reaching, and burden the patient and the healthcare system with unwanted outcomes. Functional decline is linked to adverse clinical outcomes, poor systems outcomes, and impacts older adults' quality of life (Wong, Ryan, & Liu, 2014; Boltz et al., 2010). Functional decline co-occurs with poor clinical outcomes in hospitalized older adults, such as pain, clotting disorders, skin breakdown, falls, fatigue, pneumonia, and poor psychological outcomes, including anxiety and depression (Graf, 2006; Kalisch, Lee, & Dabney, 2014). Functional decline is associated with a more than four times greater risk of death in hospitalized older adults (Ostir et al., 2013).

In addition to poor clinical outcomes, functional decline leads to increased health care demands. A 2013 study on predictors of re-hospitalization in older adults showed that functional decline demonstrated a greater likelihood of readmission (Morandi et al., 2013). Other outcomes associated with functional decline include increased length of stay, greater need for advanced nursing care, and increased need for rehabilitation (Ponzetto et al., 2003; Boltz, Capetuzi, Shabbat, & Hall, 2010; D'Ambruoso & Cadogan, 2012). Functional decline has also been linked to an older adults' sense of well-being and quality of life. Older adults often view physical function as an important aspect of their roles, routines, and relationships (Boltz, 2012).

Studies have demonstrated that patients often remain in bed during their hospitalization, do not receive physical therapy, and have no provider orders for activity or exercise while in the hospital (Brown, Friedkin & Inouye, 2004; Hirsch, Sommers & Olsen, 1990). Fisher et al. (2011) demonstrated that for 96% of the time spent in the hospital, older adults did not ambulate. One study looked to determine the frequency of hallway walking by older adults hospitalized for medical illnesses; frequency of ambulation was as low for patients independent in walking as for those dependent, 28% versus 26% (Callen, Mahoney, Wells, Enloe & Hughes, 2004). Others estimate that 23% to 33% of patients are only able to transfer from the bed to the chair and vice versa and that 83% of time is spent in bed (Brown, Redden, Flood and Allman, 2009). Additionally, 16% to 33% of older adults are on complete bed rest during their hospital stay (Brown, Friedkin & Inouye, 2004). For most of these patients, there is no documented medical indication for limited mobility.

### **Nursing's Role in Mobility and Specific Interventions**

Basic tenets of nursing, including protecting patient's rights to autonomy and beneficent care, support the idea that nurses are the key to mobilizing hospitalized older adults on medical units

(D'Ambruoso & Cadogan, 2012). Nurses' ability to observe and guide patients around the clock puts them in a powerful position in which they can influence the functional trajectory of hospitalized older adults (Hoogerduijn, Grobbee, & Schuurmans, 2013). Thus, their position at the bedside gives them the power to make mobility a part of a patient's daily routine.

Most of the existing evidence is from small randomized studies, non-randomized studies, case studies and expert opinion (Kleinpell, Fletcher & Jennings, 2008). However, certain nurse-driven mobility interventions have demonstrated improvements related to functional decline and mobility. These interventions, which encourage early and ongoing mobility, have shown considerable influence on the functional trajectory of hospitalized older adults.

Currently existing interventions for increasing ambulation in hospitalized older adults include protocols and guidelines for assessing mobility (Padula, Hughes & Baumhover, 2009; Wood et al., 2014), structured order sets for patient ambulation (Padula, Hughes & Baumhover, 2009; Counsell et al., 2000; Inouye et al., 1993) and use of a mobility aide or other staff member to help patients ambulate (Wood et al., 2014; Hastings, Sloane, Morey, Pavon & Hoenig, 2014; Tucker, Molsberger & Clark, 2004). Other types of studies included exercise programs (Courtney et al., 2010; Callen et al., 2004; Tucker, Molsberger & Clark, 2004), function-focused care programs (Boltz, Resnick, Capetuzi, Shuluk, & Secic, 2012; Inouye, Bogardus, Baker, Leo-Summers & Cooney, 2000), and multidisciplinary interventions (Inouye et al., 1999; Counsell et al., 2000).

Callen et al. (2004) developed an exercise intervention that improved functional outcomes but was unable to demonstrate reduced length of stay. Acute Care for Elders units emphasize the hospital environment, fall-risk screening and increasing mobility; this program demonstrated less ADL decline and decreased nursing home placement without increasing hospital cost or LOS

(Counsell et al., 2000). The Hospital Elder Life Program is designed to prevent cognitive and functional decline and demonstrated maintenance in both of these categories and improved patient-family satisfaction rates (Inouye et al., 2000). The “Walking for Wellness” program attempted to increase ambulation during hospitalization but did not evaluate the effect on overall function (Tucker, Molsberger & Clark, 2004). The Yale Geriatric Care Program improved functional decline by focusing on increasing ambulation while limiting barriers such as urinary catheters and restraints (Inouye et al., 1993). Additionally, Padula, Hughes, & Baumhover’s 2009 study used a multicomponent geriatric program, Geriatric Friendly Environment through Nursing Evaluation and Specific Interventions for Successful Healing (GENESIS), which is a 3-day continuing education program for principles of geriatric nursing care that includes a nurse-driven mobility protocol. The results of the study demonstrated that older adults who participated in the mobility protocol maintained or improved their functional status.

### **Why Conduct a Needs Assessment?**

Though we have research that outlines methods to combat immobility, because of the complex barriers present on this unit, it is important to evaluate knowledge, attitude and behaviors surrounding mobility prior to carrying out any interventions (Godfrey, Nelson & Batalden, 2005). This project sought to generate further evidence by conducting a complex needs assessment, which allowed me to look at the “big picture” of the unit and was used to make detailed and unit-specific recommendations for practice change (Bonnell & Smith, 2014). The data yielded helped determine which interventions are most likely to effectively enhance function in the hospitalized elderly on this medical unit. The following chapter will further delve into the rationale for the needs assessment.



### CHAPTER 3: CONCEPTUAL AND THEORETICAL FRAMEWORK

Kurt Lewin's Change Theory, or Theory of Planned Change, is a field theory that outlines how to make organizational change by mobilizing human capital and optimizing stability within a change (Shirey, 2013). Kurt Lewin, a social psychologist, studied group dynamics, group therapy and organizational development in the 1950s. Early on in his career, he developed force field analysis (FFA), a model that identified factors and forces that influence a situation. This was the framework for his change theory, a three-stage model that helps one understand how to strengthen or hinder these forces to make and sustain change (2013). The use of Lewin's Change Theory allows change agents to understand human behavior as it influences and relates to change so that any changes made can be sustained (Sutherland, 2013).

Lewin's theory draws upon field theory, group dynamics, action research, and the three-step model of change to create a multi-faceted means of making change on an individual, group, organizational, or national level (McGarry, Cashin & Fowler, 2012). Lewin recognized that change could often be made but that it was often not sustained. He stated that "a change toward a higher level of group performance is frequently short-lived; after a 'shot in the arm,' group life soon returns to the previous level" (Lewin, 1947, p. 228). His goal was to deviate from traditional process models and instead observe and conceptualize the variables that affect change (Schein, 1996). The first step in Lewin's change theory is unfreezing, or preparing for change. This involves recognition of a problem, identifying the need for change, and getting buy-in from others who need to see the change (Shirey, 2013). The next stage is moving or transitioning, which encompasses the process of change using a detailed plan of action and empowering others

to test the proposed intervention. This step involves the most work due to the emotional and uncertain nature of making change. Lastly, Lewin recommends refreezing, or stabilizing the change into existing systems. This is crucial to creating sustainability over time (Shirey, 2013). A literature review conducted by Shirey demonstrated that though Lewin's Theory of Planned Change is traditionally used in the social sciences and organizational development, it has also been used extensively in clinical nursing practice (2013).

Change is an unavoidable part of the nursing process. It can be challenging to implement due to workforce shortages, overworked staff and corporate policies, which often put nurses in a bind (Mitchell, 2013). It is important, therefore, that those looking to make change use an evidence-based framework to implement and evaluate change. This DNP project focused on the unfreezing stage of Lewin's theory. During this stage, the "change agent," or in this case, the DNP student, recognizes a problem, identifies the need for change, and mobilizes others to see the need for change (Shirey, 2013). Lewin's approach allows one to identify hindering and helping forces in a situation. This gave me the ability to understand individual actions and determine what forces would need to be broken down or built upon to bring about change (Burnes, 2004). Additionally, this theory provided me with strategies to address uncertainties identified during the change process and enabled me to identify and reduce the resistances that were encountered during this process. Unless there is a solid understanding of what behaviors drive and oppose change, one cannot work to strengthen the driving forces. One could easily step onto a nursing unit or other work area and provide incentive or disincentive for change, but as soon as that stimulus was removed, things would likely return to baseline. This framework outlines the importance of examining contributing factors, building trust with stakeholders and determining the state of a nursing unit before attempting to make change (Schein, 1996).

## CHAPTER 4: METHODOLOGY

### **Project Design**

This project's design and proposed intervention were guided by a complex needs assessment. The purpose of the needs assessment was to provide a systematic process for front line staff to identify strategies to improve care quality in the context of the regular care and daily habits. The project was granted approval from the Nursing Research Council (NRC) at UNC Hospitals. The Institutional Research Board (IRB) determined that the project was not human research and instead was a quality improvement project.

This project included a systematic examination of care staff (including registered nurses (RNs), nursing assistants (NAs) and clinical support technicians (CSTs)) interest, knowledge, capability and environmental issues and conditions that affect mobility. This needs assessment included three data sources: 1) a unit data profile, 2) observation of care patterns and 3) an online survey that assessed care staff's attitudes, knowledge and an online survey on attitudes, knowledge and behaviors that relate to mobility. The three parts of the needs assessment were analyzed and interventions were proposed to the unit. The primary methodology was adapted from the Dartmouth-Hitchcock Clinical Microsystem Action Guide (CMAG) for assessing an inpatient unit and a survey, Barriers to Early Mobility of Hospitalized General Medicine Patients by Hoyer, Brotman, Chan & Needham (2015).

The objectives of this project were to a) assess nursing staff's perceptions of organizational barriers and facilitators to implementing evidence-based care as it relates to mobility, b) assess the extent to which older adults were mobilized on an inpatient medical unit,

c) assess nursing staff's knowledge base regarding the importance of mobility among hospitalized older adults, and d) develop and propose feasible solutions to close performance gaps.

### **Setting**

The practice setting of this DNP project was an inpatient medicine floor at University of North Carolina (UNC) Hospitals. This 31-bed floor served as the hospital's Acute Care for the Elderly (ACE) unit but also provided nursing care for general medicine patients. Multiple teams cared for patients on this floor. Generally, geriatric patients were seen by the geriatric interdisciplinary team, though sometimes these patients would overflow onto other medical teams. The length of stay for geriatric patients ranged from several days to several months, depending on the acuity of the patient and their disposition needs. The patient population includes geriatric and general medicine patients which includes, but is not limited to, patients requiring medical treatment and diagnostic evaluations of both acute and chronic diseases with physiological and cognitive age related changes. Common diagnoses include renal failure, congestive heart failure, pneumonia, respiratory insufficiency and various types of infections.

UNC Hospitals is a public academic medical center encompassed by UNC Health Care, a not-for-profit integrated health care system owned by the state of North Carolina and based out of Chapel Hill. The mission of UNC Health Care is to "improve the health of North Carolinians and others whom we serve" by "achieving excellence and providing leadership in the interrelated areas of patient care, education and research" (UNC Health Care, 2014). It is nationally recognized as high performing on the United States News & World Report list of "America's Best Hospitals" (UNC Health Care, 2015).

## **Subjects**

The subjects for this project were the staff involved in direct patient care on this unit, including 14 registered nurses (RNs), eight clinical support technicians (CSTs), eight nursing assistants (NAs) employed on the unit, as well as occupational and physical therapists who provide therapy to patients on this floor. Care staff were eligible to participate in the project if they were employed on the unit in a role that incorporates direct patient care. No patients were involved in this project.

## **Data Collection Method**

The primary methodology for this project was adapted from the Dartmouth-Hitchcock Workbook Clinical Microsystems Action Guide (CMAG) for assessing, diagnosing and treating an inpatient unit (Godfrey, Nelson & Batalden, 2005). The CMAG is designed to help assess and treat an inpatient unit as if it were a “clinical microsystem,” by studying the support staff, processes, technology, and behavioral patterns in order to improve quality of care and workflow. The CMAG provides clinical teams with guidance on how to assess, diagnose, and treat their unit. Given that functional decline was already identified as a priority for our unit, the CMAG was adapted to create a complex needs assessment, including a unit data profile, observation of care patterns, and a survey that assessed staff attitudes, knowledge and behaviors surrounding mobility. The three parts of the needs assessment were analyzed and interventions were proposed to the unit.

## **Inpatient Unit Profile**

An initial focus of the needs assessment was compiling information for an Inpatient Unit Profile that describes the overall characteristics of the patients on the unit, professionals and processes related to mobility (see Appendix A). The information collected about the

characteristics of the patients served by the unit included: age distribution, their top diagnoses, patient living situation prior to admission (percent of patients who lived at home, in a nursing home, etc), point of entry (e.g. emergency department or direct admit) and discharge disposition (home, rehabilitation unit, nursing home etc.). The profile also included aggregated patient and staff satisfaction scores, percentage of off-service patients and the patient census by day. I collected information on the staffing of the unit, including numbers of nurses, certified nurse specialists (CNSs), NAs, management, and ancillary staff (physical therapy and occupational therapy). I noted whether or not the unit uses standing orders and critical pathways related to mobility, multidisciplinary rounds and discharge goal planning. This allowed me to see beyond one patient at a time and view the unit as a whole (Godfrey, Nelson & Batalden, 2005).

