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Evaluation of Purposeful Rounding On Patient Falls

Stephanie Spittle
Gardner-Webb University

Evaluation of Purposeful Rounding

On Patient Falls

By

Stephanie Spittle

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Submitted by:	Approved by:
_____	_____
Stephanie Spittle, RN, BSN	Vickie Walker, RN, MSN, DNP
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Date	Date

Abstract

The purpose of this study was to evaluate the effectiveness of routine purposeful rounding on the total number of falls on a medical unit in an acute care hospital. The project was prompted by high fall rates within the hospital and the implementation of the purposeful rounding initiative. Staff training was provided in a two hour educational class which covered the purpose for the initiative as well as the specific functions that must be performed with each round. To evaluate the effectiveness of purposeful rounding on patient falls, pre and post rounding fall rates were compared. These initial results were disappointing as there was not a significant decrease in the total number patient falls. It is felt that the bedside staff needs to embrace the rounding project as common practice and incorporate it into their everyday activities on a routine basis.

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Chapter One

Introduction

Patient safety is a growing concern not only for individuals but for governmental and private agencies as well. " In 2008, the Agency for Health Care Research and Quality (AHRQ) reported that preventable medical injuries are actually on the rise—by one percent a year" (The National Quality Forum, 2010, p. 1). The Discovery Channel recently aired a broadcast featuring Dennis Quaid discussing the hospital error that could have cost the lives of his twins (Discovery Communications, LLC [], 2010). According to the Institute of Medicine, "Employing a nursing workforce strong in numbers and capabilities and designing the work of nursing to prevent errors are critical patient safety defenses" (Institute of Medicine, 2004, p. 286). Inpatient hospital falls are considered to be preventable adverse events.

Background

Patient falls in the hospital setting is a real and disconcerting problem in the health care industry and is the most common type of inpatient accident (Krauss et al., 2001). The issue of preventing inpatient falls is serious enough that The Joint Commission has listed it as one of The National Patient Safety Goals (The Joint Commission, 2008). Falls can lead to serious physical and emotional injury, reduced quality of life, longer hospital stay, admission to a long-term care facility, and increased financial burden (Krauss et al., 2001). Approximately 30% of falls while patients are hospitalized result in physical injury, with 4% to 6% being serious injuries (Krauss et al., 2001).

Patient falls range in age according to an analysis of one hospital's falls. An analysis showed that some were younger, post-surgery patients that were going to or coming from the bathroom (Yates et al., 2005). Common risk factors associated with inpatient falls include gait or balance deficit or lower extremity problems, confusion, and urinary or stool frequency and incontinence (Krauss et al., 2001). Costs for resultant diagnostic tests, injury repair and rehabilitation, attorney and legal expenses, and patient and family dissatisfaction is roughly 20.2 million dollars yearly in acute care settings (Gowdy & Godfrey, 2003). Patients that experience a fall while hospitalized are also at a high risk for falling at home after being discharged from the hospital (Shorr, Vaidean, Kessler, & Mahoney, 2007).

According to one article, more than one third of all adults in the general population aged 65 and older fall each year (Hornbrook et al., 1994). In 2003 a sum of 13,700 people aged 65 years and older had a fatality due to falls, and 1.8 million were treated in the emergency room for nonfatal injuries from falls (Stevens, Ryan, & Kresnow, 2006). The total direct cost of all fall injuries for people aged 65 and older in the year 2000 was slightly more than 19 billion dollars and that cost is expected to reach 43.8 billion dollars by 2020 (Center for Disease Control [CDC], 2007). One fall team at a North Carolina hospital found that almost 80% of the patients who fell at their hospital had either confusion, gait disturbance, or were attempting to toilet unassisted (Gowdy & Godfrey, 2003). Nursing and CNA staff is in a position to help alleviate this significant problem by doing purposeful, routine nursing rounds at specific time intervals.

