

# **Proactive Patient Rounding and Effect on Patient Satisfaction**

A Thesis

Submitted to the Faculty

Of

Drexel University

By

Regina L. Salyer

In partial fulfillment of the requirements for the degree of

Doctor of Nursing Practice

September 2016



© Copyright 2016

Regina L. Salyer. All Rights Reserved.

## Dedications

This DNP project is dedicated to my family and friends who have supported me, picked me up, joked with me, and kept me going through this long process. “Thank you” will never be enough!

## **Acknowledgements**

Thank you to Dr. Al Rundio for your support and guidance and taking on the role of my committee chair. Thank you for believing in me, understanding, and seeing me to the finish line. Dr. Patrick Kenny, thank you for the marathon email and phone call sessions (even at 1 am) and your faith in me as my committee member. I am also grateful to Dr Elizabeth Gonzalez for your advice, as well as your feedback as my reader. Thank you all for everything!

## Table of Contents

Dedications .....	iii
Acknowledgements.....	iv
Abstract .....	vii
Problem Identification and Significance.....	9
Introduction.....	9
Problem statement.....	10
Proactive patient rounding development .....	10
Barriers to proactive patient rounding .....	18
Summary.....	20
Theoretical Framework.....	21
Purpose.....	22
Methods/Implementation .....	22
Population .....	22
Protection of Human Participants .....	23
Resources and Personnel.....	24
Protocol & Procedure.....	24
Results.....	28
Strengths and Limitations .....	34

Clinical Implications/ Recommendations ..... 36

References ..... 38

Tables ..... 41

Figures..... 51

Appendix A- Permission for Use of I3 Change Implementation Model ..... 56

Appendix B- Flyer/ Email Announcement ..... 57

Appendix C- Introduction to Proactive Rounding Patient Admission Education ..... 58

Appendix D- Education Handout..... 60

Appendix E- Proactive Rounding “Sorry I Missed You” Tent Card..... 61

Appendix F- Proactive Rounding Nurse Pocket Card ..... 62

Appendix G- Leadership Rounding Tool Questions and Data Points ..... 63

Appendix H- Proactive Rounding Competency Assessment Tool..... 64

Appendix I- Health System Institutional Review Board Approval ..... 65

Appendix J- Letter of Reliance ..... 66

## Abstract

Effective implementation of nursing staff proactive rounding, a structured method of consistent proactive inquiry and responsiveness to patient needs, has been linked to improved patient satisfaction. Barriers and challenges to proactive rounding processes must be overcome for successful and effective implementation and sustainment to take place. The purpose of this evidence-based quality improvement practice project was to pilot implementation of structured proactive nursing staff hourly rounding and effectively integrate it into current practice to improve patient satisfaction. The project utilized a quasi-experimental nonequivalent group design on a 39-bed medical surgical/telemetry unit to compare top box Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction scores before and after implementation of a structured proactive rounding process. A total of 59 nursing staff participants took part in the educational sessions. This included clinical care supervisors, RNs, and patient care assistants. Two-sample t-tests performed on HCAHPS top box composites performed on August 2015-August 2016 data (including project month), revealed that the t-statistics were not significant at the .00625 Bonferroni corrected critical alpha level. The differences in top box scores were not significant. A clinically significant increase was noted in the domain "Response of Hospital Staff" from July to August 2016, increasing from 51.7 to 58.9 percent although less than the score reported from August 2015 (61.5 percent). Clinically significant increases in HCAHPS composite top box scores during the three-week timespan of returned surveys were noted in all but three top box scores: Care Transitions reduced from 35.6 to 16.7 percent, Responsiveness of Hospital Staff scores fluctuated between 50 to 100 percent, and Hospital Environment fluctuated between 50 percent and 75 percent. Leader rounding patient satisfaction data revealed clinically significant percentage changes. One-sample t-tests

between proportions were performed for each of the leader rounding questions results. The difference between yes responses and no or na/no response answers for each question both before and after the start of the project were significant at the Bonferroni corrected critical alpha level of .007. Two-sample t-tests between proportions were performed on each leader-rounding question to determine whether there was a significant difference between the yes responses for each question both before and after project implementation. The t-statistic was not significant at the Bonferroni corrected critical alpha level of .007. The difference between yes responses were not significant. Clinical significance could be observed through increased positive responses from before project implementation to after in the areas of pain control, staff rounding every hour, staff assisting timely, and whether patients perceived they were getting rest at night. Reductions in responses were noted in the areas of whether caregivers are explaining what they are doing and why, and an increase was noted in the number who had questions regarding their discharge. Communication, understanding, accountability, and engagement are core essentials that can be utilized in the development of processes that contribute to patient satisfaction, including proactive rounding. Process development, implementation, and evaluation are shared actions involving both nursing staff and leaders. Further research should assess sustainability of proactive rounding and competency of the practice through a long-term study utilizing multiple units or multiple sites.

*Keywords:* proactive rounding, hourly rounding, patient satisfaction, nursing staff presence



## Problem Identification and Significance

### Introduction

Proactive patient rounding, a structured method of consistent proactive inquiry every one to two hours by nurses or nursing assistants, is a care strategy implemented by many health care organizations to ascertain and respond to patient needs. Patient requests for nursing assistance have been organized into a structured process or round usually identified as the 4 Ps. The 4 Ps include bathroom/toileting assistance (*Potty/Personal hygiene*), pain medication and management (*Pain*), requests for repositioning or transfer help (*Positioning*), personal assistance and addressing intravenous problems or pump alarms, call light and personal item access, requests for information, and urgent calls. (*Possessions/Personal needs*). Scheduled, routine treatments and procedures such as dressing changes, checking pumps, patient teaching, and medication administration can be performed at the time of the round. Rounding begins with the staff member introducing themselves. It ends with a closure that includes asking if there is anything else they can do for the patient and emphasis on someone returning to round at the next interval. A card may be left at the bedside if the patient is off the unit for a test advising the patient the time the nurse came to the room for a round and that the nurse would return in about an hour. Patients are not awakened at any time during rounding unless required for treatments (Fabry, 2015; Halm, 2009, Mitchell, Lavenberg, Trotta, & Umscheid, 2014; Toole, Melusky & Hall, 2016).

Proactive patient rounding is also known as intentional, purposeful, or hourly rounding. Rounding fosters team communication and improves patient safety, improves pain management as reflected in lowered self-reported pain scales, reduces skin breakdown, as well as reduces call light usage and patient falls (Halm, 2009; Mitchell et al., 2014; Olrich, Kalman, & Nigolian,

2012; Toole et al., 2016). Proactive rounding allows nursing staff to be perceived by patients as more responsive. It reduces the effects of unplanned interruptions on nurse staffing and time, improving care efficiency and reducing frustration. As a result of proactive rounding, patients are apt to connect satisfaction and care quality with nursing's resultant accessibility, presence and adeptness to meet their effectively meet their needs in a reasonable amount of time (Fabry, 2015; Meade, Bursell & Ketelson, 2006).

### **Problem statement**

Despite the established positive outcomes of proactive patient rounding, barriers and challenges to the process have been demonstrated. For successful and effective implementation and sustainment of the rounding process to take place, these challenges, including acuity levels and workload, lack of buy-in by nursing staff, time management, unexpected interruptions, maintaining rounding logs, scripting process, patient population issues, inadequate education, or lack of leadership support, must be overcome (Shepard, 2013; Toole et al., 2016).

### **Proactive patient rounding development**

The idea of proactive patient rounding grew from the desire to improve patient satisfaction through timeliness of response to patient call lights and attention to patient care needs and amenities. Proactive rounding was introduced in the 1980's at an Alabama medical center through the establishment of a unit hostess role. Rounding on each patient four times per shift while responding to all call lights within five minutes, the hostess would notify the nurse if patient requests required a licensed care provider. Otherwise, the hostess would attend to the request personally. Within two weeks of implementation, a significant reduction in complaints from patients and physicians was noted, patient satisfaction surveys improved, and positive

responses from nurses included decreased interruptions in routines and decreased patient anxiety (Davies, 2010; Sheedy, 1989).

Reduction of patient anxiety caused by unfamiliarity with hospital and health care routines and procedures, fear of the unknown, and the susceptibility toward dependence for personal and basic needs is key in rounding strategy development. Strategies to anticipate needs, provide amenities, and improve patient perception of response time and how well needs are met can improve patient satisfaction (Fabry, 2015; Mitchell et al., 2014; Toole et al., 2016).

Beginning with Meade et al. (2006), much of the literature demonstrates a significant improvement of patient satisfaction and perceptions of nursing care with proactive rounding (Blakley, Kroth, & Gregson, 2011; Halm 2009; Kessler, Claude-Gutekunst, Donchez, Dries, & Snyder, 2012; Mitchell et al., 2014; Tea, Ellison, & Feghali, 2008). Meade et al. (2006) was the only large-scale nationwide study identified. This study involved a quasi-experimental non-equivalent groups design involving 27 units in 14 hospitals during a six-week period. Nonrandom assignment was performed either to one of two experimental groups or a control group. One weakness of this assignment that was identified was that the hospitals participated in the group assignment. Experimental groups either performed rounds hourly 6a-10p & every 2 hours 10p-6a or performed rounds every 2 hours during the entire 24-hour period, both using the same 4 Ps protocol. Patients were not awakened if they were sleeping in either experimental group. The control group collected data on the reasons and frequency of call bell use, which was also collected by all groups as baseline data during the two weeks prior to the four-week implementation period. Patient satisfaction significantly increased in both rounding groups, with satisfaction levels higher in the one-hour rounding group. Patient falls were significantly reduced only in the one-hour rounding group, but call bell frequency was reduced in both

rounding groups. While considered a landmark study for proactive rounding, the Meade et al (2006) study is arguably biased in that the Studer Group, a consulting firm utilized by healthcare organizations to develop rounding processes and other tools to improve outcomes, had paid for researcher expenses.

Culley (2008), using a small convenience sample (N= 3 units: medical, surgical, and stepdown), replicated the study of Meade et al. (2006) and found that patient satisfaction increased after a structured rounding strategy was implemented. This is consistent with the findings of Olrich (2012), whose anecdotal report suggested that patient satisfaction was increased after rounding although the results were not statistically significant. A third replication of the study by Meade et al. (2006) was performed by Weisgram and Raymond (2008), in which one step-down telemetry unit was the setting. Measures included nursing compliance to the rounding program process, patient falls, call lights, and patient satisfaction. While initial compliance to the rounding process was measured at 84 to 96 percent, it was reported that a reduction of one nurse's compliance by 50 percent resulted in a significant increase in call bell use from 20 to 69 calls in one day. A reduction of falls was noted within the first 30 days of the rounding program, along with an overall initial decrease of 23 percent in call lights. The patient satisfaction outcome measure data was not reported.

A focused review of literature in the United States on proactive rounding and patient satisfaction primarily consisted of quasi-experimental non-equivalent group studies and reported results of quality improvement (QI) studies and projects. The results of this review can be found in Table 1. As reflected in the table, a paucity of large-scale studies were noted, as most were convenience samples/populations, limited to one organization. Data collection periods varied. The majority of units studied acted as their own control through the use of baseline data

collection periods. Only Meade et al. (2006) and Olrich et al. (2012) utilized a separate control unit during the study period, however all units within each study collected baseline data during the first two weeks (Meade et al., 2006) or first six months (Olrich et al, 2012). Despite smaller convenience samples and limited study periods being noted as limitations to outcome generalization and assessment of long-term process sustainment, many noted at least a clinically significant improvement in patient satisfaction (Brosey & March, 2015; Halm, 2009; Mitchell et al., 2014).