### **Shift Observation**

The purpose of the shift observation was to provide a comprehensive assessment of the unit, and to consider how mobility activities occur on different shifts. Thus, I conducted shift observations on four occasions: weekday day shift and night shift, and weekend day shift and night shift.

**Mobility events.** For each observation, I recorded occurrences relevant to mobility during each 12-hour observation shift on the Inpatient Activity Survey Sheet (see Appendix B). Observations were structured around change of shift report, interdisciplinary rounds, meal times and morning activities. Details about mobility events on the unit were recorded, including the type of mobility event (e.g. standing at the bedside, transferring to a chair, walking to the bathroom, walking in the hallway), who initiated the event (staff member versus patient), and the type of equipment needed to complete the event. Events that were considered relevant included any form of ambulation and transfers in which the patient stood.

**Shift reports.** I also observed how information was shared amongst staff (e.g., change of shift report), how often mobility was discussed in report and in interdisciplinary team meetings, and the types of communication about mobility among various members of the care team.

**CAPP rounds.** According to UNC policy, each day providers, nursing staff, case managers, and a physical/occupational therapy representative hold Communication and Patient Planning (CAPP) Rounds on the unit. These rounds monitor patient progress toward discharge. CAPP Rounds only occur on day shift. The unit CAPP Rounds agenda includes the following for each patient:

- Introduction of all new admissions
- Patient name/room number (stated by the facilitator)
- Length of stay (by the medical doctor (MD), RN)
- Chief complaint (by the MD, RN)
- Goals for the day (around the table)
- Does the patient have a Foley? If so, is it necessary?
- Barriers to discharge (around table)
- Estimated date of discharge
- Is hospital follow-up clinic appointment arranged?
- Does family know plan? (all)
- Where is the patient being discharged? (Home, skilled nursing facility (SNF), acute inpatient rehab (AIR))
- Is there transportation set up for discharge? Who is picking up the patient?

During the course of the data collection, I observed CAPP rounds to find out how often mobility was discussed between members of the interdisciplinary team.

**Unplanned activities.** Unplanned activities, or interruptions in the workflow, are important to document because by tracking the number and types of interruptions, I hoped to identify ways to reduce competition of mobility care with other activities. Thus, I documented the number of times that unplanned activities occurred among care staff members. Unplanned activities, as identified by the CMAG, included things such as phone calls, communication with other members of the interdisciplinary team pages, missing supplies, equipment alarms, and admissions.

### **Online Survey of Staff Attitudes, Knowledge and Behavior Related to Mobility Practices**

Azjen and Madden (1986) suggest that there are two influences that determine an individual's intention to perform a particular action: personal influence (or the person's attitude towards the action) and social influence (the social pressure to perform the action). Successfully changing mobility practices should include not only educational strategies but also promotion of a positive attitude towards this aspect of patient care. Thus, in order to determine potential areas for improvement, this project also included an online survey examining attitudes, beliefs and knowledge related to mobility. The survey was developed around the framework that states that before clinical practice can be changed, one must examine provider knowledge, then attitudes, and finally, behavior (Hoyer, Brotman, Chan & Needham, 2015). The survey was developed by Hoyer, Brotman, Chan & Needham (2015) (see Appendix C) and is useful in identifying barriers to early mobility of hospitalized general medicine patients. By understanding barriers to adherence to practice guidelines, the survey authors hoped to successfully translate evidence-based mobility therapies into practice (2015). An alpha coefficient of 0.72 or greater for the overall scale and all subscales demonstrated acceptable internal consistency reliability of the survey (Hoyer, Brotman, Chan & Needham, 2015). To ensure that the survey would not



sensitize staff to my interest in mobility practices, I invited direct care staff (RNs, NAs, and CSTs) to complete the survey after the shift observations were completed. The surveys collected information from nursing staff on knowledge of mobility and its importance in nursing care, ability to mobilize patients, and barriers to mobility.

**Staff recruitment.** Unit nursing staff (RNs, NAs, and CSTs) were asked to participate in the survey via an email sent out from the unit nurse manager and in person. The email included a summary of the project and survey and then provided them with a link to the Qualtrics survey (see Appendix D). The potential participants were assured that their participation was voluntary and no identifying information would be collected. They were advised that the survey takes 10-15 minutes to complete. I reminded staff to complete the survey by having the nurse manager send reminder emails and by asking staff in person to complete the survey. The oral consent form can be found in Appendix E. By having the nurse manager send out the emails I was able to protect participant confidentiality by limiting my access to email addresses, which is potentially identifiable information.

### **Stakeholder Analysis**

A stakeholder analysis is a means of analyzing persons whose interests and power should be taken into account when developing a project (Schmeer, n.d.). The stakeholder analysis process provides the project investigator with the opportunity to identify all parties that are affected by the area of interest and understand their role and perspectives. Stakeholder analysis allows the project leader to interact more effectively with key stakeholders to increase buy-in for a particular policy or project (Kennon, Howden & Hartley, 2009). Because mobility involves different staff, it was important to determine who has the power to undermine or support it as well as who the project is of interest to (Schmeer, n.d.). The stakeholder analysis for this project

informed a meeting during which I presented my findings and discussed the state of mobility on our unit.

### **Stakeholder Meeting**

Once the data collection was complete, I conducted a meeting with the key stakeholders to obtain their feedback on the findings, review the recommendations, and generate ideas for future practice change. To arrange the meeting, I identified champions of mobility for each discipline, including physical and occupational therapy and nursing, and invited each member to a roundtable discussion. These champions were identified as staff who had demonstrated a strong interest in mobility practices on the unit through personal interactions. Additionally, I invited unit leadership as they have great insight and ability to help make change. These members were invited in person. Next, I invited all of those who would be affected by any changes to mobility practices, including all unit nursing staff, in an email (see Appendix F) This meeting occurred data collection period to review the collected data and guide the development of the proposed intervention.

### **Data Analysis**

The needs assessment, guided by the CMAG, outlines which features of the unit and workforce are its strongest assets and which are some of its less strong features. This information was used to make a detailed recommendation for an intervention that can help nursing staff meet patient mobility needs.

All information was reviewed with a team of stakeholders, including myself, two staff nurses, the project chair (Dr. Beeber), a geriatric nurse practitioner (a project committee member), two occupational therapists, a physical therapy assistant, the unit nurse manager and the two clinical nurse IVs, or nurse supervisors on the unit. The Director of Medicine Services

was present for the first half of the meeting. This team met after the data collection period to review the collected data and guide the development of the proposed intervention.

The meeting's objectives were as follows: 1) review the needs assessment, 2) discuss the current state of mobility on the unit, and 3) brainstorm ways to increase mobility (see Appendix G). The group received a brief 15-minute presentation on the data (see Appendix H) and then the table was opened to discussion based on the following discussion questions:

1. What are some of the barriers you have encountered in getting patients moving?
2. What can we do to get patients up and out of bed?
3. How can we work with one another to ensure that patients are receiving the best care they can as it relates to their mobility?

Inpatient unit profile. To start, I systematically reviewed the Inpatient Unit Profile while looking for problems and deficits, impending change, opportunities for change, as well as strengths and weaknesses of the unit, which will be discussed in detail in the results section.

**Shift observation.** Each aspect of shift observation was quantified and systematically examined for patterns that would guide any future interventions. Analysis of each aspect of shift observation will be detailed below. After collecting details about each mobility event, I categorized events by type and counted the number of occurrences per type. I compiled this data into a histogram. After observing RN to RN and NA to NA shift reports at the beginning and end of each observation shift, listening specifically for mention of the patient's mobility status (or ability) and any mobility events that occurred during the shift, I then calculated the percentages that mobility status was mentioned, whether or not the shift's mobility activities were mentioned. Next, I calculated the number and percentage of time that patient mobility status was mentioned during CAPP rounds as well as what percentage of the time it was

mentioned in relation to discharge planning. Any unplanned activities were compiled into a list and quantified. Then this data was used to identify ways to reduce competition with other activities.

**Survey.** Responses from each question of the survey were reviewed in entirety and grouped into categories based on response: strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree and strongly disagree. The data were compiled into a table based on total number of responses per question and percentage of total respondents. Additionally, the responses to the free text question at the end of the survey were reviewed for word repetitions and key themes. Individual answers to this question were tagged with brief themes in Qualtrics and organized based on occurrence.

**Stakeholder analysis.** The stakeholder analysis for this project was created using the Interactive Screen App from Mind Tools ® (Thompson, 2002). It allows stakeholders to be placed on a grid, the axes of which are power and interest. Based on each stakeholders' power and interest, the Mind Tool categorizes stakeholders into four categories: (a) low power, low interest persons whom will need to be monitored (minimum effort), low power and high interest persons whom will need to be kept informed, low interest and high power persons whom will need to be kept satisfied, and high power and high interest persons whom will need to be managed closely (Thompson, 2002). For each identified stakeholder, I categorized them onto the Interactive Screen App based on their power and interest in the project (see Appendix I).

**Generation of recommendations and stakeholder meeting.** Prior to the stakeholder meeting I evaluated the project results for actionable items that could be generated into recommendations. Actionable items included a) data that were logical, made sense and provided clarity to the problem, b) data that were able to be influenced and controlled with an intervention,

and c) data that would enact change if dissolved or corrected. These data were summarized into readable formats and a PowerPoint presentation (see Appendix I) was created. Additionally, I made an executive summary (see Appendix H) consisting of project findings, proposed solutions, resources required to complete, the scope of the proposed solution, and the barriers and facilitators to implementation of the solution (Altschuld & Witkin, 2000).

### **Confidentiality of Participants and Anonymity of Data**

**Inpatient unit profile.** The inpatient unit profile included aggregated information and did not contain patient or staff information. The profile only included unit-level information.

**Shift observation.** Throughout the quality improvement project, the all participant observation was recorded on hardcopy papers, which were securely stored in the faculty chair's locked research office in a locked file cabinet. During the completion of observation, I asked the staff member for permission to observe a staff member providing patient care. If at any point the staff member became emotionally distressed or embarrassed, I would have asked if the staff member wanted to discontinue participation.

**Online surveys.** The online surveys did not ask staff for any identifying information and were submitted anonymously. No internet protocol (IP) addresses were recorded. The unit nurse manager emailed the Qualtrics survey link and cover page to potential participants, further protecting anonymity. The surveys requested that staff members did not give any identifying information, including name and position on the unit so that all surveys could be completed anonymously. The online survey responses were securely stored in the UNC Qualtrics database. None of the information collected by the surveys was sensitive. Given that the survey questions asked questions about the care staff member's knowledge and attitudes about mobilizing patients in acute care, emotional distress or embarrassment in response to the questions was not expected.

In the extremely rare case that emotional distress or embarrassment occurred, the participant would have been reminded that their participation was voluntary and they may stop with their participation at any time. It was expected that any embarrassment would be minimized by the fact that the surveys are anonymous, meaning that the surveys will not include any information about who completed the survey.

**Generation of recommendations and stakeholder meeting.** All data from the project was summarized in reports and presentations. Individual participants were not identified in these data summaries.

## CHAPTER 5: RESULTS

### **Description of Participants**

The subjects for this project were the staff involved in direct patient care on the unit: 14 registered nurses (RNs), eight clinical support technicians (CSTs) and eight nursing assistants (NAs) employed on this unit. A total of 81 care staff members and stakeholders were involved in the needs assessment. During shift observation, I observed seven RNs and three NAs/CSTs per shift for four shifts, totaling 40 care staff members. Two physical therapists, one physical therapy assistant and two occupational therapists were observed. A total of 30 of 55 care staff members (RNs, NAs, CSTs) participated in the online survey. To protect staff anonymity, I did not collect any demographic information and did not classify participants based on job. The mobility stakeholders who attended the meeting totaled 10 and included the project chair, the unit nurse manager, two clinical nurse experts (CN IVs), two staff nurses, one geriatric nurse practitioner, two occupational therapists and one physical therapy assistant.

### **Inpatient Unit Profile**

The inpatient unit profile highlights the “big picture” of the unit, allowing me to see the whole scope of the professionals, patients and processes involved in mobility care in this setting. Metrics collected included patient days, average length of stay, initiatives and goals put forth by the Centers for Medicare and Medicaid Services (CMS), patient and staff satisfaction goals, staffing data, and details about the medical teams that provide care on this unit. I reviewed the time between when data collection started and stopped, or July 2016 to October 2016 (see Project Timeline, Appendix J). I felt it was especially important to stop collecting data in

October 2016 because of the changes involving the geriatric medicine service, which are detailed below.

**Medical teams.** A total of 10 medical teams care for patients on the unit. Prior to October 2016, the primary teams on our unit included the geriatric medicine service and two general medicine services. In October, the geriatric medicine service moved to the Hillsborough Campus and the current primary services on the unit include two family medicine services and one general medicine service. Additional services that care for patients on the unit include three hospitalist services, nephrology, infectious disease, and pulmonology.

**Patient days.** The following data outlines the unit-specific number of patient days for each month, or the total number of days for all patients who were admitted to the unit. In July, August, September, and October of 2016, we had 853, 826, 849 and 860 patient days respectively.