Theoretical Framework

Orem's Self-Care Deficit Model is suitable for working with people of any age and in any setting and is composed of three related theories: (1) theory of self- care describes how and why people care for themselves (2) theory of self-care deficit describes why people can be helped through nursing (3) theory of nursing systems explains and describes relationships that must be brought about and maintained for nursing to be produced (Toomey & Alligood, 2006, p. 269). "Self-care comprises the practice of activities that maturing and mature persons initiate and perform, within time frames, on their own behalf in the interest of maintaining life, healthful functioning, continuing personal development, and well-being through meeting known requisites for functional and developmental regulations. A self-care requisite is a formulated and expressed insight about actions to be carried out that are known or hypothesized to be necessary in the regulation of an aspect(s) of human functioning and development, continuously or under specified conditions and circumstances" (Toomey & Alligood, 2006, p. 269,). Universal self-care requisites that are common to men, women and children are: maintenance of an adequate intake of air, maintenance of a sufficient intake of food, maintenance of satisfactory intake of water, provision of care related to the elimination process and excrements, maintenance of balance between activity and rest, maintenance of balance between privacy and social interaction, prevention of hazards to human life, human functioning, and human well-being, promotion of human functioning and development within social groups in agreement with human potential, known human limitations, and the human desire to be normal (Toomey & Alligood, 2006).

Health deviation self-care requisites exist for people who are ill or injured, who have definite forms of pathological disorders or conditions, and who are under medical

diagnosis and treatment. Therapeutic self-care demand is comprised of the summary of care measures necessary at certain times or over a period of time for meeting all of a person's known self-care fundamentals specifically for existent conditions and situations using methods suitable for controlling or managing factors recognized in the requisites as mentioned above. Therapeutic self-care demand at any time (1) describes factors in the patient or the environment that must be held stable within a range of values or brought within such a range for the good of the patient's health, life, or well-being, and (2) has a known measure of instrumental effectiveness resulting from the choice of technologies and certain techniques for using, changing, or in some way controlling, patient or environmental factors (Toomey & Alligood, 2006).

The self-care agency is a complicated acquired talent of mature and maturing people to know and meet their ongoing requirements for purposeful action to regulate their own functioning and development. The agent is the person who engages in a course of action or has the ability to do so. Dependent-care agent is a maturing adult or adolescent who accepts and fulfills the task to know and meet the beneficial self-care demand of others who are socially reliant on them or to adjust the development or exercise of these persons' self-care agency. Self-care deficit is a relation between the persons' curative self-care demands and their powers of self-care agency in which constituent developed self-care capabilities within self-care agency are not operable or not adequate for knowing and meeting some or all aspects of the existent or expected therapeutic self-care demand (Toomey & Alligood, 2006).

Nursing agency consists of developed capabilities of people educated as nurses that authorize them to characterize themselves as nurses and within the frame of a

justifiable interpersonal relationship to act, know, and help people in such relationships to meet their therapeutic self-care demands and to control the development or exercise of their self-care agency. Nursing design is a skilled occupation carried out both before and after nursing diagnosis and treatment which allows nurses, on the basis of thoughtful sensible judgments about existent circumstances, to amalgamate concrete situational elements into organized relations to structure operational units. The reason for nursing design is to supply guides for achieving needed and foreseen results in the assembly of nursing toward the accomplishment of nursing goals; the units taken together form the pattern to direct the production of nursing (Toomey & Alligood, 2006).