In addition to Meade et al. (2006), several extended period studies of one year or longer were reported. Olrich et al, (2012) described a one-year quasi-experimental study to implement a replication of the proactive rounding process initiated by Meade et al. (2006) as an effort to improve patient satisfaction, reduce patient fall rates, and reduce call light usage in a 506-bed teaching hospital. One medical-surgical unit served as the experimental unit, and a similar medical-surgical unit served as the control unit. Six months of baseline post-discharge patient satisfaction survey results and falls rate data, as well as two weeks of call bell usage data from each unit were collected prior to proactive rounding implementation. The patient satisfaction survey tool utilized was not described. All nurses and unlicensed assistive personnel on the experimental unit and from the medical surgical float pool attended an education session on proactive rounding performance. Rounding was performed on the experimental unit during the six-month intervention period hourly from 6 am to 10pm, and every two hours from 10 pm to 6 am. Environmental checks were solely to be performed if the patient was sleeping. A log was completed after each round by staff. To ensure rounding was completed, leadership rounds were performed by the nurse managers and clinical nurse specialists three times a week. They reviewed rounding logs, interviewed patients, and provided reminders to staff. Staff reminders

were also provided during staff meetings. The authors described that the unit leaders worked to remove identified barriers to rounding, however specific barriers were not identified. A one-hour refresher class was provided for staff on the experimental unit four months after the start of the rounding process, in which rounding process behaviors were reinforced and feedback was provided to the staff. Results of the study revealed that there was no statistically significant difference in patient satisfaction data from post-discharge surveys on both units when comparing pre-rounding and post-rounding patient groups. However, it was noted by the authors that nurse leader rounding anecdotally revealed an increase in patient satisfaction on the experimental unit. The falls rate on the experimental unit decreased from 3.37 to 2.6 per 1000 patient days, a 23 percent clinically significant reduction. The falls rate on the control unit increased. During the first week of the intervention, call light usage significantly decreased, however it was reported that due to a delirious patient, call light usage significantly increased over the following two weeks; the final week of call light data collection showed no significant change in usage. It was noted that due to the small sample size it was difficult to validate any significant change in call light usage. The authors described that patients who were frequently admitted to the experimental unit perceived the nursing staff to be more attentive after rounding implementation.

Tea et al. (2008) described the development of a proactive rounding program in response to an organizational desire to improve staff responsiveness to patient needs and requests. The outcome measure for improvement was based on increases in patient satisfaction top-box scores. The setting for the study was four orthopedic units in four hospitals over a fifteen-month period. Staff were educated on a 5-point rounding model which included smiling and asking the patient how they were, asking the patient about toileting needs, performing a pain assessment, turning or getting the patient out of bed, and ensuring things are in reach for the patient. Staff were

provided laminated cards reinforcing the “I Care” rounding process, as well as performed role-playing during the education sessions. Patient satisfaction data obtained during implementation showed that overall top-box satisfaction data was 52.3 percent at baseline. A five-point manager rounding check was performed during leader rounds to ensure staff compliance. The expectation of the check was that all items always occurred. A statistically significant improvement and/ or sustainment was noted on all manager rounding check measures. Barriers to the rounding process success were addressed by ongoing role playing sessions, daily verbal reminders, staff meeting emphasis, and reference cards to address need to change to anticipatory care and improve consistency with rounding. Overall patient satisfaction top-box scores showed consistent increases and had improved to 65.1 percent fifteen months after implementation.

Kessler et al. (2012) reported a six-year quality improvement examination of outcomes from implementation and sustainment of hourly rounding on a 30-bed medical surgical unit. Utilizing a quasi-experimental nonequivalent groups design, one-year baseline data was obtained which the authors stated demonstrated patient satisfaction and patient falls data below internal and external benchmarks (not specified), staff satisfaction scores reflecting need for improvement in areas of teamwork and perceptions of workload, and also a desire to improve hospital-acquired pressure ulcers above current levels. The authors emphasized that it was recognized that any solution was not one to be hastily implemented. Patient care expectations were assessed through post discharge telephone survey and review of patient satisfaction data, results reflecting patient desires of pain management, attention, and call bell responsiveness. Baseline Press Ganey patient satisfaction scores on pain control (88.5 percent), prompt response to call bell (86.7 percent), and staff teamwork (90.8) and Healthstream unit staff satisfaction scores (overall=3.78) were noted. The baseline falls rate was 5.46. Specific pressure ulcer data

was not described. Pre-implementation surveys were completed by the staff. One-hour education sessions were attended by all nursing staff. Efforts to promote teamwork and hardwiring in the proactive rounding process consisted of ensuring responsibility for rounding was shared equally by registered nurses and non-licensed assistive personnel. All staff signed a pledge committing to the process, and the initiative came under the oversight of the unit shared governance council. Welcome letters describing the rounding process were provided to all patients. The staff addressed the 3 P's of pain, position, and personal needs, and made sure that the call bell, remote control, trash can, tissues, and water were in reach. They also performed an environmental safety check. Rounding logs addressing each step would be initialed in front of the patient. During the first two months, staff met biweekly to discuss what was going well and what needed to be changed; patient rounding later became an agenda item at monthly staff meetings. Unit leaders would round on each patient and ensure that rounds were appropriately taking place. Staff would be also held accountable for rounds during annual performance evaluations as a unit expectation. Staff buy-in and hardwiring of the process was demonstrated as staff became champions and consultants for the development of rounding programs in other hospital units and health system campuses, as well as presented at conferences on the topic of patient rounding. The authors reported a long-term outcome of sustainment of positive Press Ganey patient satisfaction scores (pain control: 85.9-87.9 percent; response to call bell: 82.1-88.7 percent; staff teamwork: 89.9-92.1 percent) when compared to pre-implementation scores, however no significant increase was noted as a result of the program implementation. Overall staff satisfaction was improved over the period to 3.83 and significant reductions in the falls rate to 2.19 was noted. The authors concluded effective implementation of proactive rounding involves a combination of staff engagement, leadership support, commitment to the process,



structured accountability, establishment of defined metrics, and ongoing evaluation, which can result in successful, sustained outcomes.

Variations on the frequency of hourly proactive rounding were described. Multiple authors, including Brosey & March (2015), Culley (2008), Halm (2009), Meade et al. (2006) and Olrich et al. (2012) reported reducing proactive rounding during 10pm-6am to two-hour intervals. The interval reduction was to avoid unnecessarily waking patients and reduce disturbances of patients' sleep patterns (Brosey & March, 2015). Meade et al. (2006) compared around-the-clock proactive hourly rounding and the nightly reduction to two-hour rounding as their two experimental groups, with a higher level of patient satisfaction noted in the around-the-clock hourly group. During their six-year proactive rounding initiative, Kessler et al. (2012) described that the rounding process initially began in one-hour intervals from 7am to 11pm, and two-hour intervals from midnight to 6am; the protocol was adjusted over the six-year period to become hourly intervals twenty-four hours a day. No specific rationale was provided for the interval change, however the authors noted sustainment of Press Ganey patient satisfaction scores even with the interval changes. Woodard (2009) described a rounding process in which the charge nurse, instead of the staff nurses and nursing assistants, would round every two hours to proactively assess patient needs through the 4 Ps. Blakley et al. (2011) described nursing staff performing the 4 P's in two hour intervals around the clock during their six-month quality improvement study, resulting in an increase of quarterly Gallup HCAHPS overall patient satisfaction scores from 3.5 to 3.6, a reduction in call lights, and improvement in staff satisfaction. The positive effect of proactive rounding on patient satisfaction is evident despite any variations in the intervals of rounding.

## **Barriers to proactive patient rounding**

Despite its demonstration of success in patient satisfaction outcomes, difficulty in implementing and sustaining hourly rounding processes have been recognized. Implementation of proactive rounding must take into consideration the needs of the frontline staff (Deitrick, Baker, Paxton, Flores, & Swavely, 2012). Ulanimo & Ligotti (2011) recognized that patient acuity, staffing levels, and the “rehearsed” perception of scripting among barriers to proactive rounding. A systematic literature review by Toole et al. (2016) also identified barriers that affect the implementation and sustainment of hourly rounding. Among twenty articles, several categories of barriers were identified: workload, burdensome rounding logs, staff buy-in, inadequate staff education, patient population challenges, lack of leadership support, and the scripting process. The authors noted that with these being barriers identified by frontline staff, it is clear that hourly rounding is not a quick change, but a “culture of care” (p. 289) that needs to be developed as a change in thinking and “incorporated into nursing practice” (p. 289). Leaders must recognize these perceptions of frontline staff and develop strategies to recognize and alleviate these barriers to allow for successful enculturation of the hourly rounding process. They called for strategies to be developed to recognize and alleviate these barriers for frontline staff. Suggested strategies included a focus on the purpose of hourly rounding and what needs to be completed during each visit along with the proactive approach to safe patient care, rather than emphasis on the timing of the visit. Managers should go beyond general education provided and support staff in how hourly rounding can be incorporated into the staff’s existing workload and daily tasks. This teamwork approach with consistent leadership support is key to incorporating hourly rounding into practice (Toole et al., 2016; Ulanimo & Ligotti, 2011).

A study by Brosey & March (2015) involved change management strategies in an attempt to incorporate proactive rounding practice into normal workflow to reduce perceptions that the rounding process was just another task or burden on nursing staff. A lack of sustainment of proactive rounding within the facility was described. Proactive rounding was established as a care standard seven years prior, however there were weaknesses in accountability and lack of structure in the original process. Baseline staff rounding compliance rate was reported as 48.4 percent. Staff turnover was not described as a factor in compliance. The authors developed a standardized, structured hourly rounding process for pilot implementation by the nursing staff on one medical-surgical unit. Data regarding staff compliance with the existing hourly rounding process was collected for a one-week period prior to the new process implementation. Outcome measures including Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction scores, inpatient falls rates, and hospital-acquired pressure ulcers were utilized. Baseline measures of these performance indicators were obtained prior to structured hourly rounding implementation. Buy-in for re-initiation of the structured hourly rounding process was obtained prior to implementation from the staff unit-based shared governance council. All staff members received a 20-minute education session that included a structured hourly nurse rounding definition and a presentation of current evidence, historical performance indicators, and fiscal year improvement goals. Staff received a fact sheet to use as a reference. In the revised process, the staff member would enter the room and assess pain, elimination, environment, and position (PEEP), and then document the activity. Compliance was measured monthly in three, seven-day periods after implementation of the structured rounding process. Compliance rates of 69.4 percent (month one), 44.3 percent (month two), and 59.2 percent (month three) were reported. This drop in compliance was attributed to the staff stating

that they were performing the hourly rounds as expected, but not always completing the written rounding log. Improvement in all outcome measures was noted. All HCAHPS composite domain top box responses increased 6.1 percent to 30.9 percent after implementation, except responsiveness of staff, which dropped slightly to 48.6 percent (n=81) from 49.3 percent (n=35) before implementation. While no explanation was offered for this decrease, measurement of staff responsiveness top box scores at one-year post-implementation revealed an increase to 57.6 percent, an increase consistent with the one-year measurement of the other composite domain top box responses. A 57.7 percent reduction in the unit's falls rate was noted from before to after pilot implementation. Four pressure ulcers were reported prior to project implementation, zero during the project period, and one pressure ulcer was reported in the year after the project implementation. Study results were posted and shared with staff during and after rounding implementation. Assessment of the project for long-term sustainability was limited due to the short time period of the study, and the study being performed on only one unit (Brosey & March, 2015).

### **Summary**

Timely, efficient, and proactive responsiveness to patient needs through successful implementation and sustainment of structured nursing staff proactive rounding can result in a positive impact on patient satisfaction and safety. Proactive nursing presence through successful implementation and sustainment of the structured rounding process can occur with teamwork between managers and frontline staff, development of effective change management strategies, and consistent support from managers and leaders in how to integrate proactive rounding into unit practice and culture.