**Average length of stay.** The following data outlines the unit's average length of stay for each month that data was collected in 2016, or the duration of time between admission and discharge. July averaged 4.87 days per stay, August averaged 5.46, September averaged 5.54 and October averaged 5.06 days. The unit only recorded average length of stay so I was unable to calculate ranges or standard deviations.

**Centers for Medicare and Medicaid Services (CMS) initiatives and goals.** Each unit in the hospital is monitored for quality metrics, including falls, unit-acquired pressure ulcers, and various nosocomial infections. The goals for performance improvement initiatives are to improve patient outcomes, patient satisfaction, and to ensure compliance with regulatory boards such as CMS. Appendix K outlines some of the monthly quality metrics measured on the unit.



Admission assessment percentage indicates compliance with the 15-part admissions assessment required at the time the patient is admitted to the unit, which averaged between 96.0% and 98.6% completion from July to October. Documentation in EPIC, the electronic health record at UNC Health Care, is a percentage indicating compliance with the requirements for each care plan, including that it is patient-specific, that nurses address progress towards goals, and that these are revised and tailored to patient education and discharge needs. For July through October, this percentage was between 94.4% and 100%. Next, the metrics include percentage of staff compliance with full pain assessment, including appropriate frequency and appropriate reassessment timing. Though this data was not available in August or September, we were 95.9% compliant in July and 96.8% compliant in October. Falls are listed as prevalence per 1000 patient days and pressure ulcers are shown simply as prevalence. For July, the unit had 3.44 falls per patient days, while in August and September we had 3.36 and 5.81 falls per patient days, respectively. This number was not available for October. Lastly, we collect data on pressure ulcers present and whether these were unit acquired. In July, we had one pressure ulcer that was not acquired on the unit. In August, we did not have any pressure ulcers. Cells in Appendix L with N/A indicate that the data was not available.

**Patient satisfaction scores.** Patient satisfaction is captured using the Hospital Consumer Assessment of Healthcare Provider Systems (HCAHPS) survey, which is a standardized 27-question standardized survey which measures patients' feedback on their hospital stay. The mean patient satisfaction scores are outlined below in Table 1. I was unable to the data in entirety and thus unable to provide ranges or standard deviations. From July to October, we had between 15 and 31 surveys returned each month with patient satisfaction scores between 78.6 and 87.7.

Table 1

Patient Satisfaction Scores

Month	Number of Surveys Returned	Score
July 2016	15	78.6
August 2016	24	87.7
September 2016	31	84.3
October 2016	24	83.3

**Staff satisfaction scores.** Staff satisfaction is measured using a hospital-wide Workforce Engagement Survey (WES) that designates units as Tier One, Two, or Three based on performance indicators that are key drivers of workforce engagement (Mahoney, 2016). In October 2016, the unit was given Tier One, or the highest performance score, on this survey.

**Staffing data.** Appendix L outlines the unit's full-time equivalents (FTEs), which is important in analyzing nurse staffing on our unit. This is calculated by adding the number of employees who average 30 hours per week and dividing that by 30. The specific FTEs per type of staff member are outlined in detail in Appendix L. Generally, we have filled 31.5 of 36.29 budgeted FTEs for RNs and 17.10 of 18.36 NA/CST positions, indicating that the unit is not fully staffed.

### Shift Observation

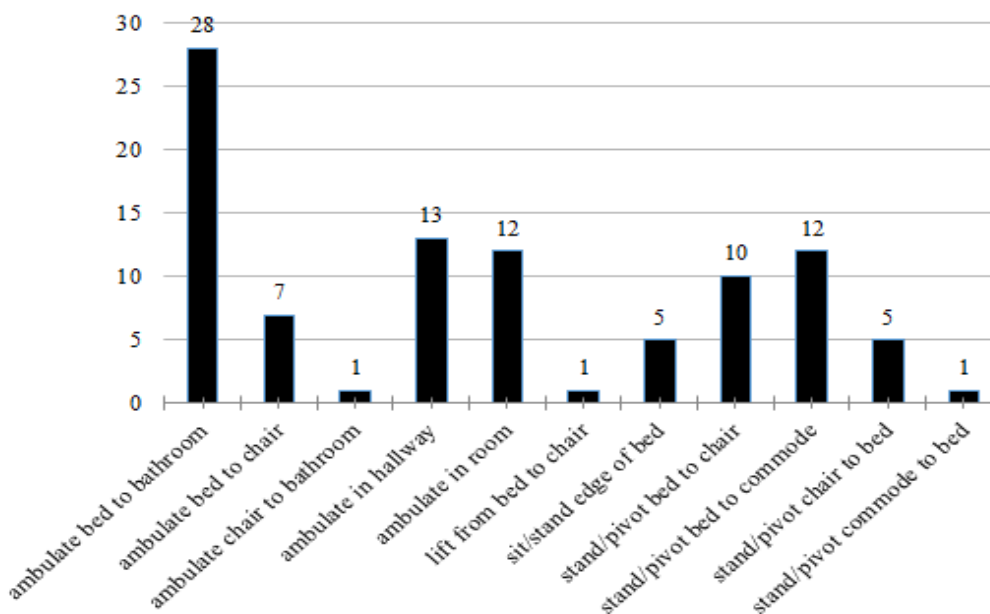
I conducted shift observations to better understand the processes that relate to mobility on the unit. This allowed me to gain context on the conditions under which nurses conduct mobility practices, which in turn gave me insight on where to make improvements. Mobility events were observed during the following nursing shifts: Wednesday, July 20<sup>th</sup> from 1900 to 0730, Saturday,

July 23<sup>rd</sup> from 1900 to 0730, Sunday, July 31<sup>st</sup> from 0700 to 1930, and Wednesday, August 4<sup>th</sup> from 0700 to 1930. I spent 100 hours over four shifts observing mobility practices. During this time, I observed 100 total events. Details recorded included type of mobility events, the time at which they occurred, number of staff involved, shift reports, and any unplanned activities.

**Type of mobility events.** This data is summarized below in Figure 1. A total of 28 events involved ambulation from bed to bathroom, seven involved ambulation from bed to chair, one instance of ambulation from chair to bathroom, 13 events of ambulation in the hallway, 12 instances of ambulation in the patient's room, one involved lift equipment (specifically the MaxiMove Lift), five cases of sitting or standing at the edge of the bed, 10 events in which a patient stood and pivoted to the chair, 12 events in which a patient stood and pivoted from the bed to a bedside commode, five events in which a patient stood and pivoted from the chair to the bed, and one event in which a patient stood and pivoted from the bedside commode to the bed.

Figure 1

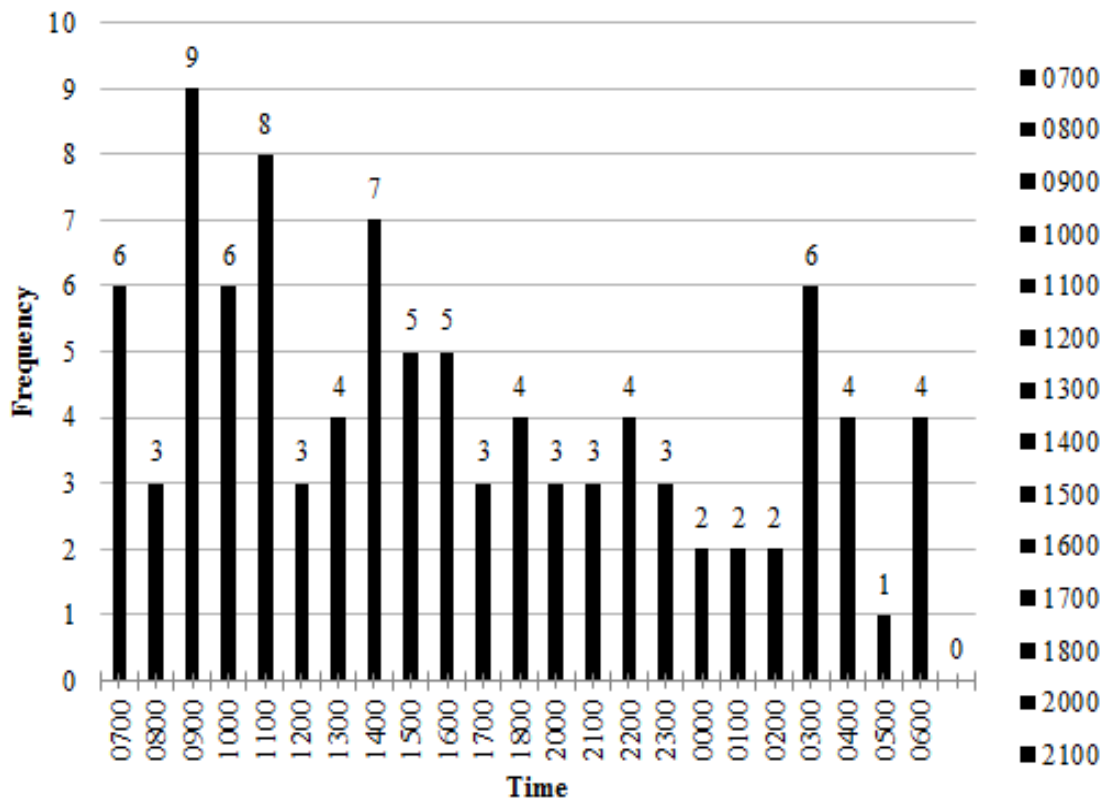
Mobility Event by Type



**Time of Day.** The majority of mobility events took place during the daytime. 63 of 100 events took place during day shift (0700-1900) while 37 events took place during night shift (1900-0700). This data is included below in Figure 2.

Figure 2

Mobility Event by Time of Day



**Shift reports.** The number of reports observed, percentage that mobility status and any mobility events that occurred were mentioned during shift report are summarized in Table 2.

I observed 21 night shift nurses give report to day shift nurses. Of those nurses, 77% mentioned mobility status and 38% mentioned mobility events. I observed 10 shift reports – all were day shift nurses giving report to night shift nurses. Of those nurses, 70% mentioned mobility status and 30% mentioned mobility events. Unfortunately, I was unable to witness

night shift NAs/CSTs give report to day shift. However, I observed 20 day shift NAs/CSTs give report to night shift. 70% mentioned mobility status and 55% mentioned mobility events.

Table 2

Mobility in Shift Report

	RN - Night to Day	RN - Day to Night	NA - Night to Day	NA - Day to Night
Number of reports observed	21	10	0	20
Yes, mobility status mentioned	77%	70%	N/A	70%
Yes, mobility events mentioned	38%	30%	N/A	55%

**CAPP rounds.** Though they are supposed to occur seven days per week, they were not completed during weekend day shift. Several unit nurses identified that the CAPP rounds were not completed on the weekend because of a lack of staff/interdisciplinary team member interest. During the observed weekday CAPP Rounds, care of 29 patients was discussed. Mobility was discussed in 10 of 29 patients or 52.6% of the time. During eight of those 10 occurrences, or 42.1% of the time, mobility was discussed for discharge planning purposes.

**Unplanned activities.** The primary unplanned activities I noted included lack of physical chair alarm pads (for patients on falls precautions), phone calls, and a need for further assistance during a mobility event.

### Online Survey of Mobility

The survey covered topics such as medical acuity, patient safety, lack of equipment and other barriers. Questions were statements, such as “Increasing mobilization will be more work for the nurses.” Respondents were able to choose and respond on a five point Likert scale: strongly

agree, agree, neither agree nor disagree, disagree, or strongly disagree. There was also a free text question at the end where participants could write in anything they didn't feel was covered overall in the survey.

A total of 30 of 55 possible care staff members responded to the survey during the collection period, resulting in a response rate of 55%. Not all respondents answered every question, thus data will be reported in percentages and frequencies. Survey results are outlined in Appendix M.

**Comment themes.** At the end of the survey we asked respondents if there were other issues surrounding patient mobility that were not covered in the survey. These tags and occurrences are organized in Appendix N. Sixteen users responded with “no”. Of those who responded yes, issues surrounding staffing and workload were mentioned eight times, patient acuity was mentioned once, environment was mentioned twice, PT and OT were mentioned twice, education was mentioned twice and patient motivation was mentioned once.

### **Presentation of Findings to Stakeholders**

During the presentation of findings to stakeholders, we talked through issues such as patient handoff, equipment, CAPP rounds, nurse comfort in mobilizing patients, and mitigating falls risk. The meeting started with brief introductions and presentation of the results from the needs assessment. These issues and action items are summarized in Appendix O.

- Falls: The medicine service leader shared that much of the pushback nursing receives against mobility relates to falls prevention and stated that he felt the focus should equally be on functional decline. Two nurses shared that they are fearful that patients will fall because they do not want to be punished, since falls are a “never event” per CMS. The nurse manager, mentioned that there is some confusion around the Morse Falls Scale, which is the current tool that inpatient

nurses use to determine a patient's fall risk, and said that in her experience, the Hendrich II Fall Risk Model was more user-friendly. She also mentioned that proactive toileting was a great solution to both fall prevention and functional decline prevention.