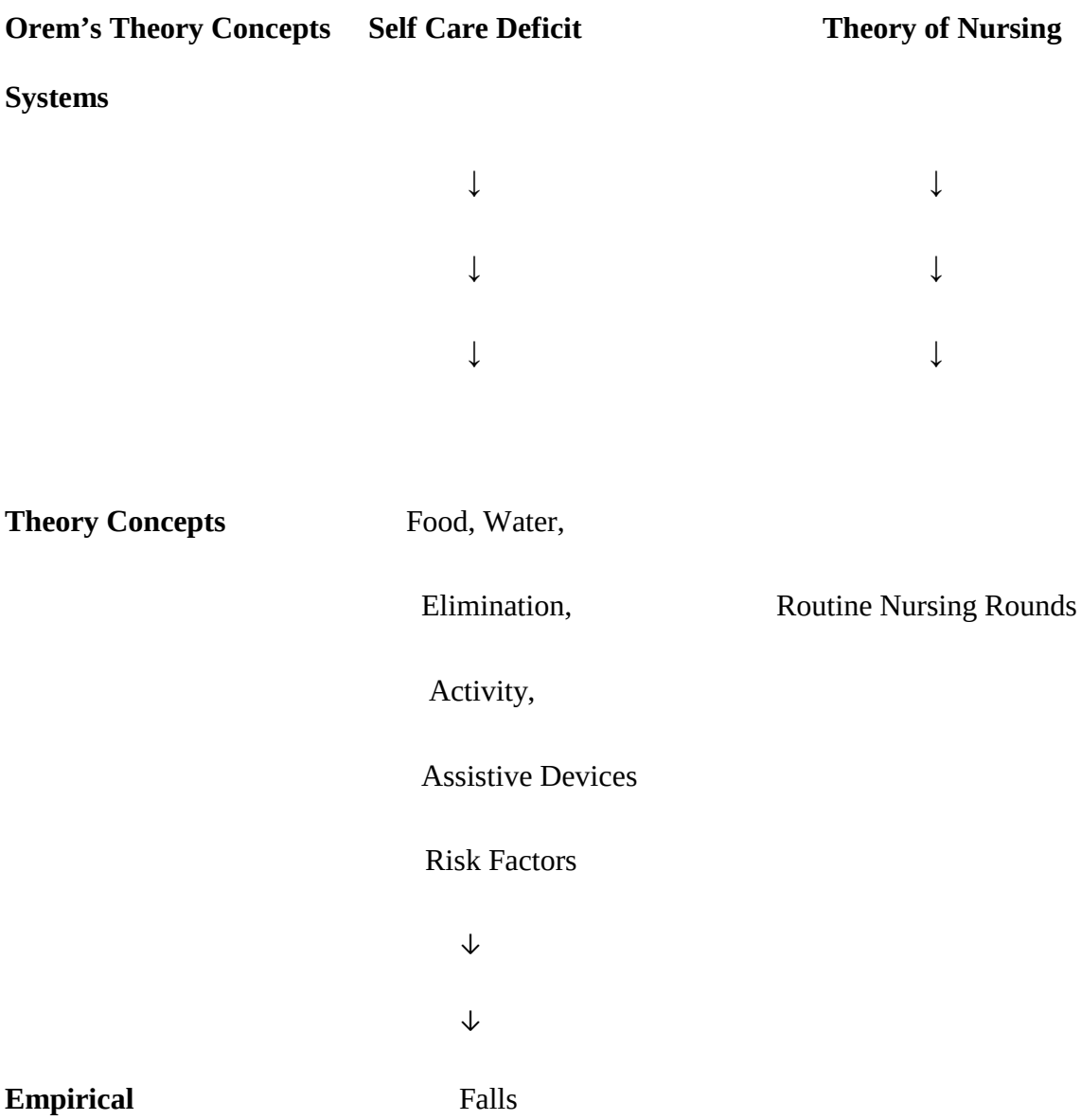
"Nursing systems are series and sequences of deliberate practical actions of nurses performed at times in coordination with actions of their patients to know and meet components of their patients' therapeutic self-care demands and to protect and regulate the exercise or development of patients' self-care agency" (Tomey and Alligood, 2006, p. 271). Helping methods from a nursing standpoint are sequential series of actions which, if carried out, will overcome or compensate for the health-associated restrictions of persons to engage in events to adjust their own functioning and development or that of their dependents (Toomey & Alligood, 2006). Nurses use all the methods, choosing and combining them in relation to the action demands on persons under nursing care and their health-related action limits, as follows: acting for or doing for someone else, directing and guiding, giving physical or psychological support, providing and sustaining an environment that supports personal growth, and teaching (Toomey & Alligood, 2006).

For testing components of the Orem model within this study, self-care deficits are identified as the patient's inability to maintain certain universal requisites (maintenance

of food, water, elimination, activity, and prevention of hazards). The theory of nursing systems is identified as the routine nursing rounds in which the nurse/CNA will assess the need for toileting, assure that items the patient needs are within reach (call bell, food/water, phone, etc), and assess if the patient has assistive devices (glasses, hearing aids, cane/walker) in use or are easily accessible. The selected concepts of Orem's Self-Care Deficit Theory are linked to middle range theory concepts in Figure1.

Figure 1.

Linkage of Concepts



Purpose of Study

With the seriousness of patient falls and related outcomes, it is imperative for healthcare facilities to assess new fall prevention strategies. Methods used in the past such as restraints and sedation are now considered harmful. Purposeful rounding provides a new innovative approach to assist with decreasing patient falls. It is a proactive, rather than reactive strategy and helps to meet patients needs and prevent them from getting up unassisted. It is important that purposeful rounding be evaluated for its effectiveness in reducing patient falls.