## Theoretical Framework

The theoretical framework chosen for this project was the I3 Change Implementation Model (Figure 1), developed by Lance Dublin, an organizational learning and change management consultant. The model provides a proactive approach in which organizations follow a path to plan and implement changes that will become an integral, sustained part of the organization. It is flexible and can allow involvement of employees at all levels to obtain buy-in and participation in the change. The initial stage, *inform*, explains and raises awareness about the change to understand its value. This was undertaken through flyer posting and emails prior to project start, providing information regarding the project. This stage was furthered through education of participating unit leaders and nursing staff regarding the proactive rounding process and project. Once staff knew about the change, the *involve* stage created engagement of staff by encouraging them to participate in or try the change, experience the value of the change and internalize it. Leader rounding with patients and staff and shift huddles with nursing staff provided staff support, addressed rounding barriers and reinforced rounding process behaviors to help internalize the proactive rounding process. In addition, HCAHPS patient satisfaction scores and unit leader rounding patient satisfaction questionnaires were collected to demonstrate the value of the process in measurable outcomes. Finally, the *integrate* stage entrenches the change in the organization's culture, creating commitment to the change, realizing its value, and making it a standard of the organization. Integration and sustainability of proactive patient rounding was to be achieved through posting of patient satisfaction data, positive reinforcement of rounding behaviors and constructive competency evaluation of rounding behaviors (International Society for Performance Improvement (ISPI), 2013; L. Dublin, personal communication, April 21,

2016). The change management strategies of this model provided guidance in the development of the proactive rounding framework (Figure 2).

### **Purpose**

The purpose of this evidence-based quality improvement practice project was to pilot implementation of structured proactive nursing staff hourly rounding and effectively integrate it into current practice to improve patient satisfaction.

### **Methods/Implementation**

This quality improvement project utilized a quasi-experimental nonequivalent group design to compare top box HCAHPS composite patient satisfaction scores on a 39-bed medical surgical/telemetry unit in order to determine the impact of a pilot program to integrate nursing staff hourly rounding on this unit. Prior to implementation, the project was approved by the Health System Institutional Review Board (IRB) (MHS # 2016-17) as an expedited review (Appendix I). The Health System IRB determined that the study presented no harm to subjects and involves no procedures for which written consent is required. It also determined that the study met all of the criteria under Federal Regulations (Personal communication, D. Palomba, July 25, 2016). Submission to the Drexel IRB was also made and approved (Protocol #1607004721) for a Letter of Reliance (Appendix J).

### **Population**

The pilot unit, located in an acute care suburban community teaching hospital in Southeastern Pennsylvania, evaluated and treated patients with various cardiac, gastrointestinal, renal, neurological and pulmonary diagnoses. The unit acted as the hospital's designated stroke unit. Patient care delivery was provided by registered nurses and patient care assistants, assisted by unit coordinators and led by the unit nurse manager, clinical care supervisors, and rotating

charge nurses (staff nurses who are assigned to the charge role for the shift). Charge nurses and clinical care supervisors did not routinely have a patient assignment. Staffing was supplemented, as census requires, by medical-surgical pool registered nurses and registered nurses floated from other floors, as well as ancillary pool patient care assistants.

All patients on this unit, regardless of insurance status, received an HCAHPS survey after discharge; this 100 percent distribution method was elected by the hospital site. HCAHPS surveys were distributed, collected, data cleaned and blinded, and resulted by Press Ganey, a health care industry data analytics and consulting firm, focused on improving quality & efficiency of health care and improvement of patient satisfaction (Press Ganey, 2015).

### **Protection of Human Participants**

Because the project was a quality improvement pilot project implementing proactive rounding, already an expectation of the organization of all nursing staff, there was no risk for participation for nursing staff or patients. The hospital site previously initiated a hospital-wide rounding program, of which long-term successful sustainability had not been demonstrated. While the project leader had password access to the de-identified HCAHPS survey score results on the Press Ganey Improvement Portal internet site as part of the project leader's job role, there was no access to raw data. The project leader obtained hospital site IRB permission to access survey data external to the job role, specifically HCAHPS data for the year prior to the start of the project up to the end date of the project. As completed survey data in the portal was received directly by and de-identified by Press Ganey prior to uploading, there was no risk to patients of being identified or associated with survey results. Access to pilot unit leader rounding data for analysis was also approved, which was de-identified of patient-specific information prior to access. The project leader has site access to a password-protected computer in a locked office,

where de-identified data utilized in the project will be stored for three years. Dissemination of data analysis and project outcomes via presentation, posting, or publication will utilize only de-identified and aggregated data.

### **Resources and Personnel**

The project leader is a masters-prepared and doctoral candidate registered nurse with twenty-nine years of adult nursing experience in the medical-surgical and critical care specialties. The project leader also has twelve years' experience as a clinical nurse educator. The project leader was responsible for all staff and leader education and competency, posting and emailing of introductory materials, distribution of all educational resources and rounding tools, and analysis of data and posting of outcomes. The project leader has access to office space within the hospital to store project materials. A password-protected computer in a locked office was available to enter and analyze data.

Preexisting password-protected access to HCAHPS patient satisfaction de-identified scores was available to the project leader on the Press Ganey Improvement Portal website. Leadership rounding is currently performed by the unit manager with seven standardized patient satisfaction yes/no questions asked as part of the round. The manager de-identified leader rounding tools of patient identifiers and provided to the project leader for analysis. Permission for pilot unit de-identified patient satisfaction data and score use in the context of the pilot from both sources, as well as project implementation, was obtained from both the health system and Drexel IRB prior to access.

### **Protocol & Procedure**

After IRB approval, participants were informed through pilot unit posting and emailing of a flyer (Appendix B) by the project leader prior to project start announcing the proactive



rounding project and the proactive rounding education dates and times. The education of participants, pilot unit leaders and all pilot unit and pool registered nurses and nursing assistants, took place prior to project implementation in thirty-minute sessions to achieve awareness, buy-in and understanding of the project processes. Registered nurses and patient care assistants floated from other units in reassignment were not to participate in the education plan for reimplementation of hourly rounding, but were expected to continue current expectations of hourly rounding processes, as the process is a current hospital-wide expectation. Education presentations focused on the purpose, rationale, and benefits of structured rounding; the interrelationship to patient satisfaction, safety, and outcomes, and implementation into current practices as a best practice strategy, rather than an administrative mandate.

To reemphasize the focus of the process on proactive care, rather than timespans, the rounding process was introduced and referred to as “Proactive rounding- the “5Ps of Presence”. These 5P’s included the traditional 4P’s of rounding- Personal hygiene (Offer toileting- bathroom, bedpan, commode; Check for incontinence), Pain (Assess and treat), Position (Reposition patient in bed, shift patient in chair; check/correct bed position), and Possessions (Call light; Personal items- sweater, blanket, cell phone, tray table, food, drink, ice water pitcher, tissues, straighten and pumps (check IV or other pumps or equipment to ensure will not alarm before next round). A fifth ”P”, Procedures, including, but not limited to routine procedures and treatments such as vital signs, medication administration, dressing changes, wound care, prepping for tests and off unit procedures, or patient and family education, was included as part of the rounding process to assist in developing buy-in and sustainment of the process by the staff. Formally structuring these additional routines into the proactive rounding process was an attempt to address barriers to rounding and demonstrate to staff that proactive rounding was not seeking

to add to staff workload, but instead was an organized way to be proactive in meeting patient needs and still complete routine tasks and expectations of the day. Education handouts, references and rounding tools found in Appendixes B-F were reviewed and provided during the education. Question-and-answer, classroom-based rounding practice and constructive feedback by peers was utilized (Brosey & March, 2015; Toole et al., 2016).

The proactive rounding pilot began on Day 1 and continued through Week 4. Demonstration of leader support and fostering of engagement took place through Monday through Friday shift huddle discussions led by the clinical care coordinator beginning Day 3 regarding the proactive rounding process: what's going right, questions and answers, and concerns (Toole et al., 2016). HCAHPS patient satisfaction scores from one year prior to project implementation to the end of Week 4 were collected. The choice of HCAHPS data as the patient experience data collected was due to its existent collection within the organization. The number and timing of surveys returned was dependent upon patients completing and returning the surveys in a short turnaround and within the project timeline. Hospital average survey turnaround time averaged three to four weeks. At the suggestion of the chief nursing officer, to lessen the potential effect of a lack of returns, the project leader asked the nurse manager to retain the leader rounding data tool currently in use, de-identify patient information on the tool, and forward to the project leader for analysis. This tool (Appendix G) contained seven patient satisfaction yes/no questions regarding responsiveness, call lights, etc., and was utilized as a supplement and comparison to findings from the HCAHPS data, in case there were a low number of HCAHPS survey returns for the time period of the pilot.

Patient satisfaction was measured utilizing Press Ganey HCAHPS patient satisfaction composite top box scores and leader rounding survey data. All patient satisfaction data,

including percentages and percentage changes, would be reported and analyzed for clinical and statistical significance. T tests were performed to assess for statistical significance. Top box patient satisfaction scores were displayed for staff on a graph that described scores and any changes that occur. Due to dependence of HCAHPS data results being dependent on return of surveys, current unit leader rounding questionnaires performed Monday through Friday beginning one month prior to pilot through Week 4 by the nurse manager were collected and de-identified and yes/no questions regarding patient experience would be tallied and analyzed by the project leader for additional patient satisfaction data source examination using descriptive and t-test statistics. Hardwiring the proactive rounding process, making the process a standard routine and part of the unit culture (Robert Wood Johnson Foundation, 2008) took place Week 4 as staff integrated the process as a unit routine and expectation of the unit culture. Constructive feedback by unit leadership through a bedside competency evaluation of staff during a round provided positive reinforcement of behaviors, allowed unit leaders to observe and intervene on barriers to the process, and demonstration of commitment to the success of the rounding program and its outcomes by all members of the unit nursing team. Patient satisfaction data results and analysis, both from leadership rounding results and HCAHPS survey results were posted on the unit throughout the pilot to demonstrate the outcomes of staff efforts. Evaluation of data would see if trends noted an improvement in patient satisfaction and would report any alternative outcomes.

The desired outcome of the project was that a structured proactive hourly rounding program would result in increased patient satisfaction. The pilot concluded Week 4, although behaviors would be expected to continue. Compliance with expectations and assessment of

long-term sustainability will be determined through leader shadowing of staff, leader patient satisfaction rounding, and ongoing discussions during huddles and staff meetings.

### **Results**

Over a six-day time span, fifty education sessions were led by the project leader. Seven-to-ten sessions were provided each day, offered at times accessible to day, evening, and night shift. A total of 59 nursing staff participants took part in the thirty-minute sessions. Both clinical care supervisors, 30 out of 35 staff RNs, and nine out of twelve patient care assistants attended. One monitor technician attended by request out of curiosity. Seventeen other nursing staff attended: three RNs from a unit next to the pilot unit, nine RNs from float pool, and five float pool patient care assistants. While the number of educational participants was predicted as N=89 based on the total number of pilot unit and float pool RNs and patient care assistants, the difference between the estimated and actual number of participants can be accounted for based on the number of pool staff utilized during the project period.

Barriers to rounding brought up anecdotally by staff during the educational sessions included the following themes: scripting, no time to do rounds/workload/staffing, lack of buy-in, or lack of feeling supported by leaders. These perceived barriers were consistent with those described by Ulanimo & Ligotti (2011) and Toole et al. (2016). With the review during the education of the proactive nature of a round, the inclusion of the 5<sup>th</sup> P (Procedures) that supports the premise that rounding includes all scheduled routine tasks, incorporated (not an addition) to the existing workload), and the built-in addition of leader support of rounding through huddle discussions, the majority of the staff when leaving the educational session seemed enthusiastic to reinstate their participation in proactive rounding. Staff expressed willingness to utilize the patient education tool for all admissions and transfer patient education on the proactive rounding

process. In addition, the “while you were out” tent card elicited a positive response from staff; one staff nurse made the comment “I can even use this to prove to my patient’s families that spend the night and sleep through my rounds that I was rounding on the patient, especially when they insist I didn’t”.