- Protocol: The physical and occupational therapy staff asked how nurses make decisions related to mobility care. I shared that the hospital did not currently have a mobility protocol, which makes it challenging to make decisions about mobility.
- Patient handoff: I mentioned that there is some confusion around the patient handoff tools, which nurses use to transfer patient information from shift to shift. In the space allotted for "Activity," some nurses write the existing orders for mobility while others talk about what the patient is capable of.
- Role of PT and OT: The physical and occupational therapists shared information on how they are assigned to patients and how they communicate best with nursing staff. They talked about the best ways to get patients up and moving and possible ways to mitigate patient unwillingness to work with staff. The unit nurse manager, discussed that in previous jobs she had a rotation with PT as a part of her job orientation. We also discussed that PT and OT were no longer attending CAPP rounds and it would be pertinent that they attend. We also discussed that new physicians often mistakenly put in bed rest orders and that it was inappropriate to have patients on bed rest until being "cleared" by PT.
- Equipment: The PT assistant asked about how nurses are trained to use the lift equipment in school and on the job, which led to conversation about nursing skills

fairs. One of the nurses shared her experience during the transfer and mobility part of the skills fair, which she thought was too short.

The members were very engaged in the meeting. Our discussion resulted in a number of possible interventions, which will be examined further in the discussion section.

### **Themes from Data and Generation of Recommendations**

This section provides the overall themes from the data and recommendations that were subsequently presented to the stakeholders in a meeting.

**Equipment and environment.** During data collection, I noted which events used equipment. Of the 100 recorded events, 16 involved a walker, 10 of 100 events involved a gait belt, eight of which used both a walker and a gait belt. All eight events involving both a walker and a gait belt were completed by physical or occupational therapy staff. One out of 100 events involved lift equipment, specifically the MaxiMove Lift. Three events involved missing equipment: I observed one RN struggle to find a gait belt, once the unit was out of chair alarm pads, and once an NA could not find a recliner. One survey respondent (see themes in Appendix N) wrote that “always having an adequate number of chair alarm supplies (pads, cords, etc) is very important to support our efforts to mobilize patients.” However, in the survey (see Appendix M, question 7), staff largely felt that the unit did have the proper equipment and/or furnishings to mobilize their inpatients: eight agreed (29.63%) and 16 strongly agreed (59.26%).

Another care staff member stated in the survey (see Appendix M) “the patients’ rooms are often too crowded, cluttered, or too small to safely ambulate the patient within the room.” Because our unit is one of the oldest in the hospital, we do have small rooms that make it challenging to mobilize patients. This is especially true of the semi-private rooms, where two patients share a small space.



**Initiation and patient motivation.** Mobility events were largely initiated by patients. 73 of 100 events were initiated by the patient while 27 events were initiated by staff, including RN, NA, CST, occupational therapy (OT), physical therapy (PT), and patient transportation. One survey respondent (see Appendix N) stated that “many of our patients are too poorly motivated to take ownership of their care and initiate early ambulation.”

**Interdisciplinary communication and CAPP rounds.** During the CAPP rounds that I attended, mobility was discussed in 10 of 29 patients or 52.6% of the time. During eight of those 10 occurrences, or 42.1% of the time, mobility was discussed for discharge planning purposes. However, when asked in the survey, the majority of respondents felt that the physical functioning of my inpatients is regularly discussed between the patient's healthcare providers (nurses, physicians, physical therapists, occupational therapists): 11 (40.74%) strongly agreed and eight (29.63%) agreed.

**Risk for injury and patient safety.** Risk for injury is a common reason why staff may not want to get patients up and moving. Staff were split when asked whether increasing the frequency of mobilizing my patients increased risk for injury: four respondents strongly agreed, seven somewhat agreed, three somewhat disagreed, seven strongly disagreed, and six were unsure (see Appendix M).

**Falls and alarms.** The falls rate on the unit (see Appendix K) from July through September 2016 averaged 4.20 falls per 1000 patient days. Initial data from a national study analyzing inpatient fall rates suggests that high-fall units have higher patient volume, proposing that patient turnover has influence on fall rates (Staggs, Mion & Shorr, 2015). In this study, the average fall rate of 800 total examined units was  $4.1 \pm 1.4$  falls per 1000 patient-days (2015). Additional data suggests that patients in medical units fall more often due to complex diagnoses

and higher medical needs (Bouldin et al., 2013). When asked in the survey if increasing mobilization of patients would be harmful, zero staff members strongly agreed, two (7.14%) agreed, three (10.71%) were unsure, 10 (35.71%) disagreed and 13 (46.43%) strongly agreed. This suggests that while most staff do not feel that mobilizing patients is harmful, many were unclear.

A total of 24 of 100 events occurred in response to a deployed bed alarm while one of 100 occurred in response to a deployed chair alarm. Bed and chair alarms, which detect and alert nursing staff to patient movement, are widely used in healthcare settings despite a lack of evidence demonstrating their effectiveness (Hubbartt, Davis & Kautz, 2011).

**Role of physical and occupational therapy.** Question four (see Appendix M) of the survey asked staff if they felt a physical therapist or occupational therapist should be the primary care provider to mobilize inpatients. Staff were largely split: five (18.52%) strongly agreed, six (22.22% agreed), two (7.41%) were unclear, six (22.22%) disagreed, and eight (29.63%) strongly disagreed. When asked if staff understand which inpatients are appropriate to refer to physical therapy, 10 (37.04%) strongly agreed and 12 (44.44%) agreed. When asked the same of occupational therapy, five (18.52%) strongly agreed and 16 (59.26%) agreed.

Survey comments (see Appendix N) included “I think PT/OT should make more rounds if there is a lack of mobility for our patients. This should not be a mandatory task for nurses or NA’s. PT/OT should be more involved” and “physical and occupational therapist need more involve in educating patient regarding mobility.”

**Staffing shortages and time constraints.** During 2015 and 2016, the unit faced critical staffing shortages. It has been a continual struggle to keep the unit fully staffed. As outlined in Appendix L, we have filled 31.5 of our budgeted 36.29 RN full-time equivalents and 17.10 of

18.36 budgeted NAs and CSTs. Survey question 23 (see Appendix M) was “I do not have time to mobilize my inpatients during my shift/workday. Staff were split: three (12.00%) strongly agreed, nine agreed (36.00%), five (20.00%) were unsure, three (12.00%) disagreed, and five (20.00%) strongly disagreed. Conversely, six (24.00%) strongly agreed, and 13 (52.00%) agreed that patients have time during their day to be mobilized three times daily.

Many comments about staffing shortages and time constraints were made during the survey (see Appendix N). Additionally, one staff member stated in the survey comments that “our unit’s patient population is so acute at times, that the staff members might not be able to comply with this goal. But we should strive to do it and encourage the patients and family to assist us with it.” Many nurses have expressed that they must focus on other nursing duties that take precedence over helping patients with mobility. This theme was present in many comments and was mentioned more than any other topic.

## CHAPTER 6: DISCUSSION

The purpose of this chapter is to examine the findings from this project in the context of existing literature and to discuss implications for future practice. The findings from the initial literature review focused on the scope of the problem and nursing's role in mobility; this chapter will specifically focus on solutions to barriers identified in the needs assessment. After discussion of individual barriers, this section will walk through hypothetical development of a nurse-driven mobility protocol on this unit. Usefulness of the work, potential for spread to other contexts, and project limitations are also considered.

### **Recommendations**

After looking at all of the data, I summarized it into nine themes to make it easier to digest. Then I looked back to the literature to see what the evidence and research said for each theme, and then based on the literature and results of the needs assessment, I made recommendations. These recommendations should be implemented to remove the aforementioned barriers and improve in-hospital mobility. Specific recommendations and current data from the literature will be outlined below.

**Use of appropriate equipment for safe patient handling and movement.** The needs assessment identified that nurses on the unit feel that patient mobility may put them at risk for harm. Because nurses on the unit demonstrated some concern about risk for injury when mobilizing patients, it will be important to promote safe patient handling in order to mitigate this risk. Per the Centers for Disease Control and Prevention, institutions should establish a culture

of occupational safety that emphasizes correct technique and access to proper equipment (Gomaa et al., 2015). This is because nursing is a highly physical and posturally demanding profession, which puts nurses at higher risk for musculoskeletal injury secondary to heavy lifting and manual handling of patients (Trinkoff et al., 2008).

UNC Health Care has a Safe Patient Handling Program and concomitant policy that outlines how to reduce the number of hospital worker injuries and improve patient care. Such programs are shown to decrease overall work injury costs and improve health care worker job satisfaction (Mayeda-Letourneau, 2014). The unit is equipped with many different types of safe patient handling equipment, including various types of lifts, assistive devices such as walkers, and gait belts. Nurses are instructed on how to use each piece of equipment annually during service-specific skills fairs, or required refresher courses to demonstrate competence on various topics.

Use of adaptive equipment such as gait belts, walkers and lift equipment has been shown to be effective in reducing and resolving functional limitations in older adults (Mathieson, Kronenfeld & Keith, 2002). Furthermore, adaptive equipment allows older adults to maintain their functional independence (Mathieson, Kronenfeld & Keith, 2002). The needs assessment revealed that gait belts were in regular use on the unit by physical and occupational therapists, but not nursing staff. Furthermore, an instance occurred in which a nurse was unable to find a gait belt. Mobility equipment may not be used because of systems issues, such as small rooms, short staffing, lack of education, or simply because staff may not know where to locate equipment. Making these devices readily available and encouraging staff to use these devices could improve the safety of patients and staff. Possible interventions include providing more gait belts, clearly labeling their location on the unit, and reminding staff of their utility.

Additionally, increasing availability and ease of use of lifting devices and commitment by management to support safe patient handling methods are shown to have a positive influence on safe patient handling techniques (Kay & Budnick, 2013). Because physical and occupational therapy consistently use gait belts, it could be helpful for them to have an in-service discussing their importance and demonstrating their use. Additionally, it will be important to ensure that we have enough chair alarm pads and recliners on the unit at all times. Since concluding the observation period, unit management has ensured that a recliner is in each patient room.

Additionally, it would be important to provide a valid nurse-administered bedside mobility assessment tool, such as the Banner Mobility Assessment Tool or Agency for Healthcare Research and Quality's Algorithm for Mobilizing Patients. Use of this tool would help to standardize assessment and decision making and could result in safer and more appropriate mobility activity. It will be important to continue to encourage safe patient handling techniques, refer staff to the Safe Patient Handling Policy, and ensure that nurses have the education and confidence necessary to be successful during mobility events. By optimizing patient environment and maintaining necessary equipment, we can ensure that staff have all the resources necessary to get patients up and moving.

**Create a geriatric-friendly unit.** Results from the needs assessment suggest that staff feel that proper equipment and a geriatric-friendly environment is necessary to be successful in mobilizing patients. As the unit is located in one of the oldest parts of the hospital, it does not have many features which are geriatric-friendly, such as large rooms, slip-free flooring, and indirect lighting. Hospital designs that emphasize geriatric-friendly principles should guide planning of physical spaces that optimize physical functioning of older adults (Wong, Ryan & Liu, 2014). It would behoove the facility to prepare the environment to better serve the needs of

its geriatric population. The hospital could make this transition by utilizing Fraser Health Authority's *Code Plus: Physical Design Components for an Elder Friendly Hospital* (Parke & Friesen, 2015). This document includes literature and a checklist for medical units with specifications for lighting, flooring, room color, signage, reading material, orientation materials, accommodations for decreased hearing, telephones, furniture, artwork, restrooms, accessibility, equipment/supplies and security (2015). By adding such features, patients and nurses would have more success in any attempts to get up and moving.

**Initiate and foster patient mobility.** The findings from this project suggest that mobility events are mostly initiated by patients, despite staff concerns about how to work with patients who are resistant to activity. This may be because nurses often wait for physical therapy clearance, physician orders, risk factors to decrease, or resources to improve before getting patients up and moving (Doherty-King & Bowers, 2013). Studies that explored interventions that would help build mobility into patient care in this population largely included components of basic nursing care (Lafreniere, Folch, Dubois, Bedard & Ducharme, 2015; Boltz, Resnick, Capetuzi & Shuluk, 2014). These interventions included things like a positive bedside manner, familiarity with patient and patient's abilities, maintaining fluid and nutrition status, and keeping the patient's spirits up. Though these simple tasks are easy to neglect due to competing biomedical care demands, their disregard in an older adult patient could result in one or more geriatric syndromes, such as functional decline, delirium, or falls (Lafreniere et al., 2015). Furthermore, providing patients with mobility care aligns with Carolina Care, a set of behaviors established by UNC Health Care that outline how to provide the highest quality patient experience possible (UNC Health Care, 2017b). The Carolina Care model encourages nurses to anticipate a patient's needs and address them as soon as, or before they occur; allowing patients

to become active participants in their care and improving communication between the patient and the caregiver (2017B).

Motivation is an important variable in older adults' participation in mobility activities (Resnick, 1998). Because of changes associated with aging and older adults' vulnerability to self-doubt and failure, consideration of motivation is especially important in this population (Kemp, 1988; Meichenbaum, 1974). For older adults who have low self-efficacy and low motivation, nurses could strengthen efficacy beliefs by providing verbal encouragement, giving positive reinforcement, and setting small and realistic goals (Resnick, 1998). Throughout pre-professional program curriculum, physical and occupational therapists learn how to assess and incorporate motivational factors into the treatment plan; thus, it may be helpful to seek insight from physical and occupational therapists on means to motivate patients to get up and moving (National Board for Certification in Occupational Therapy, 2017; Commission on Accreditation in Physical Therapy Education, 2016).

