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Hourly Rounding: The Effects on Fall Rates in Adult Population in Acute Care Setting

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<http://hdl.handle.net/10950/2599>

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Running head: HOURLY ROUNDING: THE EFFECTS ON FALL RATES

Hourly rounding: The effects on fall rates in adult population in acute care setting

A Paper Submitted in Partial Fulfillment of the Requirements

For NURS5382

In the School of Nursing

The University of Texas at Tyler

by

Sheyla J Pellicier Mercucci

April 19, 2020

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Acknowledgement

I would like to show my gratitude to those whom assistance guided me to accomplish my educational goals. Thank you, Dr. Barbara McAlister, for the motivational messages at the beginning of each week they became crucial to the continuation of my educational journey. Dr. Melinda Hermanns, thank you for always being available, for all the positive and encouraging messages, you were an essential part of my educational success. Mrs. Shawntay Harris MSN, MBA, MHA, RN, NE-BC, TCRN, CPEN, CEN, thank you for guiding me to become a better student and leader. A special thanks to my family; my husband Luis and my daughters Ariana, Christie and Liliana for being the moving engine within me. Thank you to my Angel in Heaven, my sister Yadira whom three and a half years ago lost her battle against cancer, she taught me that there is always a purpose for all my sacrifices and that failure is not an option. Lastly, I would like to thank GOD for helping me find the strength, faith to believe in myself and keep moving forward. Without HIM nothing is possible.

Executive Summary

Falls are one of fourteen categories of hospital-acquired conditions (HACs) listed by the Centers for Medicare and Medicaid Services (2020). Falls are costly and stressful for everyone involved; patients, families, nursing staff and physicians. According to the United States Department of Health and Human Services (2019), about seven hundred thousand to one million hospital admitted patients fall every year. The estimated cost of a fall is about fourteen thousand fifty-six dollars if an injury occurs and can extend patient's hospital length of stay (LOS) to up to 6.3 more days (Joint Commission Center for Transforming Healthcare, 2019).

When a patient falls there is a sense of anxiety and fear related to the event that can lead to lack of activity and independence, mistrust and loss of strength. Most of the patients who fall are elderly, suffering from dementia, experiencing acute delirium, weakness, or are under the effects of prescribed psychoactive agents (United States Department of Health and Human Service, 2019). Healthcare providers must develop a plan of action to tackle the problem before it occurs. A fall is defined as unexpected drop to the floor with or without injury (United States Department of Health and Human Services, 2019). Falls are serious hospital acquired conditions and can lead to serious injuries or patient's death.

Within the past two years there has been an increase of fall rates in the acute care units at a large Level I Trauma Center in Central Texas which have left nursing administrators and unit leaders searching for ways to reduce these events. A pilot project is needed to answer the following PICOT question: In adult population in acute care settings (P) how does hourly rounding (I) compared to not rounding (C) affect the incidence of falls (O) over a thirty-day period (T)? The pilot project goal is to decrease fall rates by fifty percent at the end of a thirty-day period.

Hourly rounding: The effects on fall rates in adult population in acute care setting.

Project Rationale

To decrease fall rates in the adult population in the acute care setting at a large level I trauma center in Central Texas it is crucial to develop an intervention that will consistently address patient needs. The World Health Organization (WHO) estimation of patients dying from non-intentional falls or accidental falls throughout the world is four hundred twenty-four thousand individuals and about 37 million will require medical treatment (Avanecean, Calliste, Contreras, Lim, & Fitzpatrick, 2017). With significant numbers like this something must be done to ensure patient fall rates are reduced. Decreasing fall rates must be the focus of the multidisciplinary team. Preventing falls must be a priority because there is an increase of unfavorable economic and social effects of falls on patients, family members, providers and healthcare organizations and many falls may result in exacerbation of patient's existing conditions (Avanecean et al., 2019). It is imperative to develop a strategic plan for the reduction or eradication of this preventable events. By working together healthcare providers will be able to address patient's needs during hourly rounding and reduce fall rates in the acute care settings. Within the last years there has been an increase in fall events, many of them resulting in injury. In the month of November two thousand and twenty there were twenty-eight fall events within the eleven acute care units, two of them resulting in serious injuries to the patient. Despite a myriad of fall prevention measures, these preventable events continue to occur. The main focus of this project is to implement hourly rounding to prevent falls in the adult population in the acute care settings.