A Western North Carolina hospital began purposeful rounding in October of 2009 using the "four P's" to guide the rounds (potty, position, pain and possessions). Every hour in daytime and every two hours at night the nurse or CNA does a purposeful round. Each time rounding is performed the patient is asked if they need to use the bathroom, if they have pain, if they need to change position, and if they have all their needed possessions within reach. The purpose of this study is to determine if performing purposeful routine nursing rounds using the "four P's" has an effect on the number of patient falls in a medical unit.

Chapter Two

Review of the Literature

This literature review focuses on inpatient hospital falls and on the outcomes from patient rounding. Research related to patient falls is described first, followed by available research related to patient rounding. The Cumulative Index for Nursing and Allied Health Literature was utilized for the search.

Patient Falls.

Hitcho et al. (2004) did a prospective descriptive study of inpatients hospital falls. The study was conducted over a 13 week course in a 1300 bed urban academic hospital. Information on patient characteristics, circumstances of the fall, and injury were obtained through interviews with patients, families, nurses, medical records and occurrence reports. A total of 183 patients fell during the study period. The average age of patients who fell was 63.4 years (range 17 years to 96 years). Many of the falls were unassisted and occurred in the patient's room during the evening/overnight, and during ambulation. Half of the falls were elimination related, which were more common in patients over 65 years of age. The medicine and neurology services had the highest fall rates and the highest patient to nurse ratio. Results showed that hospital falls affect young as well as older patients, are often unassisted and involve elimination activities.

Krause et al. (2004) conducted a case-control study at a large urban hospital using 98 patients who fell. Medical records, adverse event reports and nurse staffing levels were reviewed. Results found that the health status of the patient, particularly abnormal gait or

lower extremity problems, medications, and care-related factors, increase the risk of falling.

A comparative study by McFarland-Kolb (2004) used an independent *t* test to compare two groups, fallers and non-fallers on a 30-bed colorectal/vascular ward in a 600-bed regional teaching and research organization in Australia. This was a dual purpose study. First, the researcher sought to recognize whether introducing a falls risk assessment and falls prevention protocol would have an effect on the incidence of falls and severity among surgical patients in the hospital. Secondly, the researcher wanted to examine whether the falls risk assessment tool profiled fall risk, relative to other risk factors more accurately. The outcomes of this study brought to light the serious implications of falling among weak, older, hospital patients. The study developed and partially validated a new scale for realistic implementation into a specific hospital environment. There were good indications that the intervention may have been effective and, at least, that more research along related lines should be carried out on a larger scale in hospitals where falls are more common. The researcher also found that a decrease in falls risk may be achieved by precise assessment and multi-targeted interventions from admission to discharge in a hospital setting.

Kerzman, Chetrit, Brin, and Toren, (2004), did a retrospective study comparing reports of 711 fall incidents in 1998 with reports of 328 falls in the period of 1978-1981. The study was conducted in a 200-bed medical center in Israel. The purpose of the study was to determine the prevalence of reported falls and identify the sociodemographic characteristics and patterns of falls of patients in 1998 and compare these features with those assessed during the 1978-1981 survey. Information obtained included gender, age,

department, shift, severity of the injury, reasons, and treatments or tests performed after the injury. Results found that the rates of falls per 1000 admissions in 1998 in the departments of psychiatric, elder care and rehabilitation were considerably higher than in the earlier time period. The percentage of reported falls in the younger age group (under 50) was higher in the later survey (1998), and a larger number occurred outside the patient's room. The study indicated that most of the reported falls in 1998 happened during the morning shift. It was concluded that the increased number of falls could be a result of heightened awareness, and that the causes and place of the falls were different for the two periods. Some of the reasons may be connected to an intervention program implemented after the first survey.

Gowdy and Godfrey, (2003) looked at a falls prevention program and the fall process in a 457-bed not-for-profit community hospital in the Piedmont region of North Carolina. Root cause analyses were performed for each inpatient fall to find possible associations between assessed fall risks and root causes. It was concluded that with an increase in the acuity of the patient and specialization in care of new and more challenging patient populations, health care organizations need to recognize patients' fall risks and develop innovative methods to prevent falls. They suggested that efforts be concentrated on high-risk populations, to use knowledge gleaned from experiences, review results, and, when successful execute those changes throughout the remainder of the inpatient setting.