**Clarify the role of physical and occupational therapy in mobility.** Survey data supports that staff largely understand the role of physical and occupational therapy; however, some percentage of staff are still unclear on therapy's role in mobility activities. A 2013 study by Barbara Doherty-King and Barbara Bowers showed that some nurses feel that responsibility for ambulation fell on physical therapy. However, because of their round-the-clock presence at the bedside, many researchers have identified nurses as the profession most capable of promoting mobility (2013). Results from this study and those of Kalisch (2006) demonstrate that nurses may not feel responsibility for patient mobility in the hospital setting. Drolet et al. (2012) argues that physical therapists only have about 30 minutes each day to ambulate patients. Thus, shifting perceived responsibility for mobility care from PT to nursing may increase the rate at which



patients are mobilized each day. It may be helpful to have a therapy representative come to a nursing staff meeting to discuss the role of therapy during the hospital and to reinforce that nurses are the team member primarily meant to carry out the mobility care plan put in place by therapists. In their 2013 qualitative study, Doherty-King and Bowers found that nurses who received instructions from individuals charged with oversight of care of older adults across hospital units, such as clinical nurse specialists (CNSs) were more likely to ambulate patients. This was especially true if the CNS followed up after instructing the nurse about ambulation (2013). Additionally, the study concluded that establishment and enforcement of a unit level expectation that patients will be ambulated was a strong influence on ambulation. This would be a helpful standard to establish on this unit, as currently ambulation of a patient is at the discretion of the bedside nurse. This mentality would be solidified by development of a nurse-driven mobility protocol, which formally brings the responsibility of ambulation to the nurse.

**Improve interdisciplinary communication and CAPP Rounds.** Early evaluation and identification of older adults at risk for functional decline allows prevention, personalized treatment and allotment of resources necessary to provide interdisciplinary mobility care (Admi, Shadmi, Baruch & Zisberg, 2015). Furthermore, thorough communication and shared objectives by physicians, nurses and other members of the interdisciplinary team is key in promoting independence for hospitalized patients (Admi, Shadmi, Baruch & Zisberg, 2015). The needs assessment revealed that staff feel that mobility care is discussed routinely. However, physical and occupational therapy staff are not routinely present at CAPP Rounds and mobility status may not be consistently discussed during this meeting. Because the interdisciplinary team does not consistently discuss patient mobility status, we are missing an opportunity to foster communication and reinforce that mobility is a shared goal. Mobility status and risk assessment

would be a simple addition to the CAPP Rounds agenda and would ensure that functional decline prevention remains a priority for all patients. The following questions could be added to the agenda:

- What level of activity is the patient capable of?
- What barriers does the patient have to being mobilized?
- How can we continue to prioritize mobility for this patient?

Perhaps a representative from physical and/or occupational therapy could be present at CAPP Rounds each morning to ensure this agenda item is not missed. This would allow discussion of patient progress and strategies to motivate and move patients toward functional independence. Furthermore, this would be an opportunity to ensure that patients have the most appropriate activity orders and be sure that patient mobility is a priority for all members of the health care team.

**Reconsider the relationship between patient acuity and mobility.** During the survey, most staff did not feel that mobility was harmful to patients, though some stated that patient acuity was a barrier to mobilization. Factors such as previous functional impairment, advanced age, complex comorbidities, spinal cord injury, burns, neurologic and/or orthopedic compromise and severe cardiopulmonary dysfunction are shown to limit ability for functional improvement in some patients (Perme & Chandrashekar, 2009). A 2013 study identified that nurses tend to wait until risks such as compromised cognitive or physiologic status to improve before initiating mobility practices (Doherty-King & Bowers, 2013). However, the consequences of bedrest, including things like low plasma volume, orthostatic intolerance and muscle atrophy, start to occur within 24 hours of bed rest (Fortney, Schneider & Greenleaf, 1996). Because patients are only hospitalized for a short while, waiting for risk level to improve often means waiting until

time of discharge, causing patients to never ambulate during their hospital stay (2013). Nurses need adequate training to mobilize patients, including how to incorporate patient acuity into mobility planning; this will, in turn, be essential in increasing nurse-directed patient mobilization.

Staff education and skills training in conjunction with an interdisciplinary team approach allows successful implementation of early mobility programs in the intensive care unit (ICU) (Perme & Chandrashekar, 2009). Most of these protocols outline decision making on when and how to mobilize patients in the ICU. Because the patients on the floor level are less acutely ill, nurses across medical-surgical units should be just as successful in mitigating any risks posed by compromised medical status. Though a survey of current literature did not produce any such list or tool, care staff on the unit would likely benefit from a resource that outlined absolute and relative contraindications to mobility based on patient acuity and diagnosis.

**A better balance between decreasing falls risks and encouraging mobility.** UNC Hospitals places great emphasis on falls prevention, and for good reason, because falls in the elderly can be devastating to an elder patient's recovery. UNC Hospitals' Fall Precautions Policy (NURS 0331) outlines universal falls interventions, screening and fall precautions for high-risk patients, and how to manage fall occurrences (UNC Health Care, 2016). As falls are considered one of eight "never events" by the CMS, many fall reduction strategies are already in place at UNC Health Care System. However, fear of falling and emphasis on fall prevention encourages patients to stay in bed all day, which has the unintended consequence of worsening functional status for geriatric patients. Especially because bed rest and subsequent functional decline put a patient at further risk for falls (Stuempfle & Drury, 2007). Research suggests that nurses struggle to balance the pressure from nursing administration to prevent falls with the

unintended consequence of worsening functional status in older patients (King et al., 2016). Strongly worded messages from hospital administration to achieve a zero falls rate results in fear of falls, nurses' developing a need to protect themselves and the unit, and thus, restriction of fall risk patients (2016). In a 2014 article, researchers encouraged organizations to promote independence and self-direction alongside patient safety (Boltz, Resnick, Capetuzi & Shuluk, 2014). Another study looked at conditions that shifted nurses to "progress," or ambulate fall risk patients; these conditions included support from nursing administration, having confident clinical decision making skills, a leadership role on the unit, and years of experience as a nurse (King, Pecanac, Krupp, Liebzeit & Mahoney, 2016).

Because of the complexity of falls, it is important to use a patient- and unit-centered approach to fall prevention. Unit leadership should encourage both fall prevention and ambulation simultaneously, and give nurses the power and knowledge to make educated decisions on how and when to get fall risk patients up and moving. Zero falls rates should be eliminated, as a hospital unit without falls is one where patients are not up and moving (King et al., 2016). Organizational policies should be put in place that support mobility, including mobility standards of care.

**Address staffing shortages and time constraints.** Data from the survey and mobility meeting suggests that staff struggle to prioritize mobility activities. Placing patient ambulation lower on the list of the day's priorities is a common means of responding to a busy day or insufficient staffing (Doherty-King & Bowers, 2013). On a busy day, nurses may choose to prioritize "necessary activities" like passing medications, assessing physiologic status, and managing symptoms (Doherty-King & Bowers, 2011). The pressure on an already overburdened healthcare system continues to increase, which results in a workforce of healthcare professionals

who are unable to meet the current healthcare demands (Ball, Murrells, Rafferty, Morrow & Griffiths, 2012). Thus, finding viable alternatives to addressing workforce shortages will become more of a necessity. In the meantime, nursing care staff must find ways to build mobility practices into patients' daily routines, such as having patients perform sit to stand exercises while helping them brush their teeth. If care staff were to assist patients in performing functional exercises after PT and OT sessions and documenting patient mobility status in the electronic health record, this would both improve interdisciplinary collaboration and eliminate divisions among those responsible for mobility (Mowat & Parsons, 2016). Furthermore, nursing staff members should use careful planning to prioritize mobility and meet with NAs and CSTs early in the shift to discuss patient load, which patients need to be ambulated and how to best make it happen (Doherty-King & Bowers, 2013). Support of NAs and CSTs from the nurse is critical, as nurses can role model desired behaviors, such as mobilizing patients, which motivates and increases confidence of assistive staff (Mowat & Parsons, 2016). Patient and staff education in conjunction with interdisciplinary collaboration will be essential in achieving this goal.

**Improve nursing education about mobility.** Depending on the quality of pre-professional training and preceptorship, nurses may have varying views on the importance of mobility. In order to improve patient outcomes, it is important to help nurses acquire the necessary knowledge, which can then result in a subsequent change in clinical practice (Marzlin, 2011). Therefore, ongoing nursing staff education is necessary to foster awareness of the role of physical function and mobility in the hospitalized older adult.

### **Future Protocol Development**

Development of a hospital-wide mobility protocol would make it clear that UNC Hospitals prioritizes mobility and would give nurses the resources necessary to be successful in

preventing functional decline in the hospital. Because no protocol currently exists, nurses are not given details about UNC Hospitals' preferred methods for patient mobility. The following sections will outline a plan for hypothetical development of a nurse-driven mobility protocol as guided by the needs assessment.

**Development within the context of the conceptual framework.** As outlined earlier, this project was supported by Lewin's three-step change model. This project consisted of the needs assessment, or the "unfreezing" stage of Lewin's Change Management theory. In order to create a culture that promotes patient ambulation and establish mobility standards of care, the next step to this project should be development of a mobility protocol, as one does not currently exist. The protocol should be guided by the results of the needs assessment. The protocol should be pilot tested on this unit with anticipation that it would be implemented in other medicine units after the trial period. This pilot study should consist of two phases, a) development of a mobility protocol and b) piloting of the protocol to determine efficacy on this unit.

**Literature relevant to protocol development.** After a review of relevant literature, three pathways stood out as potential means of guiding protocol development: the GENESIS program, the Banner Mobility Assessment Tool, and the Algorithm for Mobilizing Patients.

The GENESIS program, or Geriatric Friendly Environment through Nursing Evaluation and Specific Interventions for Successful Healing, is a 3-day continuing education program for principles of geriatric nursing care that includes a nurse-driven mobility protocol (Padula, Hughes & Baumhover, 2009). The results of the study demonstrated that older adults who participated in the mobility protocol maintained or improved their functional status. Thus, this may be a reasonable protocol to adopt for use on this unit. The Algorithm for Mobilizing Patients was created by the Agency for Healthcare Research and Quality in 2013 and adapted from Drolet

et al.'s 2009 "Move to Improve" study. This tool includes a stepwise means of assessing a patient's status, how to mobilize the patient based on their status, when to consult physical and occupational therapy, and inclusion and exclusion criteria. The Banner Mobility Assessment Tool is a valid, nurse-administered mobility assessment tool that walks nurses through stepwise assessment of mobility status and how to carry out mobility interventions based on the information gleaned from the test (Boynton et al., 2014). These tools were selected for potential use because they outline means of assessing mobility status and interventions based on assessment.

As single-intervention approaches are less sustainable, multiple aspects from the studies outlined in the previous section should be employed to address multiple barriers simultaneously, including a structured mobility protocol with multiple components, such as exclusion criteria, steps to verify active orders for mobility, and a tool assist nurses in decision-making. The protocol would include a series of specific mobility interventions implemented progressively throughout the patient's hospital stay to maintain baseline mobility status. This could be modified from one of the three aforementioned studies, or a new one could be created to meet the specific needs of the unit. Ideally, one of these three tools would be integrated into the hospital's electronic health record for ease of use. Protocol roll-out would require extensive education and training and support from hospital leadership. Steps to ensure successful implementation are to follow.

**Guidelines for protocol development.** Main protocol components should be guided by UNC Health Care's Guidelines for Policies and Suggested Policy Template (ADMIN 0245), which includes a description of what the policy is about, rationale for why the policy exists, a detailed description of the policy itself, and any references (2017a). Thus, protocol components

should include a) description of current literature on functional decline and early mobility and b) structured mobility procedures. The protocol should incorporate active encouragement of mobility from all members of the interdisciplinary team, training for nurses and physicians to better mobilize patients and recognize functional decline early and often, readily available assistive devices, and tools to increase patient motivation.

The following elements should be included:

- Mobility order sets that instruct the nurse to assess patient mobility status, provide exclusion criteria and instructions on when to consult physical and occupational therapy
- Progressive steps for mobility based on assessment (BMAT, GENESIS or Algorithm for Mobilizing Patients)
- Discussion of mobility on each patient by the interdisciplinary team in CAPP rounds
- Care staff should report on the mobility status of each patient at shift change
- Transfers to and from other units should include a review of current mobility status
- As visual reminders, signage that outlines the process should be displayed across the unit
- Assignment of a leader to guide protocol development, identification and involvement of stakeholders from various disciplines, and a plan to educate stakeholders and staff members on the protocol

**Staff education.** The protocol will need to include education on the evidence, explanation of new processes, opportunities for answering questions and setting goals. Staff



education could use workshops, trainings, conferences, slide presentations, and interactive discussions are all effective tools to use for staff education. This information could even be given out at nursing grand rounds. Multiple teaching styles would make education more effective (Vaughn & Baker, 2009).