Project Goals

Avoiding injury, decreasing fall rates, increasing patient satisfaction scores and creating,

promoting and maintaining a culture of zero harm and safety are the goals of this benchmark study. Patient-centered care must be a priority for all. According to Grillo, Firth & Hatchel (2019), there is a link between increase fall rates and decrease patient and staff satisfaction. Beginning on July eight two thousand eighteen, falls were included as one of the ten categories for HACs limiting hospital reimbursements for preventable condition which added a burden to an already constricted healthcare system (Center for Medicare and Medicaid Services, 2020). A culture of zero harm and vigilant staff must be the focus of every member of the multidisciplinary team.

Over the last two years fall rates have been steadily increasing in the acute care areas despite a plethora of fall prevention interventions such as: yellow socks, bed and chair alarms, placing patients closer to the nurse's stations and bedside report. Hourly rounding with a focus on patient-centered care and addressing the five p's: pain, position, potty, periphery and pump will be implemented. The cost of lethal and non-lethal falls in the year 2015 was estimated to be around fifty billion dollars (Florence et al., 2019). In reference to the aforementioned project the main goal is to decrease fall rates in the adult population in the acute care settings.

Literature Review

During a period of two years a careful review of the literature was conducted. Twelve of the eighteen articles reviewed demonstrated a correlation between hourly rounding and a decrease in fall rates. There was also a strong correlation in leadership involvement with the successful of the hourly rounding intervention. Patient satisfaction was also positively affected by the implementation of hourly rounding. Overall, the implementation of hourly rounding contributed to a decrease in fall rates.

In Tucker, Bieber, Attlesey-Pries, Olson, & Dierkhising (2012), two twenty-nine bed post-operative orthopedic units of a large academic Medical Center in the Midwest of the United States (US) were utilized to implement Structured Nursing Rounds Interventions (SNRI). These hourly rounds focused on addressing patient's needs such as; positioning and comfort, toileting, call lights, environmental check and time frame expectations for next round (Tucker et al., 2012). Results showed that falls decreased from fourteen at baseline to six falls during the implementation phase and an increase to nine falls a year post implementation. Falls were measures during a three-month period.

As evidenced by Olrich, Kalman, and Nigolian (2012) there was a twenty-three percent fall reduction after a patient-centered hourly rounding was implemented in two medical-surgical units at a five hundred and six beds teaching hospital of the Northeast of the United States (US). Hourly round was conducted every hour during day shift and every two hours during night shift, during these rounds, nurses addressed pain, toileting, positioning and environment. Fall rate decreased from 3.71 to 2.6 falls per one thousand patient days. Not statistically but clinically significant.

Mitchell, Lavenberg, Trotta & Umscheid (2014) describes the need of a multidisciplinary team for the success of hourly rounding. There was a correlation between hourly rounding, fall rates reduction and patient satisfaction scores among the studies. Mitchell et al. (2014) emphasized the need of leadership and administrators' collaboration to develop a plan of action for excellent patient-centered care without constricting nursing staff.

A patient-centered initiative to assess patient needs during hourly rounds was implemented on two medical-surgical units at Christiana Care Health System in Wilmington, Delaware. The patient-centered approach intervention was carried out during a thirty-day period

(Goldsack, Bergey, Mascioli & Cunningham, 2015). The pilot unit where leadership, frontline staff and unit champions were involved during planification phase showed a significant reduction in fall rates, from 3.9 falls to 1.3 falls per one thousand patient days, whereas the control unit where there was not leadership involvement the reduction on fall rates was only 2.6 to 2.5 from baseline to implementation phase.

According to Hicks (2015) there is a correlation between decreasing patient falls and increasing patient satisfaction scores. Among fourteen studies used to study the correlation between hourly rounding, patient satisfaction scores and decrease in fall rates, twelve showed significant reduction in fall rates per one thousand patient days. Leadership engagement is crucial for the success of hourly rounding.

Although the facility in Brosey and March (2015) have implemented hourly rounding in the past, there was not sufficient accountability and structure among nursing staff. Because of the lack of consistency, it was decided that an hourly nurse rounding quality improvement project was going to be implemented in a twenty-four-bed medical-surgical unit during a period of three months. After the completion of the study results showed a significant reduction from 7.02 to 3.18 fall rate per one thousand patient days.

A nursing led quality improvement project was implemented at a seventy-five-bed neuroscience unit consisting of nursing intentional rounds (IR) to decrease falls. According to Morgan et al. (2017) during the eight-month implementation phase there was a fifty percent fall rates reduction and falls continued to decrease during the post implementation phase.

Purposeful hourly rounding was implemented in a one hundred and twelve bed medical-surgical unit of a large inner-city hospital in the southwest part of the US. Grillo, Firth & Hatchel (2019) described how hourly rounding was added to existing fall precaution measures

resulting in a decrease from 5.31 to 2.58 falls rate per one thousand patient days. Although not statistically significant these findings are clinically significant.