Proactive rounding became one of the routine topics discussed during Monday through Friday change of shift group huddles that were led by the unit clinical care supervisor and/or nurse manager. Comments and leader responses were recorded in a notebook kept in the unit clinical care supervisor office. Initial concerns expressed included the length of the educational sessions. Specific to the proactive rounding process, staff comments/themes to the unit leader (unit leader responses noted) included

- not enough time to do all this
  - reinforced that the rounding is not new and this is a refresher to what we should have been doing
- “feel like I will never get there every hour”/ I’m in there five times already
  - goal is to do everything when you are there and not have to go in five times
- Bedside tent card-Very cumbersome/more clutter on table/ I feel like it is setting me up to fail
  - goal is to make sure our patients know we are keeping our commitment to them
- “we are constantly in the rooms so why can’t we use those encounters as rounding”
  - We can if you are asking the P’s

- Patient care assistant accountability for doing rounds/ “I don’t feel I can get there every hour”
  - Reinforced new language to patients: “myself or someone will be in in about an hour to check on you”

Proactive rounding continued to be a topic of conversation during week four of the pilot project. Several comments were directed toward the efficacy of the tent cards, in addition to comments and discussion regarding the proactive rounding process.

- It’s not working secondary to the tent cards. Maybe something sticky may be helpful. Everyone leaves cards.
- Going well/going ok
- “...the cards is too much crap”
- “I think we are getting better with toileting our incontinent patients with proactive rounding”
- I notice a change with less heavy incontinent patients when we just go in frequently
- Table tent card- another thing to put in my pocket
  - They are kept at the desk. Suggested that staff pick up a couple at start of shift or throughout day.

There was one staff comment that management was not buying in and that there was no follow-up. Although no note was made regarding response by unit leader, there were several discussions with staff and unit leaders regarding continuation of proactive rounding being a topic during huddles. Staff were also reminded of ability to bring up barriers to rounding to unit

leaders at any time. Additionally, staff were reminded of the constructive feedback shadowing of rounds that would be occurring to assist with success of the process.

Year-long top box HCAHPS composite domains were each graphed to demonstrate trends (Figures 3-10). Percentage changes were unable to be calculated due to differences in N. Top box scores for the HCAHPS composite domains were examined at one year, six months, and one month prior to the project, as well as the month of the project (Table 2). Utilizing a standard 95% confidence level, a two-sample t-test between proportions was performed for each of the eight composites to determine if there was a significant difference between top box scores from one-year prior to project start to project month, six-months prior to project start to project month, and month prior to project start to project. To reduce the risk of a Type I error, the critical alpha ( $\alpha$ ) level was adjusted from .05 using a Bonferroni correction due to the number of tests run (eight) for each of the three sets of intervals. The calculation of  $.05/8$  was utilized resulting in a critical  $\alpha = .00625$ . The t-statistic was not significant at the .00625 critical alpha level, for the t-statistics listed in Table 2. Therefore, we fail to reject the null hypothesis and conclude that the difference in top box scores in each interval was not significant. The only clinically significant increase in scores was noted in the domain "Response of Hospital Staff" from July to August 2016, increasing from 51.7 to 58.9 percent. This still remained less than the score reported from August 2015 (61.5 percent).

The eight HCAHPS composite domain top box scores from the project month were examined (Tables 3-4). The number examined was limited due to the number of surveys currently returned. The total N of surveys returned was nine. Percentage changes were unable to be assessed due to differences in N between weeks. Using a standard 95% confidence level, a two-sample t-test between proportions was performed for each of the eight HCAHPS composite

domain top box scores, to determine if there was a significant difference between top box scores from week one to week two, and week two to week three. To reduce the risk of a Type I error, the critical alpha ( $\alpha$ ) level was adjusted from .05 using a Bonferroni correction due to the number of tests run (eight) for each of the two sets of intervals. The calculation of  $.05/8$  was utilized resulting in a critical  $\alpha = .00625$ . Due to unreported surveys or scores of zero, t-statistic calculations for care transitions and pain management were limited. The t-statistic was not significant at the .00625 critical alpha level, of the t-statistics listed in Table 4. Therefore, we fail to reject the null hypothesis and conclude that the difference in top box scores in each weekly interval was not significant. Clinically significant increases during the three-week timespan were noted in top box scores in communication with nurses (61.1 to 100 percent), communication with doctors (55.6 to 83 percent), pain management (40 to 100 percent), communication about medications (37.5 to 75 percent), and discharge information (80 to 100 percent). A clinically significant reduction in top box scores was noted in care transitions (35.6 to 16.7 percent) during the same three-week period. Responsiveness of hospital staff scores fluctuated from 50 to 100 percent, and back to 50 percent for the third week, while scoring on hospital environment went down to 50 percent during week two before returning to a 75 percent top box score during week three.

Leader patient satisfaction rounding data and percentage changes are noted in Table 5. Percentage changes were clinically significant. Utilizing a standard 95% confidence level, separate one-sample t-tests between proportions were performed for each of the seven patient satisfaction questions in the leader rounding tool results to determine whether there was a significant difference between the percent choosing yes and no for each question (Table 6). (If there were no recorded responses for no answers, the proportion answering na/no response was



utilized). Tests were performed on all question data collected both before and after the start of the project. Due to the number of tests run, a Bonferroni correction was performed to reduce the risk of a Type I error. The t-statistic was significant at the corrected critical alpha level of .007. The null hypothesis for all questions is rejected; the difference between yes responses and no or na/no response answers is significant.

Two-sample t-tests between proportions were performed on each leader rounding question (Table 7) to determine whether there was a significant difference between the yes responses for each question both before and after project implementation. Due to the number of tests run, a Bonferroni correction was performed to reduce the risk of a Type I error ( $.05/7$ =corrected critical alpha level of .007). The t-statistic was not significant at the corrected critical alpha level of .007. We fail to reject the null hypothesis for all questions; the difference between yes responses is not significant. Percentage changes could not be measured due to differences in N. Clinical significance could be observed through increased positive responses from before project implementation to after in the areas of pain control, staff rounding every hour, staff assisting timely, and whether patients perceive they are getting rest at night. Reductions in responses were noted in the areas of whether caregivers are explaining what they are doing and why, and an increase was noted in the number who had questions regarding their discharge.

Proactive rounding data was posted for all staff members to review to provide a comparison of patient satisfaction data from before and after project implementation.

Bedside competency evaluation of proactive rounding behaviors was begun the final week of the project through shadowing of staff members by unit leaders during a patient round. Two observations were completed by one of the unit clinical care supervisors, both observations

being of patient care assistants. All steps and behaviors in the proactive rounding process were completed by both patient care assistants, except one required reminding to assess the patient for pain. The competency assessment tools were completed by the unit clinical care supervisor and shared with the staff member.

### **Strengths and Limitations**

The development of this quality improvement project as a pilot program with a single unit focus allowed for refinement of materials and processes before actual expansion to the hospital at large. Its quasi-experimental design, however, did not allow for uniformity and randomization of the population (Meade et al., 2006). The small, single unit population allowed only limited generalizability of the project external to the hospital site. These issues were mitigated by examination of HCAHPS patient experience data results for the one-year time period prior to implementation of the project, to allow the unit to act as its own comparison. The analysis of HCAHPS survey data for the four-week project time period was limited due to collection of results by Press Ganey being dependent upon rate of return. HCAHPS survey results totaled N=9 for the four-week time period under study. This low result could affect the study external validity. Further study should utilize a longer-term, multi-hospital unit or site design.

The population on the pilot unit varies somewhat, and therefore could not be an exact control because identical populations cannot be guaranteed. Long-term sustainability assessment was limited due to performance on only one unit and the short time period of the study. Other than with the comparison of the yes-no questions in the leader rounding data, percentage changes were unable to be calculated on either the HCAHPS top box scores or the leader rounding data due to differences in N.

Shortly after initiation of the project, it was brought to the project leader's attention that one RN objected to participating in the study project, as she had "not signed anything" giving consent to participate. It was explained to the individual that no consent was required as the project was deemed exempt by two IRBs through an expedited review. Despite several explanations, including that all data regarding the project was de-identified and aggregated, the nurse continued to object to being a part of the project, however stated she would continue to perform proactive rounding, since that was a current hospital expectation. The project leader, in an effort to maintain protection of subjects, agreed to her request, and advised the nurse leaders of the pilot unit that she would not be included in the constructive feedback competency assessment by the unit leaders. As the nurse manager had an existing practice prior to the project that she shadowed staff weekly to assure compliance with rounding, the manager noted that the RN would still be shadowed during a round as part of the manager's existing weekly shadowing practice. Written consent could be considered for future studies to mitigate this issue even if not indicated.

Vacations, competing priorities, and unit activity limited the completion of Monday through Friday leader rounding patient satisfaction data collection; approximately fifty percent of the expected data was collected. Additionally, unit activity (acuity and patient issues) and competing administrative priorities limited the number of bedside competency evaluations completed by unit leaders. While the manager had a routine of weekly shadowing of staff patient rounds, she was unable to complete any staff shadowing in the final week of the project. She did, however, review the tool utilized for the evaluation, and found it to be an effective method to document the evaluation of staff and provide feedback.

Dissemination of results to staff and leadership to integrate the value of the process as part of the unit and hospital culture will take place after the end of the project. A PowerPoint presentation will describe the pilot, data collection, and results, including any significance of outcomes. The project leader will then work with nursing leadership and staff throughout the site hospital to implement this program hospital-wide. Feedback will be elicited on tent cards, patient education tools, and the rounding competency tool from unit leadership and staff to modify tools as needed. By encouraging ongoing feedback and input from nursing staff and leaders, both regarding the daily practice as well as how it is implemented, they will be able to actively engage in championing a process they have jointly engaged in, creating a collaborative effort and investment in hardwiring efforts toward a positive patient experience.

### **Clinical Implications/ Recommendations**

The purpose of this evidence-based quality improvement practice project was to pilot implementation of structured proactive nursing staff hourly rounding and effectively integrate it into current practice to improve patient satisfaction. Although there were no statistically significant changes able to be ascertained in patient satisfaction through the HCAHPS composite top box scores, clinically significant positive increases in patient satisfaction scores were noted. This finding was supported with the leader rounding data collected. Additionally, the use of change of shift huddles as a method for constructive feedback regarding proactive rounding to provide interchanges and support between unit staff and leaders regarding the process and any barriers appears to be an effective method of communication and expression. While constructive reinforcement of behaviors through positive feedback by leaders is an important aspect of performance evaluation in ensuring compliance, only limited assessment of utilization of the competency evaluation tool was performed during the study.

Further research should assess sustainability of proactive rounding and competency of the practice through a long-term study utilizing multiple units or multiple sites. Additional work toward developing standardized leader rounding tools that perform not only real-time assessments of the patient experience and patient satisfaction that can allow leaders to perform both staff recognition and service recovery, but to also allow a comparison to the HCAHPS survey results. Although HCAHPS top box scores are usually focused on, due to their utilization in reporting and reimbursement strategies, a study utilizing HCAHPS mean scores would allow more precise comparison where there are differences in N over time.

Communication, understanding, accountability, and engagement are core essentials that can be utilized in the development of processes that contribute to patient satisfaction, including proactive rounding. Process development, implementation, and evaluation should be shared actions involving both nursing staff and leaders. Providing information as to not only the “how” to perform a task or expectation and the “why” of it through education and support (*inform*), and the ability to provide input as to the practice, along with constructive feedback and demonstration of equal accountability and sharing of results of efforts, engages the staff (*involve*) in the process and increases the willingness to *integrate* the expectation into practice.