**Outcomes of mobilization.** A 2012 integrated review demonstrated that early mobilization protocols in the medical-surgical inpatient population are associated with less DVTs, reduced length of stay, and maintained or improved functional status (Pakishanti & Von Ah, 2012). During the pilot study, it would be important to examine process measures, or those that look at intended delivery of the intervention (such as, patient and staff feedback, accuracy and efficiency of the tool) and outcome measures, or those that look at the intended response of the intervention (Wojciechowski, Pearsall, Murphy & French, 2016). Relevant outcome metrics to measure would include length of stay, pressure ulcers, DVTs, falls, delirium, new nursing home admissions and adverse events. It would be important to measure these data pre- and post-implementation to determine if any changes occurred due to protocol roll-out. Because CMS withholds reimbursement for preventable hospital-acquired conditions, such as DVTs and pressure ulcers, the hospital's financial performance is tied to the quality of the care they provide (Hines & Yu, 2009). If this pilot study can demonstrate improved care outcomes, hospital leadership across the system (such as the legal department, nursing leadership, medicine leadership and risk managers) may be more inclined to support such a protocol due to organizational financial gain (2009).

**Addressing barriers to mobility.** This mobility protocol should target the barriers present on the unit by enacting change at multiple levels, including giving nurses the skills and knowledge needed to engage patients in mobility, creating a culture that promotes mobility, and

establishing mobility standards of care. In order to break down these barriers, the institution could first utilize a nurse-driven intervention such as Mobilizing Older Adult Patients Via a Nurse-Driven Intervention (MOVIN), which has been proven to help shift ownership of mobility practice to nurses, help nurses feel supported during mobility practices, and increased communication about ambulation needs and its priority on the unit (King, Steege, Winsor, VanDenbergh & Brown, 2016). This could be used as a support tool during protocol rollout. Using a systems approach to both identify and overcome barriers on multiple levels will change mobility processes and outcomes and promote adoption of a standard for patient ambulation at a unit level (2016).

**Buy-in from stakeholders.** In order to make mobility a hospital-wide priority for nurses, the issue will require buy-in from nursing leadership. Lewin's theory has proven to be most successful when used in a top-down approach to change, so it is especially important to include nursing leadership and other formal leaders (Shirey, 2013). Omery and Williams (1999) stated that "unless nursing leadership believes in research utilization and promotes a culture that supports its activities, research utilization fails to become a lived value" (p. 55). Moreover, because nursing leadership is charged with responsibility of care of patients across multiple hospital units, they may have the ability to influence education and protocol development (Doherty-King & Bowers, 2013). Thus, nursing leadership and champions of mobility throughout the hospital should prioritize mobility education and development of a protocol that supports mobility practices. Ideal leadership could come from clinical nurse specialists, who are trained to roll out and sustain standardized protocols (Pakishanti & Von Ah, 2012).

**Ensuring successful change, or "refreezing."** After protocol development, it would be important to "refreeze" the changed practice once it occurs in order to establish stability. This is

the final step in Kurt Lewin's model. Refreezing, or consolidating the new change and reinforcing it through policy and organizational change includes assessment of any consequences, ongoing monitoring, and learning from the process (Lewin, 1951). If this step is overlooked, the change made will be short-lived and staff will revert to their old behaviors (1951). Eventually, after continual support and facilitation of the protocol by the unit, the process will refreeze and become unit culture. Support and empowerment from management will ensure that the change in the environment transforms into a culture change on the unit (Shirey, 2013). Because this needs assessment allowed me to understand the individuals involved in mobility, their value systems, and the driving and restraining forces behind making a change, future projects can better plan for successful implementation. Additionally, as part of the refreezing process, the unit should celebrate the success of the change; this would help the unit feel appreciated for their extra work during the time of the change and help them feel like future change will be successful and rewarding (Wojciechowski, Pearsall, Murphy & French, 2016). This could include sharing success stories of early mobilization of patients on the unit as a source of inspiration (Agency for Healthcare Research and Quality, 2013). The protocol should be reviewed annually to make sure that it is current and meeting the needs of the unit (Mills et al., 2005). Review should determine if the protocols outcomes and process measures have been met and include a plan to revisit goals should any shortcomings be present (Agency for Healthcare Research and Quality, 2013).

### **Implications for Practice**

This study furthered existing knowledge of functional decline in older adults by exploring barriers to mobility on a medical nursing unit. It helped our unit to reexamine its current mobility resources and make sure that we are using them to the fullest extent. It also highlighted

the importance of interdisciplinary collaboration in improving mobility practices. This needs assessment will be helpful in developing a mobility program or protocol that has significant and lasting impact on our unit.

### **Usefulness of the Work**

The purpose of this DNP project was to conduct a needs assessment and use it to develop unit-based interventions aimed at improving mobility in hospitalized older adults on a medical unit. This quality improvement process, guided by the Clinical Microsystems Action Guide, can be used to improve the quality and value of patient care as well as the work processes of all staff that contribute to mobility care on an inpatient unit (Godfrey, Nelson & Batalden, 2005).

Quality improvement, defined as “the combined and unceasing efforts to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development (learning),” is an important component of change in health care (Batalden & Davidoff, 2007, para. 1). Though the results and recommendations of this project are largely unit-specific, conducting a needs assessment using the CMAG is useful in systematically assessing, diagnosing and treating any problems present on an inpatient unit.

Future work should focus on implementation of recommendations and development of a protocol based on the results of this needs assessment. It will also be useful in assessing future quality improvement projects aimed at increasing mobility and monitoring changes in the unit’s culture of mobility over time.

### **Potential for Spread to Other Contexts**

Given the specificity of this project, meaning that it was a needs assessment conducted on a single medical unit in an academic medical center, the findings from this project are not generalizable to other inpatient units or hospitals. The localized nature of this project prevents us

from concluding that the same barriers and facilitators to mobility present in this unit are present in other inpatient units (Leung, 2015). However, it is important to note that the goal of this needs assessment was not to draw broad inferences from a particular set of data, but to provide a contextualized understanding of mobility practices on a single medical unit (Polit & Beck, 2010).

### **Project Strengths and Limitations**

Though the specificity of this project prevents spread to other contexts, the localized nature of this project is also its greatest strength. The needs assessment allowed me to validate and clarify barriers to mobility, which will allow for better investment of time and resources needed to amend these problems. Future projects and protocol development can then build on this prior work and have a greater and longer lasting impact.

While this project did provide information about mobility practices on a single medical unit, there are some limitations to this project. The first identified limitation of the study was that not all components of the inpatient unit profile were collected. During the data collection period, I encountered a number of roadblocks in accessing certain data. These included overall characteristics of the patients served by the unit, such as age distribution, and percent or frequencies of top diagnoses and conditions, patient living situation prior to admission (percent of patients who lived at home, in a nursing home, etc), point of entry (e.g. emergency department or direct admit) and discharge disposition (home, rehabilitation unit, nursing home etc.). Additionally, I could not determine the percentage of off-service patients or characteristics about ancillary staff members.

An additional limitation was that the study only included four shifts of observation; thus, we cannot conclude with any certainty that the data collected is an accurate depiction of mobility practices on this unit. Also, because not all eligible care staff completed the survey, a selection

bias may have been introduced. Finally, because this project only considered nursing and nursing support staff, it would be beneficial in future studies to assess other bedside providers, such as physical and occupational therapists, physicians and other providers. Despite these limitations, this project was an important first step in identifying the facilitators and barriers to mobility on the unit as it allowed me to systematically review aspects of mobility care and processes in order to improve quality of care.

## **Conclusion**

Functional decline secondary to immobility is a complex problem with far-reaching implications. Despite decades of research suggesting that mobility is an important part of an older adult's hospital care, there are still many barriers that prevent implementation of best practices. The purpose of this DNP project was to complete a systematic needs assessment to assess current beliefs and practices that relate to mobility and recommend interventions based on the findings. For this project, it was essential that barriers to change be addressed prior to implementation of any intervention or protocol. Future work includes implementation of these recommendations on this unit and development of an evidence-based policy to guide mobility practices in this institution.

## APPENDIX A: INPATIENT UNIT PROFILE

Inpatient Unit Profile									
<b>A. Purpose:</b> Why does your unit exist?									
Site Contact:							Unit:		
Administrative Director:				Nurse Director:			Medical Director:		
<b>B. Know Your Patients:</b> Take a close look into your unit, create a "high-level" picture of the PATIENT POPULATION that you serve. Who are they? What resources do they use? How do the patients view the care they receive?									
Est. Age Distribution of Pts:			List Your Top 10 Diagnoses/Conditions				Patient Satisfaction Scores		% Always
18-30 years			1.	6.			Nurses		
31-45 years			2.	7.			Doctors		
46-55 years			3.	8.			Environment		
56+ years			4.	9.			Pain		
% Males			5.	10.			Discharge	% Yes	
% Females							Overall	% Excellent	
Living Situation			Point of Entry		%		Pt Population Census: Do these numbers change by season? (Y/N)		Y/N
Married			Admissions				Pt Census by Hour		
Domestic Partner			Clinic				Pt Census by Day		
Live Alone			ED				Pt Census by Week		
Live with Others			Transfer				Pt Census by Year		
Skilled Nursing Facility			Discharge Disposition		%		30 Day Readmit Rate		
Nursing Home			Home				Our patients in Other Units		
Homeless			Home with Visiting Nurse				Off Service Patients on Our Unit		
Patient Type	LOS avg.	Range	Skilled Nursing Facility				Frequency of Inability to Admit Pt		

Medical				Other Hospital				
Surgical				Rehab Facility				
Mortality Rate			Transfer to ICU					
<b>11. Know Your Professionals:</b> Use the following template to create a comprehensive picture of your unit. Who does what and when? Is the right person doing the right activity? Are roles being optimized? Are all roles who contribute to the patient experience listed?								
Current Staff	Total	Day Shift	Night Shift	Rotating Shifts	Weekend	Per Diem	Admitting Medical Service	%
MD Total							Internal Medicine	
Hospitalist Total							Family Practice	
Unit Leader Total							Pulmonary	
NAs Total							Geriatrics	
RNs Total							Hospitalists	
LPNs Total							Other	
CSTs Total								
HUCs Total								
Social Workers Total								



Do you use Per Diem?	_____ Yes      _____ NO		Staff Satisfaction Scores				
Do you use Travelers?	_____ Yes      _____ NO		How stressful is the unit?				% Not Satisfied
Do you use On-Call Staff?	_____ Yes      _____ NO		Would you recommend it as a good place to work?				% Strongly Agree
Do you use a Float Pool?	_____ Yes      _____ NO						

## APPENDIX B: INPATIENT UNIT ACTIVITY SURVEY SHEET

Inpatient Unit Activity Survey Sheet		
Position: <u>NA/CST</u>	% Occurrence	Position: <u>RN</u>
Activity: <u>Mobilize patients</u>  Specific Items Involved: <ul style="list-style-type: none"> <li>• Mobility events (e.g. standing at the bedside, transferring to a chair, walking to the bathroom walking in the hallway)               <ul style="list-style-type: none"> <li>o Initiation – patient versus staff</li> <li>o Adaptive equipment used?</li> <li>o How long did the event take?</li> </ul> </li> <li>• Declined attempts to get patients up and out of bed</li> </ul>		Activity: <u>Mobilize patients</u>  Specific Items Involved: <ul style="list-style-type: none"> <li>• Mobility events (e.g. standing at the bedside, transferring to a chair, walking to the bathroom walking in the hallway)               <ul style="list-style-type: none"> <li>o Initiation – patient versus staff</li> <li>o Adaptive equipment used?</li> <li>o How long did the event take?</li> </ul> </li> <li>• Declined attempts to get patients up and out of bed</li> </ul>
Activity: <u>Discuss mobility in report</u>  Specific items involved: <ul style="list-style-type: none"> <li>• Discuss mobility status in report</li> <li>• Discuss mobility performed on shift</li> </ul>		Activity: <u>Discuss mobility in report</u>  Specific items involved: <ul style="list-style-type: none"> <li>• Discuss mobility status in report</li> <li>• Discuss mobility performed on shift</li> <li>• Discuss mobility in interdisciplinary rounds</li> </ul>
Activity: <u>Mobility Education</u>		Activity: <u>Mobility Education</u>
		Activity:
Total		Total

### Activity Occurrence Example:

What's the next step? Insert the activities from the Activity Survey Here.

Activities are combined by role from the data collected above. This creates a master list of activities by role. FID-is THE NUMBER OF TIMES PER SESSION (AM and PM) THAT YOU OBSERVE THE ACTIVITY. Make a tally mark by the activity each time it happens, per session. Use one sheet for each day of the week. Once the frequency of activities is collected, review the volumes and variations by session, day of week, and month of year. This evaluation increases knowledge of predictable variation and supports improved matching of resources based on demand.

Role: RN	Date:	Day of Week:	
	Day Shift	Night Shift	Total
Activity of interest			14
Total	73	73	148

## APPENDIX C: PATIENT MOBILIZATION SURVEY

In this survey we would like to know about your opinions regarding mobilization of hospitalized patients.

### Instructions:

- Please answer questions for inpatients on [Unit Name]
- Mobilizing patients means to get them out of bed or ambulating.
- For each statement below, please fill in only ONE response (mark with X) that most accurately reflects your opinion based on experience over the past 1 – 2 weeks.
- Your completion of this survey will serve as your consent to be in this research study.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. My inpatients are too sick to be mobilized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I have received training on how to safely mobilize my inpatients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Increasing mobilization of my inpatients will be harmful to them (i.e. falls, <u>IV line</u> removal, <del>etc</del> ).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. A physical therapist or occupational therapist should be the primary care provider to mobilize my inpatients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In this survey we would like to know about your opinions regarding mobilization of hospitalized patients.