Patient Rounding

Meade, Bursell, and Ketelsen, (2006) conducted a nationwide six-week study analyzing data collected during the first two weeks from 27 nursing units in 14 hospitals. The purpose of the study was to "determine the frequency of and reasons for patients'

call light use, the effects of one-hour and two-hour nursing rounds on patients' use of the call light, and the effects of such rounding on patient satisfaction, as well as patient safety as measured by the rate of patient falls" (Meade et al., 2006, p. 58). Results found that very precise nursing actions performed at specific intervals were linked with statistically significant reduced patient use of the call light, along with decreased patient falls and increased patient satisfaction.

One project conducted at a Midwestern teaching hospital on a 27-bed medical-surgical unit examined "an intervention developed to decrease patient uncertainty regarding nurse availability for response to immediate needs, leading to higher patient satisfactions scores and improved patient safety" (Woodard, 2009, p. 200). The charge nurse completed rounds every two hours and addressed the "4 P's", which encompasses pain assessment, position, potty, and presence. Results found that the routine presence of a registered nurse promoted patient safety as evidenced by the decrease in fall scores. "Patient certainty of nurse presence and the trust in the nursing care have flourished since the implementation of this model and are evidenced in the increasing patient satisfaction scores and patient surveys" (Woodard, 2009, p. 200).

Sobaski, Abraham, Fillmore, McFall, and Davidhizar, (2008) conducted a retrospective quasi-experimental study utilizing the Press Ganey Patient Satisfaction tool to measure patient satisfaction at a 25-bed cardiac telemetry unit in a large community-owned and not-for-profit hospital in the Midwest. Results confirmed that more interaction between nursing staff and patients increases the patients' perception of care that they receive. Data from this study suggest that elements could be expanded or added for more research information. For example, is there a measurable difference in one and

two hour rounding? Is there a difference if rounding is performed by LPNs or RNs? Is there an association between nursing-staff-to-patient ratios and satisfaction of the patient?

Summary of Literature Review

Previous studies regarding falls for hospital inpatients show evidence that it is a serious problem. During the literature review it was found that many falls were elimination related and that the health status of the patient can increase the risk of falling. It was also found that patient rounding was believed to have an effect in decreasing patient falls, although there is limited research published in regards to patient rounding. The overall goal is to decrease patient falls and the findings of this study can help guide future activities to help accomplish this goal.

Chapter Three

Method

Setting

Data was obtained from a Western Carolina hospital in Asheville, NC which has over 700 beds. The facility is a Level 2 Trauma Center and tertiary care referral center for the region. The hospital has over 750 physicians, employs approximately 6000 employees, and has 700 volunteers. Its Centers of Excellence include heart, stroke care and neurosciences, and pediatrics. The inpatient unit included in data collection was the Pulmonary Medical Care Unit which consists of 16 beds and has a 95% occupancy rate. The patient population consists of patients with a pulmonary or general medical diagnosis.

Sample

This study utilized retrospective data from the Risk Master Occurrence reporting system for inpatient falls from January through March 2009 and compared to data in January through March in 2010. Data was obtained from the computerized occurrence reporting system which all employees use to report patient falls. Data collected included date and time of the fall, age of the patient, where the fall occurred, age and sex of the patient, fall risk factors, fall interventions already in place, a description of the event, any injuries acquired, medications patient was receiving that could have contributed to the fall, and patient diagnosis.

Instrument

Data was obtained from the Risk Master occurrence reporting system and compiled in the SPSS program. Fall data was obtained from January through March 2009 and

compared to data in January through March 2010 which comprises information pre and post purposeful rounding.

Ethics and Procedure

Permission to use the data was granted by the Nursing Practice, Education and Research department which reviews all studies to ascertain whether Institutional Research Board approval is needed (Appendix A), as well as permission from the Gardner-Webb University Institutional Review board (Appendix B). Before instituting the purposeful rounding initiative, all clinical staff and department managers were required to attend a two hour educational class which covered the purpose for the initiative as well as the specific functions that must be performed with each round.

Chapter Four

Results

The purpose of this study was to determine if purposeful rounding had a significant effect on patient falls in a medical unit. The study looked at the total amount of falls occurred before and after implementation of purposeful rounding. The table below shows the number of falls for each of the three months in 2009 and 2010.