## References

- Blakley D., Kroth M., & Gregson, J. (2011). The impact of nurse rounding on patient satisfaction in a medical-surgical hospital unit. *Medsurg Nursing, 20*(6), 327-332
- Brosey, L. & March, K. (2015). Effectiveness of structured hourly nurse rounding on patient satisfaction and clinical outcomes. *Journal of Nurse Care Quality, 30*(2), 153-159.
- Culley, T. (2008). Reduce call light frequency with hourly rounds. *Nursing Management, 39*(3), 50-52.
- Davies, K. E. (2010). Hourly patient rounding. *Advance for Nurses*. Retrieved from <http://nursing.advanceweb.com/Continuing-Education/CE-Articles/Hourly-Patient-Rounding.aspx>
- Deitrick, L., Baker, K., Paxton, H., Flores, M., & Swavely, D. (2012). Hourly rounding: Challenges with implementation of an evidence-base process. *Journal of Nursing Quality, 27*(1), 13-19.
- Fabry, D. (2015). Hourly rounding: perspectives and perceptions of the frontline nursing staff. *Nursing Management, 23*(2), 200-210. DOI: 10.1111/jonm.12114
- Halm, M. A. (2009). Hourly rounds: What does the evidence indicate? *American Journal of Critical Care, 18*(6), 581-584.
- International Society for Performance Improvement (2013). *August 2007: I3 Change Implementation Model, Lance Dublin*. Retrieved from <http://community.ispi.org/blogs/ispi-staff/2013/06/27/august-2007-i3-change-implementation-model-lance-dublin>

- Kessler, B., Claude-Gutekunst, M., Donchez, A. M., Dries, R. F., & Snyder, M. M. (2012). The merry-go-round of patient rounding: assure your patients get the brass ring. *MedSurg Nursing, 21*(4), 240.
- Meade C. M., Bursell, A. L., & Ketelsen, L. (2006). Effects of nursing rounds: on patients' call light use, satisfaction, and safety. *American Journal of Nursing, 106*(9), 58-70.
- Mitchell, M. D., Lavenberg, J. G., Trotta, R. L., & Umscheid, C. A. (2014). Hourly rounding to improve nursing responsiveness: A systematic review. *JONA: The Journal of Nursing Administration, 44*(9), 462-472. doi:10.1097/NNA.000000000000101
- Olrich, T., Kalman, M. & Nigolian, C. (2012). Hourly rounding: A replication study. *MedSurg Nursing, 21*(1), 23.
- Press Ganey (2015). About: History & Mission. Retrieved from <http://www.pressganey.com/about/history-mission>
- Robert Wood Johnson Foundation (2008). How to hardwire change. Retrieved from <http://www.rwjf.org/en/library/research/2008/06/the-transforming-care-at-the bedside-tcab-toolkit/section-4-implementing-change/chapter-1-how-to-hardwire-change.html>
- Sheedy, S. (1989). Responding to patients: The unit hostess. *Journal of Nursing Administration, 19*(4), 31-33.
- Shepard, L. H. (2013). Stop going in circles! Break the barriers to hourly rounding. *Nursing Management, 44*(2), 13-15.
- Tea, C., Ellison, M., & Feghali, F. (2008). Proactive patient rounding to increase customer service and satisfaction on an orthopaedic unit. *Orthopaedic Nursing, 27*(4), 233-242.
- Toole, N., Melusky, T., & Hall, N. (2016). A systematic review: Barriers to hourly rounding. *Journal of Nursing Management, 24*, 283-290.

- Ulanimo, V. M., & Ligotti, N. (2011). Patient satisfaction and patient safety: Outcomes of purposeful rounding. *Topics in Patient Safety, 11*(4), 1,4.
- Weisgram, B. & Raymond, S. (2008). Using evidence-based nursing rounds to improve patient outcomes. *MedSurg Nursing, 17*(6), 429-430.
- Woodard, J.L. (2009). Effects of rounding on patient satisfaction and patient safety on a medical-surgical unit. *Clinical Nurse Specialist, 23*(4), 200-206.



Tables

	N, setting	design	baseline data collection	Rounds frequency	Patient satisfaction	comments
			Timespan of study or project		Call light use frequency	
					Patient falls	
Meade et al., 2006	14 hospitals, 27 units	Quasi-experimental	2 weeks	Rounds hourly 6a-10p & every 2 hours 10p-6a OR Rounds every 2 hours during entire 24-hour period;	Increased	Nonrandom assignment to experimental or control group; hospitals participated in group assignment; control collected reasons/frequency of call bell use; Studer Group paid for researcher expenses
			4 weeks		Decreased	
Culley, 2008	1 hospital, 3 units (surgical, medical, stepdown)	Quasi-experimental	3 months	Rounds hourly 6a-10p & every 2 hours 10p-6a	Increased	
			3 months		Decreased	
Blakley et al., 2011	1 hospital, 1 unit	QI study	1 quarter	Rounds every 2 hours around the clock	Increased	Staff satisfaction increased; rounding logs incomplete despite staff stating completing rounds; unit leader reminders to complete logs; education reinforced 2 weeks after implementation (no specifics regarding education discussed)
			2 quarters		Decreased	

Table 1. Table of evidence

	N, setting	design	baseline data collection	Rounds frequency	Patient satisfaction	Comments
			Timespan of study or project		Call light use frequency	
					Patient falls	
Weisgram & Raymond, 2008	1 hospital, 1 unit	QI study	Not reported	Rounds hourly 8a-10p & every 2 hours between 10p & 8a	Outcome measure but not reported	84-96% staff adherence to process. Overall initial reduction in call lights by 23%, but note of 1 RN compliance reduction resulting in immediate significant increase in call lights in 24-hour period, resulting in staff self-monitoring of process
			1 month		Decreased	
					Decreased	
Brosey & March, 2015	1 hospital, 1 unit	QI study	Several weeks	Rounds hourly between 6am & 10pm; every 2 hours from 10pm to 6am	increased	20 minute staff education sessions; fact sheet given to staff for reference; results discussed monthly at staff meetings and posted. Hospital acquired pressure ulcers decreased post implementation. Measure of staff compliance included completion of round and documentation on log. Staff believed consistently completing rounding process but not always remembering to document on log. Incorporating rounding process into normal workflow lessens perception rounding is additional task
			3 months			
					Decreased	

Table 1. Table of evidence, continued

	N, setting	design	baseline data collection	Rounds frequency	Patient satisfaction	Comments
			Timespan of study or project		Call light use frequency	
					Patient falls	
Tea et al., 2008	4 hospitals, 4 orthopedic units	QI Study	6 months	hourly	increased	5 point manager rounding check during leader rounds to ensure staff compliance: RNs sat with patient at beginning of shift and discussed needs and goals; staff rounding hourly; staff anticipating needs; after patient used call bell, help when wanted; staff asking anything else I can do for you, I have time-expectation of check is all always occur. Statistically significant improvement and/ or sustainment noted on all check measures; barriers addressed by role playing, daily verbal reminders, staff meeting emphasis, and reference cards to address need to change to anticipatory care and improve consistency with rounding.
			9 months			
Woodard, 2009	1 hospital, 1 medical/ surgical unit	QI study	1 quarter	every 2 hours by charge nurse addressing the 4 P's	increased	Results reported by quarter; Implementation date not reported.; used NRC Picker patient survey; Patient satisfaction based on survey question "would you recommend this hospital to family and friends"; significance of outcomes not reported
			3 quarters		decreased decreased	

Table 1. Table of evidence, continued

	N, setting	design	baseline data collection	Rounds frequency	Patient satisfaction	Comments
					Call light frequency	
					Patient falls	
Kessler et al. (2012)	1 hospital, 1 medical-surgical unit	Quasi-experimental	1 year	Hourly rounds 7am-11 pm; 2 hour rounds 12 midnight-6am	improved	Replication of Meade et al. (2006). One-year baseline data demonstrated patient satisfaction and patient falls data below internal and external benchmarks (not specified), staff satisfaction scores reflecting need for improvement in areas of teamwork and perceptions of workload, and also a desire to improve hospital-acquired pressure ulcers above current levels; staff met every 2 weeks to discuss what was going well & what needed to be changed; discussion during staff meetings; welcome letter for patients; complete rounding log; staff act as rounding champions on their unit and for other units
			5 year		Decreased	

Table 1. Table of evidence, continued

	N, setting	design	baseline data collection	Rounds frequency	Patient satisfaction	Comments
					Call light frequency	
					Patient falls	
Olrich et al. (2012)	1 hospital, 2 medical-surgical units	Quasi-experimental, replication	6 months	Control; Hourly rounds 6am-10 pm; 2 hour rounds 10pm-6am; environmental check only performed if patient sleeping	No improvement in patient satisfaction scores on surveys, however anecdotal improvement noted per nurse leader rounding	Utilized same process as Meade et al., 2006. Additionally, leadership rounding completed by managers & CNS three days/week on experimental unit to ensure rounding process completed by asking patients, reviewing logs, and reinforcing with staff. Expectations of rounding reinforced during leader rounds; Rounding discussed every staff meeting; 4 months after start, experimental unit staff attended 1-hour refresher course reinforcing rounding behaviors and providing staff feedback. Small sample size, non-randomized sample; lack of consistent leader support and reinforcement. Staff from other units who were not trained in hourly rounding were floated to the experimental unit during low census periods and did not perform rounding
			6 months		No effect	
					Decreased	

Table 1. Table of evidence, continued

	July 2016 top box %	July 2016 N	August 2016 top box %	August 2016 N	t test July/Aug 2016	February 2016 top box %	February 2016 N	t test Feb/ Aug 2016	August 2015 Top box %	August 2015 N	t test Aug 2015/ Aug 2016
Response of hospital staff	51.7	20	58.9	9	t(27)=0.360, p=.7217	59.7	33	t(40)=0.043, p=.9656	61.5	27	t(34)=0.138, p=.8907
Pain Management	71.8	11	60	5	t(14)=0.469, p=.6460	52	25	t(28)=0.327, p=.7459	53.3	15	t(18)=0.261, p=.7972
communication about medicines	70	10	64.3	7	t(15)=0.247, p=.8081	65.4	26	t(31)=0.054, p=.9571	58.3	20	t(25)=0.279, p=.7828
communication with nurses	87	26	74.1	9	t(33)=0.903, p=.3732	70.4	41	t(48)=0.222, p=.8255	70.7	33	t(40)=0.200, p=.8424
communication with doctors	76.6	26	59.3	9	t(33)=0.998, p=.3256	75.6	41	t(48)=0.994, p=.3254	68.7	33	t(40)=0.530, p=.5988
care transitions	49.8	25	28.7	9	t(32)=1.093, p=.2826	48.3	41	t(48)=1.071, p=.2896	44.4	32	t(39)=0.846, p=.4026
discharge information	84.6	26	68.8	8	t(32)=0.994, p=.3278	85.1	37	t(43)=1.093, p=.2805	90.6	32	t(38)=1.601, p=.1177
hospital environment	69.5	25	61.1	9	t(32)=0.461, p=.6482	63.4	41	t(48)=0.129, p=.8976	69.4	33	t(40)=0.472, p=.6397

Table 2. HCAHPS top box score domain T test for significance of score change

CAHPS	Aug 1 - Aug 6	Aug 7 - Aug 13	Aug 14 - Aug 20	Aug 21 - Aug 27	Aug 28 - Sep 3
	Top Box N=6	Top Box N=2	Top Box N=1	Top Box	Top Box
Comm w/ Nurses	61.1 ▲	83.3 ▲	100 ▲	-	-
Response of Hosp Staff	55.0 ▼	100 ▲	50.0 ▼	-	-
Comm w/ Doctors	55.6 ▲	66.7 ▲	83.3 ▲	-	-
Hospital Environment	75.0 ▲	50.0 ▼	75.0 ▲	-	-
Pain Management	40.0 ▲	-	100	-	-
Comm About Medicines	37.5 ▲	75.0 ▲	75.0	-	-
Discharge Information	80 ▲	25.0 ▼	100 ▲	-	-
Care Transitions	35.6 ▲	0.0 ▼	16.7 ▲	-	-