Instructions:

- Please answer questions for inpatients on [Unit Name]
- Mobilizing patients means to get them out of bed or ambulating.
- For each statement below, please fill in only ONE response (mark with X) that most accurately reflects your opinion based on experience over the past 1 – 2 weeks.
- Your completion of this survey will serve as your consent to be in this research study.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. My inpatients are too sick to be mobilized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I have received training on how to safely mobilize my inpatients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Increasing mobilization of my inpatients will be harmful to them (i.e. falls, <u>IV line</u> removal, <del>etc</del> ).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. A physical therapist or occupational therapist should be the primary care provider to mobilize my inpatients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5 & 6. I understand which inpatients are

appropriate to refer to:

5. Physical Therapy ☐ ☐ ☐ ☐ ☐

6. Occupational Therapy ☐ ☐ ☐ ☐ ☐

7. We don't have the proper equipment  
and/or furnishings to mobilize my inpatients. ☐ ☐ ☐ ☐ ☐

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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8. The physical functioning of my inpatients  
is regularly discussed between the patient's  
healthcare providers (nurses, physicians,  
physical therapists, occupational therapists). ☐ ☐ ☐ ☐ ☐

9. Nurse-to-patient staffing is adequate to  
mobilize inpatients on my unit(s). ☐ ☐ ☐ ☐ ☐

10. My inpatients often have  
contraindications to be mobilized. ☐ ☐ ☐ ☐ ☐

11. Unless there is a contraindication, my  
inpatients are mobilized at least once daily by  
Nurses ☐ ☐ ☐ ☐ ☐

12 & 13. Increasing mobilization of my  
inpatients will be more work for:

12. Nurses ☐ ☐ ☐ ☐ ☐

13. Physical and/or Occupational ☐ ☐ ☐ ☐ ☐

Therapists

14. My departmental leadership is very supportive of patient mobilization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Increasing the frequency of mobilizing my inpatients increases my risk for injury.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Inpatients who can be mobilized usually have appropriate physician orders to do so.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. My inpatients are resistant to being mobilized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I believe that my inpatients who are mobilized at least three times daily will have better outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I am not sure when it is safe to mobilize my inpatients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Family members of my inpatients are frequently interested to help mobilize them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I do not feel confident in my ability to mobilize my inpatients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I document the physical functioning status of my inpatients during my shift/work day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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23. I do not have time to mobilize my inpatients during my shift/work day. ☐ ☐ ☐ ☐ ☐
24. Unless there is a contraindication, I mobilize my inpatients at least once during my shift/work day. ☐ ☐ ☐ ☐ ☐
25. Unless there is a contraindication, I educate my inpatients to exercise or increase their physical activity while on my hospital unit. ☐ ☐ ☐ ☐ ☐
26. My patients have time during their day to be mobilized at least three times daily. ☐ ☐ ☐ ☐ ☐

Do you feel there are other issues regarding patient mobility that was not covered in this survey? If yes, specify below.



#### APPENDIX D: SURVEY EMAIL COVER LETTER

Thank you for agreeing to participate in my doctoral project about [Unit Name]'s mobility practices. For this project, I am working to help with functional decline on our unit. Your responses to this survey will help us improve mobility on [Unit Name].

The survey is very brief and takes about 10 minutes to complete. It can be completed on a web browser or on a mobile phone.

Your participation in the survey is completely voluntary – this means you do not have to participate if you do not want to. All of your responses will be kept anonymous, meaning no personally identifiable information will be associated with any of your survey responses. Additionally, your individual responses will be confidential - meaning they will not be shared with [Unit Name] staff.

The UNC Institutional Review Board (irb\_subjects@unc.edu) has approved this project. Should you have any questions, please feel free to contact me at [email address] or [phone number].

Thank you very much for your time and cooperation.

Dana Kouchel

## APPENDIX E: ORAL CONSENT SCRIPT

I am conducting a quality improvement project with UNC School of Nursing as part of my DNP program. I am asking you to be a part of my project because you are a staff involved in direct patient care on [Unit Name]. If you agree, I will observe you mobilizing your patients throughout today's shift.

This study may contribute to our understanding of mobility on [Unit Name]. The information collected in this project will be kept confidential. Your name will not be recorded, just your role on the unit, whether you are a nurse, nursing assistant, or CST. The recording sheets I am filling out will be stored in a locked file cabinet in a locked office at the School of Nursing. In the event that I observe any illegal or negligent behavior, I will need to follow the guidelines set forth by UNC Hospitals and report it.

Your participation in this project is entirely voluntary and you may discontinue your participation at any time without penalty. Just let me know if you do not want to be observed.

If you have concerns about any aspect of this project I can give you the contact information for my project chair, Dr. Anna Beeber, project chair, [email address], [phone number], or to the UNC Chapel Hill Institutional Review Board.

[The PI will have the project chair's business card and the contact information for the IRB available]

## APPENDIX F: STAKEHOLDER MEETING EMAIL

Hi everyone!

This is a **friendly reminder about my DNP project meeting tomorrow**. I'm providing ACTUAL food as well as some food for thought.

We will meet in the resource room at 11. This is an open meeting - if anyone you know would like to attend, please bring them!

Details below:

When: Wednesday, December 21st, 2017, 11a-12p

Where: [Unit Name] Resource Room

Who: DNP Student and Principal Investigator - Dana Kouchel, Project Chair - Anna Beeber, Committee Member - John Gotelli, PT and OT Representatives, [Unit Name] Nursing Leadership, [Unit Name] Nurses and Nursing Support Staff

What: As you all have probably noticed, I have been collecting data on mobility and functional decline on our unit for the last several months. During this meeting, I will discuss the findings of my graduate project and seek feedback about the state of mobility on [Unit Name]. We will talk about the many challenges in improving mobility on our unit and how to overcome some of these barriers. What can we do to get patients up and out of bed? How can we work with one another to ensure that patients are receiving the best care they can as it relates to their mobility? If you would like to join us, please plan to hear a brief presentation and then be engaged in an informal discussion that starts to build an agenda for future mobility-focused interventions.

Please email me with questions or concerns at [email address] or [phone number]

Thank you all!!!

Dana Kouchel

## APPENDIX G: MOBILITY MEETING EXECUTIVE SUMMARY



### **Early Mobility in Hospitalized Older Adults: Needs Assessment, Analysis and Proposed Intervention**

IRB Study #: 16-1208

#### Agenda:

- 11:00-11:05 Brief Introductions
- 11:05-11:30 PowerPoint Presentation – Review Data
- 11:30-12:00 Discussion

#### Objectives:

1. Review needs assessment
2. Discuss the current state of mobility on [Unit Name]
3. Brainstorm ways to increase mobility

#### Findings:

Staff are not consistently using equipment (i.e. gait belts, walkers) during mobility events.

Staff are concerned about getting hurt when mobilizing patients.

Staff are unclear about how factors such as patient acuity and motivation should be incorporated into mobility practices

Staff are not clear about the role of PT and OT

#### Discussion Questions:

1. What are some of the barriers you have encountered in getting patients moving?
2. What can we do to get patients up and out of bed?
3. How can we work with one another to ensure that patients are receiving the best care they can as it relates to their mobility?

## APPENDIX H: MOBILITY DISCUSSION POWERPOINT

# Early Mobility in Hospitalized Older Adults: Needs Assessment, Analysis and Proposed Intervention

DANA KOUCHEL, BSN, RN, DNP(C)  
THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL  
DOCTOR OF NURSING PRACTICE PROJECT



## Objectives

- Review needs assessment
- Discuss the current state of mobility on [Unit Name]
- Brainstorm ways to increase mobility



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## Project Overview

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Part 1 – Inpatient Unit Profile

Part 2 – Shift Observation

Part 3 - Survey



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## Part 1: Inpatient Unit Profile

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Admissions

Average Length of Stay

CMS Initiatives

Patient and Staff Satisfaction Scores

Nurse Staffing Details

Information on Medical Teams



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## Part 2: Shift Observation

Are people getting up and out of bed?

At what time?

If so, who is initiating the event? Patient or staff member?

Was any equipment used?

How many staff members were needed?

Are we talking about mobility in CAPP Rounds?



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## Observation – Main Points

We underuse equipment

- 16 out of 100 events involved a walker
- 10 out of 100 events involved a gait belt, 8 of which also used a walker
- 1 out of 100 events involved any lift equipment (MaxiMove Lift)
- 1 RN could not find a gait belt
- Out of chair alarm pads one shift
- 1 NA could not find a recliner

Alarms are in use

- 24 events occurred in response to a deployed bed alarm, 1 to a deployed chair alarm

Mobility events are initiated by patients

- 27 events initiated by staff (RN, NA/CST, OT, PT, patient transport) and 73 events initiated by the patient



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## Part 3: Survey

**Barriers To Early Mobility Of Hospitalized General Medicine Patients** by  
Hoyer, Brotman, Chan & Needham

30 questions, 30 participants

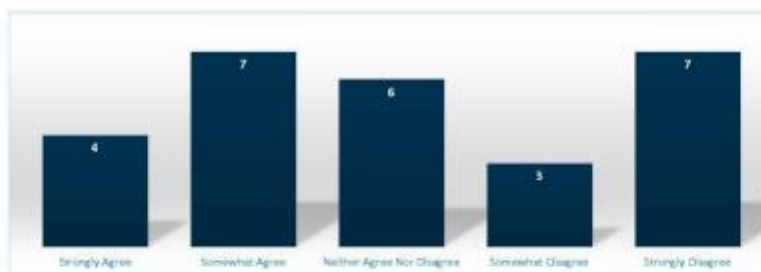
Evaluated nurses' (RNs) and nursing support staff's (NAs, CSTs)  
*knowledge, attitudes and behaviors* related to mobility

This helps identify important barriers to mobilizing medical inpatients



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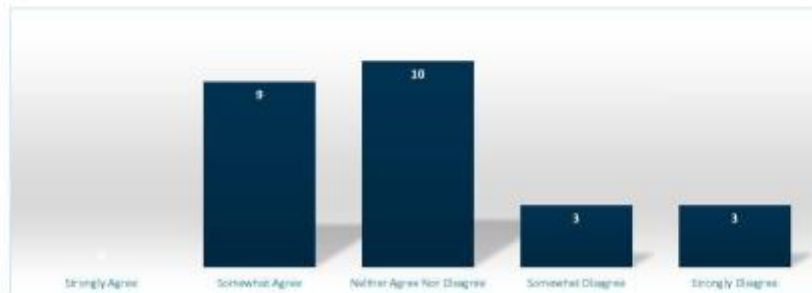
Increasing the frequency of mobilizing my  
patients increases my risk for injury.



THE UNIVERSITY OF MICHIGAN SCHOOL OF NURSING

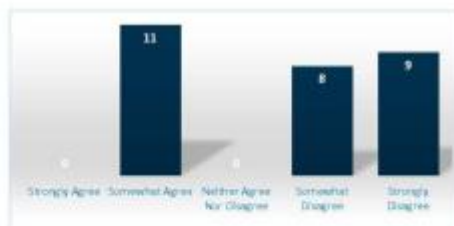


My inpatients are resistant to being mobilized.

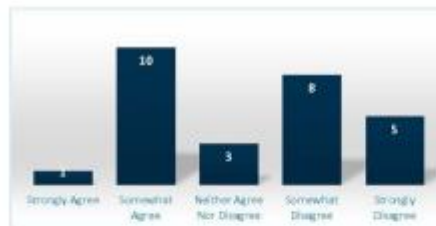


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My inpatients are too sick to be mobilized.

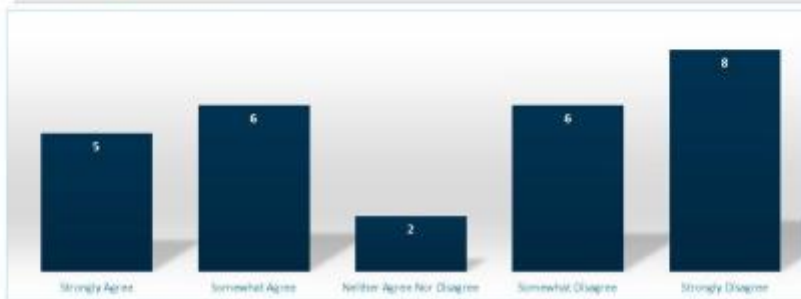


My inpatients often have contraindications to be mobilized.



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A physical therapist or occupational therapist should be the primary care provider to mobilize my inpatients.

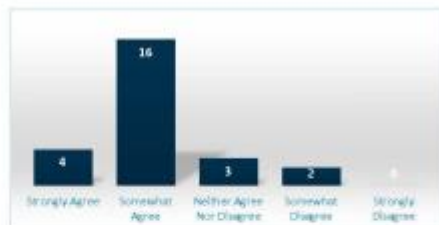


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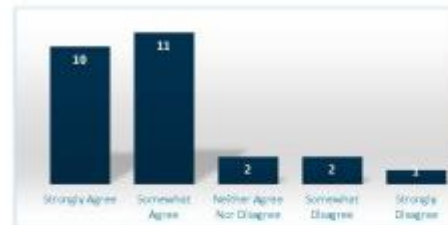
11

I understand which inpatients are appropriate to refer to...

Occupational Therapy



Physical Therapy



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## Possible Ways to Intervene

Staff are not consistently using equipment (i.e. gait belts, walkers) during mobility events.

Staff are concerned about getting hurt when mobilizing patients.