Table 1

Number of falls per month and year

Month	2009	2010
January	7	3
February	3	2
March	3	3

Table 2

Means and Standard Deviations for falls and age of patients

Year		Mean	S.D.
Number of falls	2009	4.33	2.309
	2010	2.67	.577
Age of Patients	2009	65.15	11.473
	2010	75.00	8.586

Chapter Four

Results

Interpretation of Findings

The falls data was collected from the Risk Master Occurrence reports from January through March 2009 and also from January through March 2010 and analyzed using the Statistical Package for the Social Sciences, version 17. Table 2 shows the mean and standard deviation for the total number of falls for the three months in 2009 and the three months in 2010. Also included in this table are descriptives for the patients involved in the falls (age and gender). Gender was coded as follows: 1 = Male, 2 = Female. For the time period of the study more females than males fell in 2009, and more males than females fell in 2010. The average age of the patients involved in a fall increased from 2009 to 2010. The average number of falls decreased from 2009 to 2010.

An independent samples t-test for the current study by the researcher was conducted to evaluate the hypothesis that there was a significant difference between the number of patient falls due to purposeful rounding between 2009 and 2010. The test was not significant at an alpha level of .05 for the total number of patient falls reported between 2009 and 2010, t (2.249) = 1.213, p = .337. Equal variances were not assumed here since Levene's Test was found to be significant. The associated 95% confidence interval for the difference in means indicates the same results since zero is included within the interval: (-3.662, 6.995). Interestingly, the t-test was found to be non-significant. This was probably due to a very small sample size and a high standard deviation for 2009.

The researcher of this study analyzed the fall data utilizing the SPSS program. The results found that there was no significant difference in the total number of patient falls after the implementation of purposeful rounding.

Chapter Five

Discussion

Interpretation of Findings

Overall, the results indicate that rounding did not result in an overall change in the number of falls between the two years. Similarly, there was not a significant difference in the number of falls related to toileting between the two years. The average age of the patients that fell increased from 2009 to 2010.

Implications for Nursing

The Purposeful Rounding initiative has only been in effect since October of 2009 so there are likely still processes that need to be improved. Rounding is a culture change at the facility and thus will likely take longer to embrace as part of the normal routine, so another possible cause for poor results for the study could be improper or incomplete implementation of rounding. Taking this into consideration, additional education and training could be undertaken to ensure rounding is carried out as intended.

Implications for Further Research

Further study is needed in falls research related to the benefits of rounding at this facility. The rounding initiative has only been in existence since October of 2009 so is still considered a change in the culture of nursing. The data reviewed for this study used three months of data pre and post rounding so using an entire year of data would be more beneficial and give a more accurate view of the effect of rounding on patient falls. Using a larger nursing unit would provide more data which would give more validity to the results.

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Appendix A

March 30, 2010

To whom it may concern,

This letter is to inform you that I met with Stephanie Spittle regarding her project on "What is the effect of purposeful rounding on patient falls in a medical unit" on March 24, 2010.

After discussing the specifics of her project, it became apparent that this did meet the criteria for nursing research or evidence-based practice. Stephanie plans to compare data before the initiation of rounding to data after rounding implemented in regards to falls. She is looking at fall data from January through March 2009 and comparing to data from January through March 2010. She is not implementing a new practice, just collecting patient or provider data regarding the implementation of the practice for clinical purposes. This is a quality improvement activity, and according to the Office for Human Research Protections (OHRP): "the HHS (Health and Human Services) regulations for the protection of human subjects do not apply to such quality improvement activities, and there is no requirement under these regulations for such activities to undergo review by an IRB, or for these activities to be conducted with provider or patient informed consent." (http://www.hhs.gov/ohrp/qualityfaq.html#q2)

Stephanie will have Risk Management review the project for approval. She has obtained approval from her Director, Linda Anderson for completion of this project.

No additional approval is required from the Nursing Research Council.

Sincerely,

Kathy Daley, RN, MSN, CCRN-CMC-CSC, CPAN
Clinical Nurse Specialist – Research

Office number - 828.213.0779
Pager number - 828.257.9018
Fax number - 828.213.1874

Mission Hospital
Nursing Practice, Education and Research
Asheville, NC 28801