Table 3. HCAHPS Top box scores displayed by discharge date for project month

	Week 1 top box % (N=6)	Week 2 Top box % (N=2)	T test Week 1-2	Week 3 top box % (N=1)	T test Week 2-3	T test week 1-3
communication with nurses	61.1	83.3	t(6)=0.577, p=.5851	100	t(1)=0.433, p=.7396	t(5)=0.764, p=.4794
Response of hospital staff	55	100	t(6)=1.166, p=.2880	50	t(1)=1.095, p=.4710	t(5)=0.093, p=.9296
communication with doctors	55.6	66.7	t(6)=0.276, p=.7920	83.3	t(1)=0.303, p=.8129	t(5)=0.523, p=.6236
hospital environment	75	50	t(6)=0.661, p=.5334	75	t(1)=0.414, p=.7501	t(5)=0.000, p=1.0000
Pain Management	40	no scores	n/a	100	n/a	t(5)=1.111, p=.3169
communication about medicines	37.5	75	t(6)=0.920, p=.3929	75	t(1)=0.000, p=1.0000	t(5)=0.702, p=.5143
discharge information	80	25	t(6)=1.425, p=.2042	100	t(1)=1.225, p=.4359	t(5)=0.491, p=.6440
care transitions	35.6	0	n/a	16.7	n/a	t(5)=0.372, p=.7248

*Table 4.* HCAHPS Domain Top box scores T statistics by weekly interval for project month

	do you feel the staff are doing enough to control your pain	are nursing staff rounding on you every hour	do your caregivers explain what they are doing and why	are your caregivers listening to what you and your family have to say	are staff members assisting you in a timely manner when you request assistance	are you able to rest at night	do you have any questions about your discharge or the discharge process
before (N= 54)							
yes (N)	21	51	51	50	50	48	7
yes %	38.9	94.4	94.4	92.6	92.6	88.8	12.96
No N	4	0	0	0		3	47
No %	7.4					5.6	87.04
na/no response N	29	3	3	4	4	3	0
na/no response %	53.7	5.6	5.6	7.4	7.4	5.6	0
after N= 62							
yes N	38	61	58	58	59	56	15
Yes %	61.3	98.4	93.6	93.6	95.2	90.3	24.2
No N	5	1	4	2	1	4	47
No %	8.1	1.6	6.4	3.2	1.6	6.45	75.8
na/no response N	19	0	0	2	2	2	0
na/no response %	30.6			3.2	3.2	3	0
percentage change							
yes (%)	80.9524	19.6078	13.7255	16	18	16.667	86.7284
no (%_	25					33.3333	13.7408
na/no response (%)	34.4828d	100d	100d	50d	50d	33.3333d	0

Table 5. Leader rounding tool results and percentage change data (d=decrease)



	before y/n	after y/n	1 sample t test between percents			
			n54	(before y/n)	n63	(after y/n)
yes	38.9	61.3				
no	7.4	8.1	t(53)=3.838, p=.0003		t(61)=6.534, p=.0000	
na/no response	0	0				
yes	94.4	98.4				
no	0	1.6	t(53)=14.191, p=.0000		t(61)=30.373, p=.0000	
na/no response	5.6	0				
yes	94.4	93.6				
no	0	6.4	t(53)=14.191, p=.0000		t(61)=14.027, p=.0000	
na/no response	5.6	0				
yes	92.6	93.6				
no	0	3.2	t(53)=11.959, p=.0000		t(61)=18.331, p=.0000	
na/no response	7.4	3.2				
yes	92.6	95.2				
no	0	1.6	t(53)=11.959, p=.0000		t(61)=24.311, p=.0000	
na/no response	7.4	3.2				
yes	88.8	90.3				
no	5.6	6.45	t(53)=12.185, p=.0000		t(61)=12.840, p=.0000	
na/no response	5.6	3				
yes	12.96	24.2	t(53)=8.243, p=.0000		t(61)=4.743, p=.0000	
no	87.94	75.8				
na/no response	0	0				

Table 6. One Sample T-test between percents on leader rounding tool data

	before y/n	after y/n	T-statistics	
	N=54	N=62		
yes	38.9	61.3	t(114)=2.407, p=.0177	do you feel the staff are doing enough to control your pain
no	7.4	8.1		
na/no response	0	0		
yes	94.4	98.4	t(114)=1.175, p=.2423	are nursing staff rounding on you every hour
no	0	1.6		
na/no response	5.6	0		
yes	94.4	93.6	t(114)=0.181, p=.8570	do your caregivers explain what they are doing and why
no	0	6.4		
na/no response	5.6	0		
yes	92.6	93.6	t(114)=0.212, p=.8321	are your caregivers listening to what you and your family have to say
no	0	3.2		
na/no response	7.4	3.2		
yes	92.6	95.2	t(114)=0.588, p=.5579	are staff members assisting you in a timely manner when you request
no	0	1.6		
na/no response	7.4	3.2		
yes	88.8	90.3	t(114)=0.264, p=.7923	are you able to rest at night
no	5.6	6.45		
na/no response	5.6	3		
yes	12.96	24.2		do you have any questions about your discharge or the discharge process
no	87.94	75.8	t(114)=1.678, p=.0961	
na/no response	0	0		

Figure 7. 2-Sample T-test statistics between yes answers on Leader rounding tool

## Figures

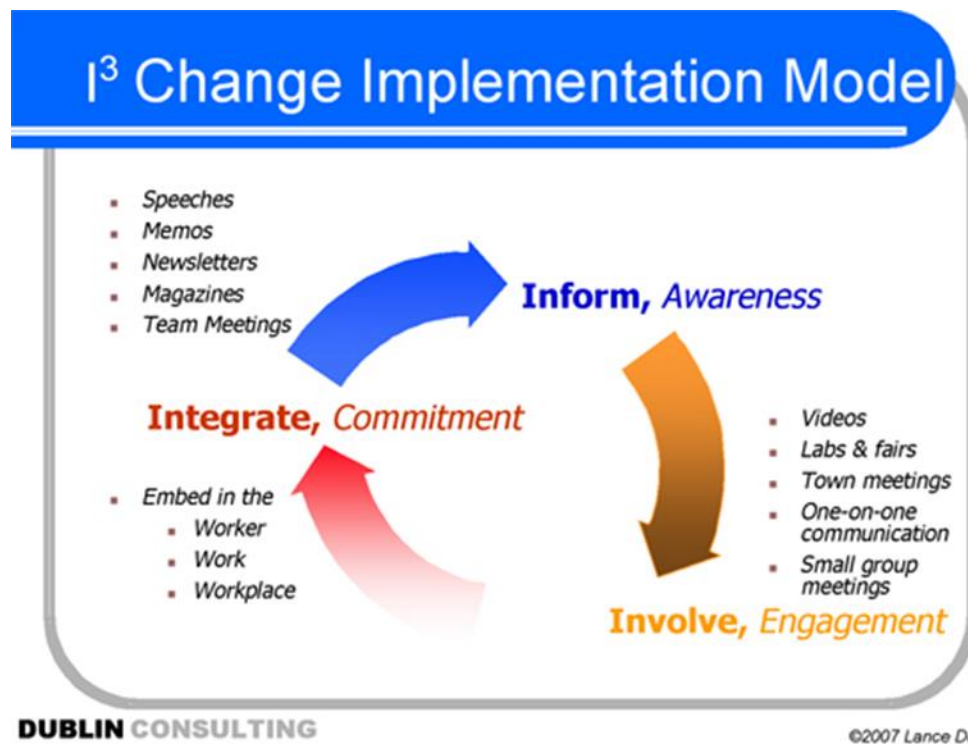


Figure 1. I<sup>3</sup> Change Implementation Model [used with permission of L. Dublin, 2016].

(International Society for Performance Improvement, 2013)

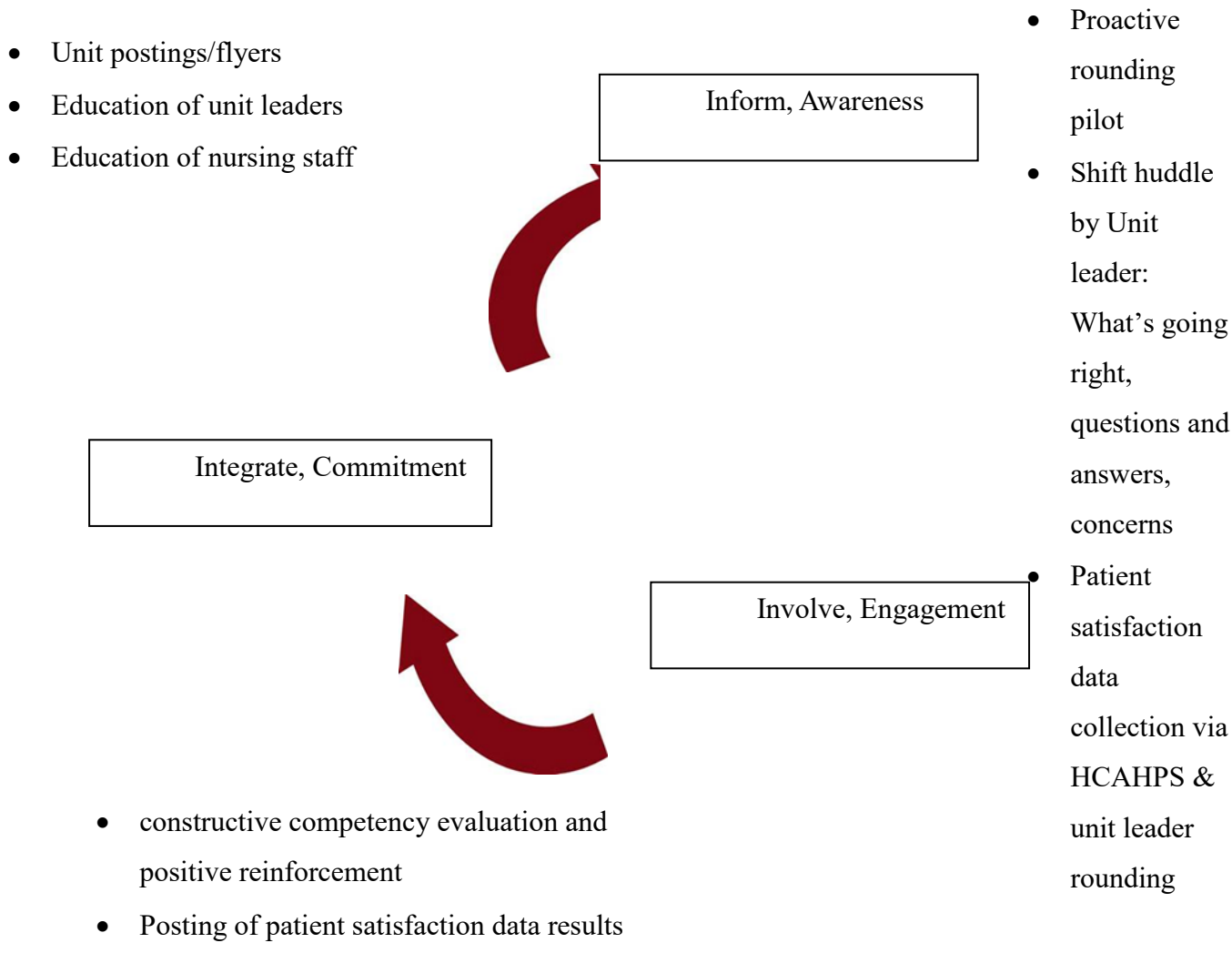


Figure 2. Project framework [Adapted from I3 Change Implementation Model with permission of L. Dublin, 2016]