Staff are unclear about how factors such as patient acuity and motivation should be incorporated into mobility practices

Staff are not clear about the role of PT and OT



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11

## Discussion Questions

What are some of the barriers you have encountered in getting patients moving?

What can we do to get patients up and out of bed?

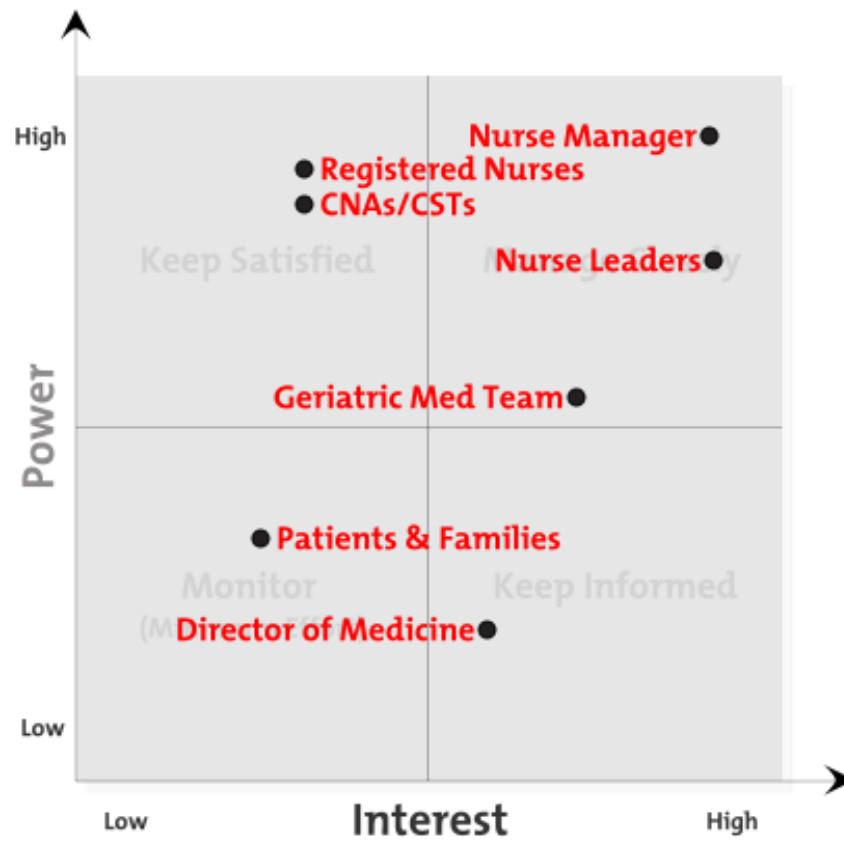
How can we work with one another to ensure that patients are receiving the best care they can as it relates to their mobility?



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## APPENDIX I: STAKEHOLDER ANALYSIS



## APPENDIX J: PROJECT TIMELINE

Date	Activity
April 19, 2016	DNP Proposal Defense
June 23 <sup>rd</sup> , 2016	IRB and Nursing Research Council Approval Given
July 1 <sup>st</sup> , 2016	Final Proposal Draft and Timeline to Committee Members
July 20 <sup>th</sup> (7p-7a), July 23 <sup>rd</sup> (7p-7a), July 27 <sup>th</sup> (7a-7p), July 30 <sup>th</sup> (7a-7p)	Data Collection
August 1 <sup>st</sup> , 2016	Survey Go-Live Date
October 31, 2016	Survey closes
August-November 2016	Data Analysis
December 21, 2016	Disseminate Findings to Unit
February 28, 2017	DNP Project Final Defense
April 13, 2017	Submit Final DNP Project Write Up
May 14, 2017	Graduation

APPENDIX K: MONTHLY CMS DATA

	July	August	September	October
Admission Assessment Compliance	96.6%	97.3%	96.0%	98.6%
EPIC Documentation Compliance	95.5%	100.0%	94.4%	96.8%
Falls Rate (falls/1000 pt days)	3.44	3.36	5.81	N/A
Pain Documentation Compliance	95.9%	N/A	N/A	96.8%
Pressure Ulcers Present/Unit-Acquired	1/0	0/0	N/A	N/A

APPENDIX L: FULL-TIME EQUIVALENTS

Type of Staff	Number of Staff	Actual FTE	Budgeted FTE	Total by Job Class
Clinical Nurse I	3	1.8	2.48	
Clinical Nurse II	29	25.9	24.87	
Clinical Nurse III	2	1.8	4.03	
Clinical Nurse IV	2	2.0	1.77	Total RNs 31.5/36.29
Nursing Assistant I	10	3.6	3.08	
Nursing Assistant II	2	1.9	2.72	
Clinical Support Tech I	3	2.7	4.05	
Clinical Support Tech II	4	3.5	2.68	Total NA/CSTs 17.10/18.36
Health Unit Coordinator	4	3.6	4.08	N/A

## APPENDIX M: SURVEY RESULTS

#		Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree	Total Responses
1	My inpatients are too sick to be mobilized.	0 (0.00%)	11 (39.29%)	0 (0.00%)	8 (28.57%)	9 (32.14%)	28
2	I have received training on how to safely mobilize my inpatients.	17 (60.71%)	9 (32.14%)	1 (3.57%)	0 (0.00%)	1 (3.57%)	28
3	Increasing mobilization of my patients will be harmful.	0 (0.00%)	2 (7.14%)	3 (10.71%)	10 (35.71%)	13 (46.43%)	28
4	A physical therapist or occupational therapist should be the primary care provider to mobilize my inpatients.	5 (18.52%)	6 (22.22%)	2 (7.41%)	6 (22.22%)	8 (29.63%)	27
5	I understand which inpatients are appropriate to refer to physical therapy.	10 (37.04%)	12 (44.44%)	2 (7.41%)	2 (7.41%)	1 (3.70%)	27
6	I understand which inpatients are appropriate to refer to occupational therapy.	5 (18.52%)	16 (59.26%)	3 (11.11%)	2 (7.41%)	1 (3.70%)	27
7	We don't have the proper equipment and/or furnishings to mobilize my inpatients.	1 (3.70%)	1 (3.70%)	1 (3.70%)	8 (29.63%)	16 (59.26%)	27
8	The physical functioning of my inpatients is regularly discussed between the patient's healthcare providers (nurses, physicians, physical therapists, occupational therapists).	11 (40.74%)	8 (29.63%)	3 (11.11%)	4 (14.81%)	1 (3.70%)	27
9	Nurse-to-patient staffing is adequate to mobilize inpatients on my unit.	3 (11.11%)	10 (37.04%)	0 (0.00%)	6 (22.22%)	8 (29.63%)	27
10	My inpatients often have contraindications to be mobilized.	1 (3.70%)	10 (37.04%)	3 (11.11%)	8 (29.63%)	5 (18.52%)	27
11	Unless there is a contraindication, my inpatients are mobilized at least once daily by nurses.	9 (33.33%)	7 (25.93%)	2 (7.41%)	7 (25.93%)	2 (7.41%)	27



12	Increasing mobilization of my inpatients will be more work for nurses.	4 (14.81%)	14 (51.85%)	4 (14.81%)	0 (0.00%)	5 (15.82%)	27
13	Increasing mobilization of my inpatients will be more work for physical and/or occupational therapists.	0 (0.00%)	6 (22.22%)	5 (18.52%)	3 (11.11%)	13 (48.15%)	27
14	My departmental leadership is very supportive of patient mobilization.	11 (40.74%)	10 (37.04%)	5 (18.52%)	1 (3.70%)	0 (0.00%)	27
15	Increasing the frequency of mobilizing my patients increases my risk for injury.	4 (14.81%)	7 (25.93%)	6 (22.22%)	3 (11.11%)	7 (25.93%)	27
16	Inpatients who can be mobilized usually have appropriate physician orders to do so.	10 (37.04%)	12 (44.44%)	3 (11.11%)	2 (7.41%)	0 (0.00%)	27
17	My inpatients are resistant to being mobilized.	0 (0.00%)	9 (36.00%)	10 (40.00%)	3 (12.00%)	3 (12.00%)	25
18	I believe that my inpatients who are mobilized at least three times daily have better outcomes.	17 (68.00%)	5 (20.00%)	3 (12.00%)	0 (0.00%)	0 (0.00%)	25
19	I am not sure when it is safe to mobilize my inpatients.	0 (0.00%)	5 (20.00%)	2 (8.00%)	6 (24.00%)	12 (48.00%)	25
20	Family members of my inpatients are frequently interested to help mobilize them.	5 (20.00%)	8 (32.00%)	4 (16.00%)	7 (28.00%)	1 (4.00%)	25
21	I do not feel confident in my ability to mobilize patients.	2 (8.00%)	4 (16.00%)	3 (12.00%)	3 (12.00%)	13 (52.00%)	25
22	I document the physical functioning status of my inpatients during my shift/work day.	12 (48.00%)	8 (32.00%)	2 (8.00%)	2 (8.00%)	1 (4.00%)	25

23	I do not have time to mobilize my inpatients during my shift/work day.	3 (12.00%)	9 (36.00%)	5 (20.00%)	3 (12.00%)	5 (20.00%)	25
24	Unless there is a contraindication, I educate my patients to exercise or increase their physical activity while on my hospital unit.	12 (48.00%)	10 (40.00%)	2 (8.00%)	1 (4.00%)	0 (0.00%)	25
25	My patients have time during their day to be mobilized three times daily.	6 (24.00%)	13 (52.00%)	4 (16.00%)	2 (8.00%)	0 (0.00%)	25

□

## APPENDIX N: SURVEY THEMES

Theme	Number of Times Mentioned	Comments
Staffing and Workload	8	<p>“The acuity of the patients on [Unit Name] is too high to possibly ambulate all of them on a daily basis. We are not staffed to be able to do that.”</p> <p>“Some times due patient’s load I find it hard to walk patients 3 times a day.”</p> <p>“Staffing ratio on our floor does make it difficult to mobilize the patient three times a day.”</p> <p>“If there are 4 nursing assistants staffing on the floor it is so much easier to give the patients the time for their care that they need. It would be a lot easier to mobilize patients during day shift if we had 4 at all times.”</p> <p>“I feel that you need to take in consideration that if we are short staff , the nurse or nursing assistant might not have time to mobilize the patients 3 times a day.”</p> <p>“-- While operating with 6 RNs and 1-2 NAs on the unit, it is impossible to facilitate adequate ambulation while also managing the usual RN workload on [Unit Name].”</p> <p>“Sometimes when the unit is short staffed it may be hard to find adequate help to get patients out of bed, but we try out best to find staff to help us do so.”</p> <p>“If we have adequate staffing all the time it would be easier to make sure our patients are up and or walking in the halls. It is hard to make sure everyone is up if as an NA we only have 2 on the floor. It is easier with 3 but even better with 4.”</p>

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Acuity	1	“Our unit’s patient population is so acute at times, that the staff members might not be able to comply with this goal. But we should strive to do it and encourage the patients and family to assist us with it.”
Environment	2	“The patients’ rooms are often too crowded, cluttered, or too small to safely ambulate the patient within the room.”
PT and OT	2	<p>“Also always having an adequate number of chair alarm supplies (pads, cords, etc) is very important to support our efforts to mobilize patients.”</p> <p>“I think PT/OT should make more rounds if there is a lack of mobility for our patients. This should not be a mandatory task for nurses or NA’s. PT/OT should be more involved.”</p>
Education	2	<p>“Physical and occupational therapist need more involve in educating pt regarding mobility.”</p> <p>“I encourage them to [walk] on their own if possible. I make sure to encourage them to get out of bed to the chair with meals.”</p>
Patient Motivation	1	<p>“Physical and occupational therapist need more involve in educating pt regarding mobility.”</p> <p>“Many of our patients are too poorly motivated to take ownership of their care and initiate early ambulation.”</p>

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## APPENDIX O: MEETING MINUTES AND RECOMMENDATIONS SUMMARY

- Blue handoff tools: Staff are inconsistently using the "Activity" section of the handoff tool. **ACTION:** could use clarification whether we should be putting a) the patient's activity orders, b) the patient's abilities, or c) both. Encourage staff to NOT make assumptions about what the patient can or cannot do
- CAPP Rounds: We may not be consistently discussing patient mobility in CAPP Rounds. **ACTION:** Make mobility a discussion point for every patient, regardless of discharge needs.
- Green door paper: Staff are not using this tool to indicate patient's ADL needs. **ACTION:** reinstate use of these tools, fix the acrylic holders that are broken
- Lift equipment: Some staff are not comfortable using lift equipment. **ACTION:** continue to train staff on safe patient handling during skills fairs, extra sessions if need be
- PT/OT
  - o Role of PT/OT: Staff are unclear about the role of PT/OT. **ACTION:** In-service on role of PT/OT, when to consult, contraindications to mobility, how to consider pt acuity and motivation
  - o Information sharing: Staff are unclear on how to know if PT/OT are coming to see patient today. **ACTION:** Provide staff with information (during staff meeting, safety huddle perhaps) on how to understand the treatment team sticky note and any other information that will help them understand process; encourage nurses to write about mobility practices in daily note
  - Providers: Providers may be unclear about role of PT/OT. **ACTION:** continue to educate providers, remind them that patients do not need to be "cleared" prior to mobility activities
  - Protocol: There is no protocol for mobility practices hospital-wide: **ACTION:** continue to advocate the need for a protocol to help staff make decisions about mobility; give staff a decision tree or other tool to inform these decisions

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