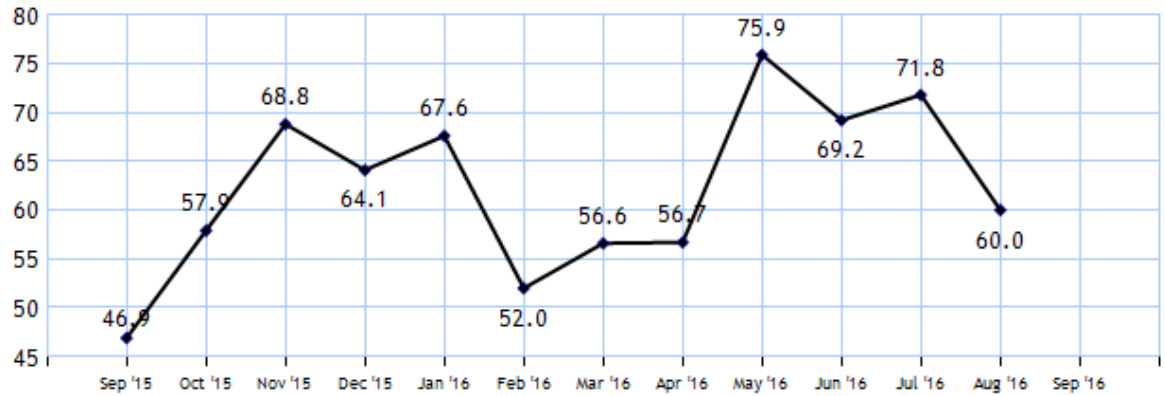


Figure 3. Pain management Top Box Trends

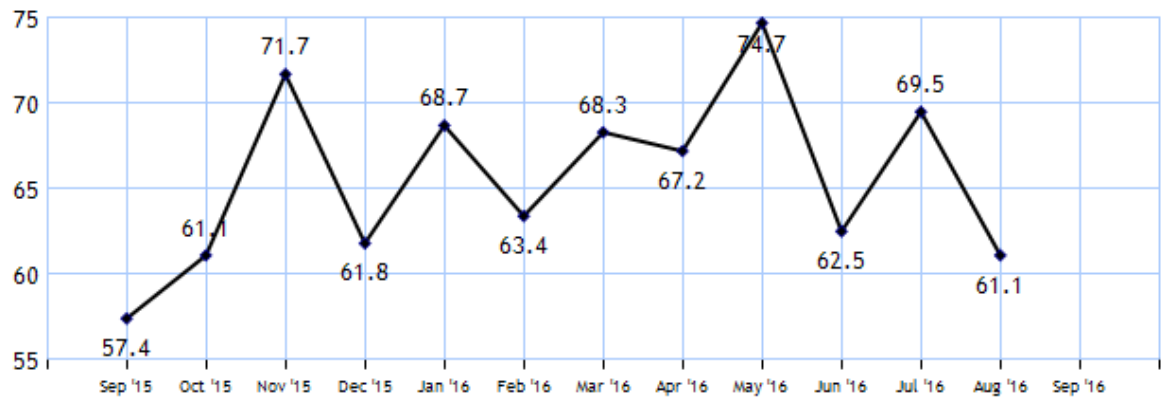


Figure 4. Hospital environment Top Box Trends

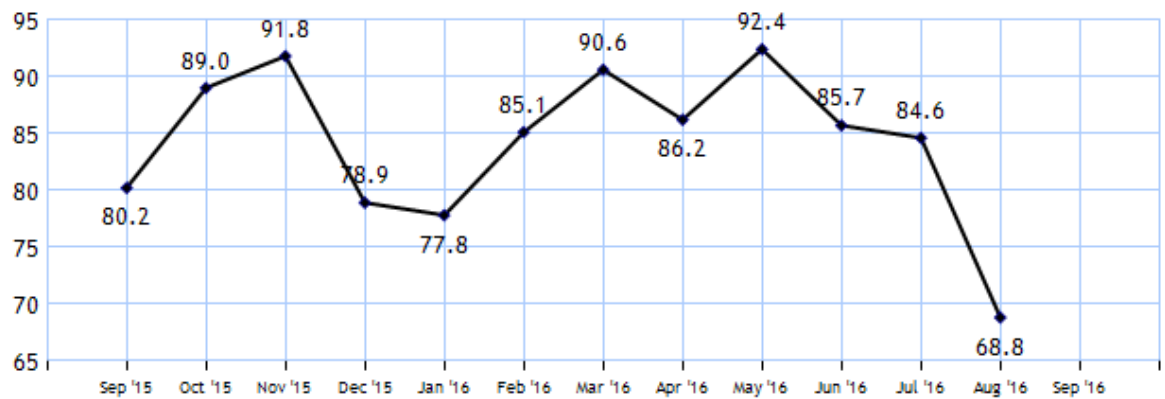


Figure 5. Discharge information Top Box Trends

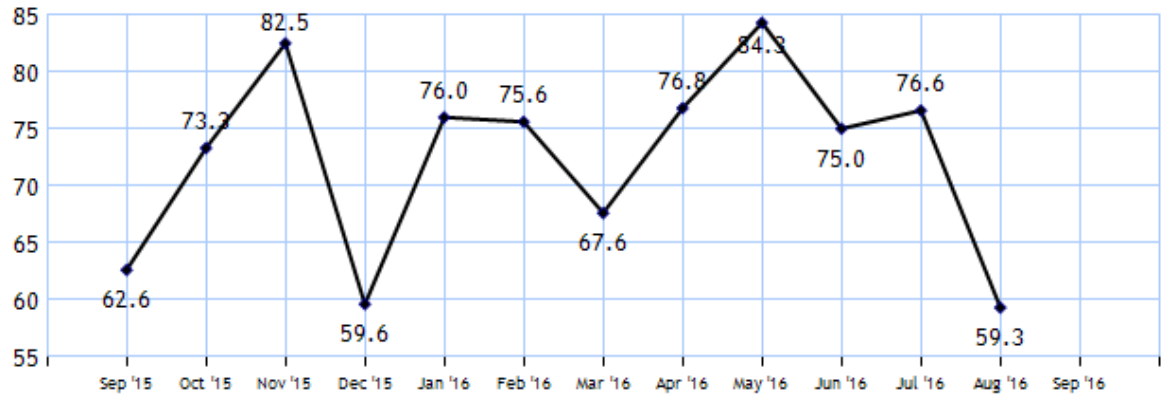


Figure 6. Communication with Doctors Top box trends

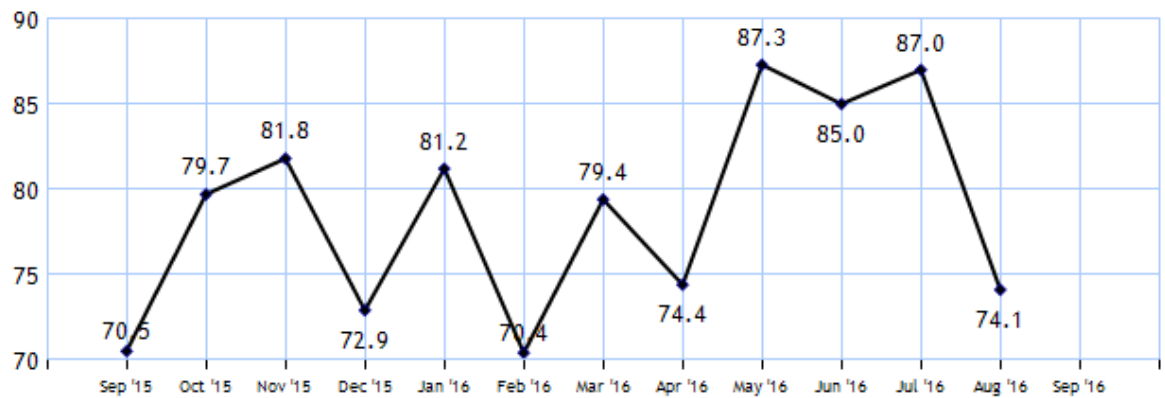


Figure 7. Communication with Nurses Top box trends

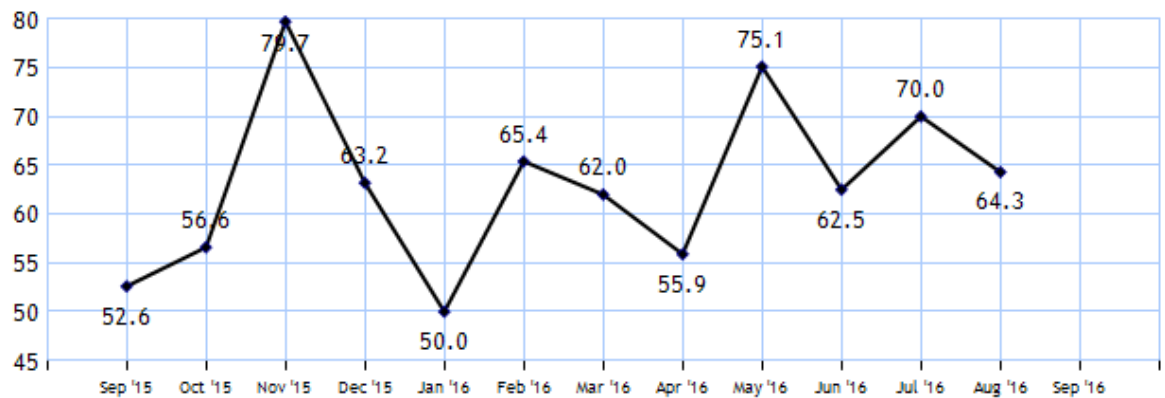


Figure 8. Communication about Medicines Top box trends

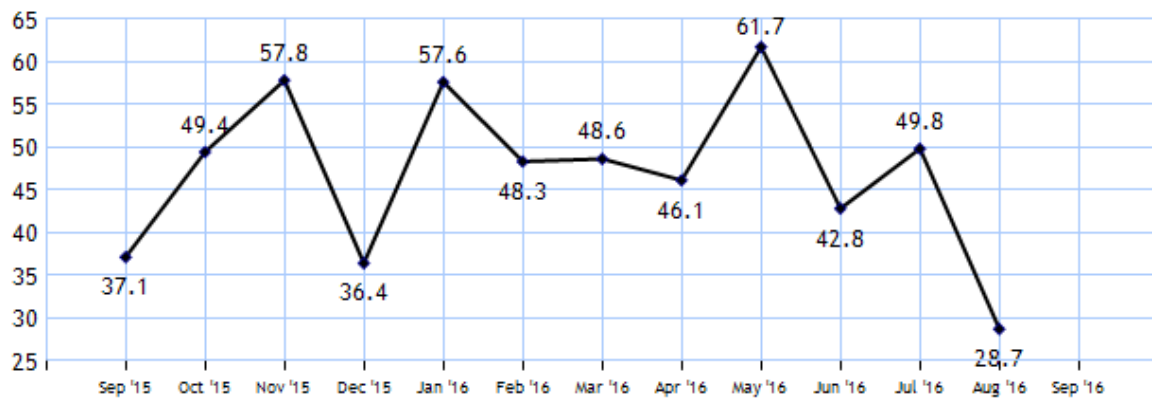


Figure 9. Care Transitions Top box trends

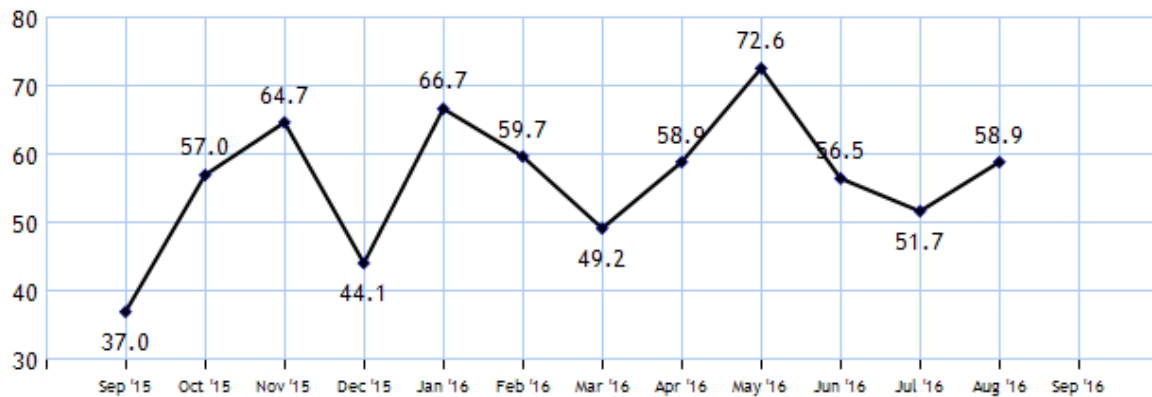


Figure 10. Response of hospital staff Top box trends

## Appendix A- Permission for Use of I3 Change Implementation Model

**Regina Salyer**

---

**From:** Lance Dublin <lancedublin@gmail.com>  
**Sent:** Tuesday, April 19, 2016 8:03 PM  
**To:** regina\_salyer@verizon.net  
**Subject:** Re: I3 change Implementation Model

**Importance:** High

Hi Regina,

Thank you for your email.

I am very pleased that you discovered my model and feel it can be a suitable framework for you project. So, yes, you have my permission to use it - and adapt it.

Since that article was published I further refined the model. I will look through my files to find other articles that may be helpful to you as well as Powerpoint presentations.

Also, I'd be happy to talk with you directly if you fee;l that would be useful.

My best,

Lance

\*\*\*\*\*

**DUBLIN CONSULTING**  
*Implementing Change, Revitalizing Learning, & Transforming Organizations*  
 415-759-1258 (in office) / 415-596-1175 (anywhere I am)  
 email: [lance@dublinconsulting.net](mailto:lance@dublinconsulting.net) / website: [www.dublinconsulting.net](http://www.dublinconsulting.net)  
 linkedIn: [www.linkedin.com/in/lancedublin](http://www.linkedin.com/in/lancedublin)  
 skype: lancedublin / twitter: lancedublin

On Apr 17, 2016, at 10:53 AM, Regina Salyer <[regina\\_salyer@verizon.net](mailto:regina_salyer@verizon.net)> wrote:

Dear Mr Dublin,

My name is Regina Salyer and I am a Doctor of Nursing Practice Candidate at Drexel University. I discovered your change model on the International Society for Performance Improvement website at <http://community.ispi.org/blogs/ispi-staff/2013/06/27/august-2007-i3-change-implementation-model-lance-dublin>

I am writing for permission to utilize your I3 change implementation model and graphic in my Doctoral project as the theoretical framework for my project, which involves reimplementation of nursing staff hourly rounding and its effect on patient satisfaction. I find your model to be a much more suitable framework for my project, than several other models, as it addresses the issue of sustainability when



**Appendix B- Flyer/ Email Announcement****Proactive rounding- The 5 Ps of Presence**

This unit \_\_\_\_\_ will be participating in a Nursing quality improvement pilot project beginning \_\_\_\_\_.

All unit nursing staff- RN's, aides, and cross-trained unit coordinators will be participating in one of the following thirty-minute education sessions:

\_(Dates and times)\_\_\_\_\_

Come learn how the P's are Key to Patient Safety,  
Satisfaction, and Outcomes

Come see how to make the P's part of your everyday

Any questions, please contact Regina Salyer @

rsalyer@mercyhealth.org

## **Appendix C- Introduction to Proactive Rounding Patient Admission Education**

Welcome!

We provide proactive rounding on our unit to ensure that you receive excellent care. We round every hour from 6am to 10pm, and every 2 hours from 10 pm to 6am. As rest is important, if you are sleeping during rounds, we will make every attempt not to awaken you, unless necessary for procedures or treatments. If at any time during your stay you have any questions or concerns, please call immediately so that we may address them.

### **Proactive Rounding-5Ps of Presence**

#### **Personal hygiene**

- Offer toileting- bathroom, bedpan, commode
- Check for incontinence

#### **Pain**

- Assess and treat

#### **Position**

- Reposition patient in bed, shift patient in chair
- Bed position

#### **Possessions**

- Call light
- Personal items-
  - sweater, blanket, cell phone, tray table, food, drink, ice water pitcher, tissues, straighten
- Pumps-
  - check IV or other pumps or equipment to ensure will not alarm before next round

#### **Procedures**

- Vital signs
- Medications
- Dressing changes, wound care
- Prep for tests, off unit procedures
- Patient and family education



## Appendix D- Education Handout

### Proactive Rounding- The 5Ps of Presence

Key-

- Introduce yourself, your role/experience
- \_\_\_here to provide excellent care and round on you
- During change of shift bedside report – Introduce and manage up oncoming shift

### Personal hygiene

- Offer toileting- bathroom, bedpan, commode
- Check for incontinence

### Pain

- Assess and treat

### Position

- Reposition patient in bed, shift patient in chair
- Bed position

### Possessions

- Call light
- Personal items-
  - sweater, blanket, cell phone, tray table, food, drink, ice water pitcher, tissues, straighten
- Pumps-
  - check IV or other pumps or equipment to ensure will not alarm before next round

### Procedures

- Vital signs
- Medications
- Dressing changes, wound care
- Prep for tests, off unit procedures
- Patient and family education

Key

- Is there anything else I can do for you before I leave?
- Myself or another member of our team will be here to round on you in about an hour (two hours on night shift)

If patient is asleep, do not awaken patient during round except if necessary for treatments/procedures

If patient is off unit, use tent card, note current time on card, and place on tray table

**Appendix E- Proactive Rounding “Sorry I Missed You” Tent Card**

**Proactive Rounding**

***Sorry I Missed You!***

We provide proactive rounding on our unit to ensure you receive excellent care

**If you need anything upon your return, please let us know**

Time \_\_\_\_\_

I will return in about an hour

## Appendix F- Proactive Rounding Nurse Pocket Card

### Key- Intro/ manage up

- Introduce yourself, your role/experience
- \_\_\_\_\_ here to provide excellent care and round on you
- During change of shift bedside report – Introduce and manage up oncoming shift

### Personal hygiene

- Offer toileting
- Check for incontinence

### Pain

- Assess and treat

### Position

- Reposition/shift patient in bed/ chair
- Bed position

### Possessions

- Call light
- Personal items
- Pumps

### Procedures

- Vital signs
- Medications
- Dressing changes, wound care
- Prep for tests, off unit procedures
- Patient and family education

### Key

- Is there anything else I can do for you before I leave?
- Myself or another member of our team will be here to round on you in about an/two hour(s)

## **Appendix G- Leadership Rounding Tool Questions and Data Points**

1. Do you feel the staff are doing enough to control your pain?
2. Are nursing staff checking on you every hour?
3. Do your caregivers explain what they are doing and why?
4. Are your caregivers listening to what you and your family have to say?
5. Are staff members assisting you in a timely manner when you request assistance?
6. Are you able to rest at night? If no, can you tell me why?
7. Do you have any questions or concerns about your discharge or the discharge process?
8. Whiteboard complete/up to date
9. Room Clean
10. IVs labeled
11. Call light within reach

All above questions and data points have a yes/no response with the possibility of additional comments.

## Appendix H- Proactive Rounding Competency Assessment Tool

Name: \_\_\_\_\_ Unit: \_\_\_\_\_ Date: \_\_\_\_\_

Direction: Colleague is to be assessed during direct observation of a proactive round on completion of the below steps. Constructive feedback and reinforcement of expectations by observer should follow.

Step	components	Demonstrates step effectively (yes/no, date, observer initials)	Constructive feedback and reinforcement provided (yes/no, date, observer initials)	Comments
Intro/ manage up	Introduces self, role/ experience			
	emphasizes here to provide excellent care and round on pt			
	During change of shift bedside report – Introduces and manage up oncoming shift			
Personal hygiene	Offers toileting			
	Checks for incontinence			
Pain	Assess and treat			
Position	Reposition/shift patient in bed/ chair			
	Checks bed position (height)			
Possessions	Call light in reach			
	Personal items addressed (ice, water, blanket, tissues, snacks etc)			
	Pumps checked			
Procedures	Performs any scheduled treatments, med administration, teaching, etc			
Closing round	Is there anything else I can do for you before I leave?			
	Myself or another member of our team will be here to round on you in about an/two hour(s)			

Colleague signature \_\_\_\_\_ Observer signature \_\_\_\_\_ Date observed \_\_\_\_\_



**Appendix I- Health System Institutional Review Board Approval**

Mercy Health System

**Institutional Review Board**

July 25, 2016

Regina Salyer, RN  
Linda Kaufman, MHS CNO  
Mercy Fitzgerald Hospital

Dear Regina and Linda:

This is written acknowledgement of the approval regarding your protocol, MHS #2016-17, entitled, "Proactive Patient Rounding and Effect on Patient Satisfaction".

The protocol was reviewed and approved by Dr. James Roberts, Chairman, Mercy Health System IRB. You may start your research immediately.

All members of the MCMC Institutional Review Board have also been sent the Lay Summary for their review.

An annual review of your study will be due on or before July 12, 2017.

Thank you for using the MCMC Institutional Review Board.

Sincerely,

Dianne Palomba  
MHS Institutional Review Board Administrator

Cc: James Roberts, MD

## Appendix J- Letter of Reliance



### IRB AUTHORIZATION AGREEMENT BETWEEN DREXEL UNIVERSITY AND MERCY HEALTH SYSTEM FOR THE PROTECTION OF HUMAN SUBJECTS

**Name and Address of Institution or Organization Providing IRB Review (Institution A):**

Mercy Health System  
1500 Lansdowne Avenue  
Darby, PA 19023-1291  
Federal Wide Assurance Number: 00002146  
IRB Registration Number:

**Name of Institution Relying on the Designated IRB (Institution B):**

Drexel University  
Human Research Protection  
1505 Race Street  
7<sup>th</sup> Floor, Bellet Building  
Philadelphia, PA 19102  
Federal Wide Assurance Number: 00005917

The Officials signing below agree that Institution B will rely on the designated IRB of Institution A for review and continuing oversight of its human subjects research described below.

This agreement is limited to the following specific protocol(s):

**Name of Research Protocol:** Proactive Patient Rounding and Effect on Patient Satisfaction

**Sponsor or Funding Agency:** \_\_\_\_\_ **Award Number, if any:** \_\_\_\_\_

**Name of Principal Investigator (Institution A):** Regina Salyer, MSN, RN (MHS# 2016-17)

**Name of Principal Investigator (Institution B):** Al Rundio, PhD, DNP, RN, APRN (#1607004721)

The protocol reviewed and approved by the IRB of Institution A will include a description of the research to be conducted at Institution B. Principal Investigators at both Institutions will maintain current copies the IRB approved protocol. Institution A will conduct this research in accord with the terms and conditions of its OHRP-approved Assurance and will provide relevant minutes of its IRB meetings to Institution B upon request. Institution B will conduct this research in accord with the terms and conditions of its OHRP-approved Assurance. Institution B remains responsible for ensuring compliance with the IRB's determinations and with the terms of its OHRP-approved Assurance. This agreement will be kept on file at both Institutions and will be available to OHRP upon request.

Recruitment/intervention location(s): Mercy Fitzgerald Hospital



This protocol will expire on July 12, 2017. A continuing review is required and must be approved by the IRB of record and a copy of the approval letter must be sent to the relying institution (Drexel University).

Authorizing Officials

Mercy Health System

*Clida Kaufman*  
Chief Nursing Officer  
Sr. Donna Watto, RSM  
VP of Mission Integration

Mercy Health System  
1500 Lansdowne Avenue  
Darby, PA 19023-1291  
610.237.3623 (phone)  
[dpalomba@mercyhealth.org](mailto:dpalomba@mercyhealth.org)

8-9-16  
Date

Drexel University

**John Medendorp**  
**M.S., B.S.N., R.N.**  
**CIP**

Digitally signed by John Medendorp  
M.S., B.S.N., R.N. CIP  
DN: cn=John Medendorp M.S., B.S.N.,  
R.N. CIP, o=Drexel University,  
ou=Human Research Protection,  
email=jcm29@drexel.edu, c=US  
Date: 2016.08.05 11:04:10 -0400'

Jack Medendorp, MS, BSN, CIP  
Executive Director, Human Research  
Protection  
Drexel University  
1505 Race Street  
7<sup>th</sup> Floor, Bellet Building  
Philadelphia, PA 19102  
215-762-3944 (phone)  
[jcm29@drexel.edu](mailto:jcm29@drexel.edu)

\_\_\_\_\_  
Date