According to Ryan, Jackson, Woods & Usher (2019) there was a correlation between hourly rounding and fall rates reduction. Seven articles focusing on hourly rounding demonstrated fall rate reduction rates per one thousand patient days in units where hourly rounding was implemented. There was also a correlation between hourly rounding and patient satisfaction scores. Education was provided to nursing staff prior to each project phase.

As stated by Christiansen et al. (2018) systematic review, six articles demonstrated a reduction of fall rates after the implementation of intentional hourly rounding. The recommendations in this systematic review were the implementation of intentional hourly rounding with a well-developed evaluation process for identification of the impact intentional rounding has in fall rates.

As evidenced by Hutchings (2013) literature review demonstrate a reduction in fall rates in seven out of nine studies focusing on these events. Furthermore, the evidence showed that leadership involvement is necessary for the success of the intervention.

Nuckols et al. (2017) evaluated the effectiveness of hourly rounding fall prevention intervention at two hospitals. At the end of the study they concluded that the decrease in fall rates after implementation of hourly rounding at one of the hospitals and the time nurses utilize implementing hourly rounding and decreasing falls can lead to decrease cost or savings.

Project Stakeholders

While planning, developing, implementing and disseminating a change project it is imperative to understand who the stakeholders are and seek their support. Among the key stakeholders are the executive leadership: Chief Nursing Officer (CNO), Vice-presidents of acute

and critical care services, Chief Medical Officer (CMO). Active stakeholders in the project design, implementation and dissemination are: nursing professional development department, research council, director of eight north and STC five, nurse managers, unit supervisors, registered nurses (RNs), unit champions, licensed vocational nurses (LVNs), health unit secretaries (HUCs), patient care technicians (PCTs), physician, dietitians, pharmacist, case managers, physical therapists, respiratory therapist, patients and their families. As with any other facility initiative the buy-in from the executive leadership is crucial to be able to implement and disseminate a new intervention, policy or guideline. It is paramount that stakeholders are provided with the opportunity to review and understand the results of the project implementation (Melnyk & Fineout-Overholt, 2015). There must be an accord of all stakeholders for the success of the hourly rounding implementation and subsequent reduction of fall rates. According to Hicks (2015) and Hutchings (2013) leadership engagement in the implementation of a new project is crucial for its success. Unit nurse supervisor, RNs, LVNs, HUCs, PCTs and other ancillary teams will provide hourly rounding in the units. Clinical coaches, nursing professional development department and the research council will support and address the staff educational needs. Patients and families will be educated on the planning and implementation of hourly rounding intervention for the prevention of falls.

Proposed Outcomes

Patient safety and injury prevention is at the center of every healthcare organization, provider, families and everyone involve in patient care. Falls are costly preventable events and challenging to all in every healthcare setting, especially acute care. Falls are the major cause of injury and death caused by injury among adults sixty-five years or older (Center for Disease Control and Prevention (2019). The proposed outcomes for the implementation of hourly

rounding are: multidisciplinary approach to reduce fall rates, fall rate reduction by fifty percent within the first thirty days of implementation, leadership engagement and follow up, increase patient satisfaction scores by fifty percent, increase staff engagement and accountability by ninety percent, increase hospital reimbursements, dissemination of the project to all eleven acute care units, decrease fall rate by seventy five percent within three months post project implementation. As evidenced by Morgan et al. (2017) falls rates was reduced by fifty percent within the eight-month project implementation period continue to decrease post implementation. It is imperative to focus on patient safety, zero harm culture and multidisciplinary team approach to accomplish the proposed outcomes.

Plan for Implementation

A pilot project will be implemented at a large Level One Trauma Center/ Teaching Hospital in Central Texas which serves multiple communities, including the military community of Fort Hood. Within the facility there are eleven acute care units with capacity for three hundred and ninety-nine patients. As the level of acuity continues to increase, so are the fall events among adult patient population in the acute care settings. Nursing leaders with the collaboration of the nursing professional development (NPD) and Quality departments have implemented a myriad of fall prevention protocols and guidelines such as: use of chair and bed alarms, signs with the amount of assistance needed for every patient, fall prevention education for patients and families, acknowledgement form stating how to call for help and all the devices utilized to prevent falls and post fall huddles just to mention some of them. Furthermore, there are strict policies to prevent these events. Despite all the efforts, fall rates continue to increase, many times resulting in injury and longer LOS for hospitalized adult patients. There is a shared

concern between healthcare providers, patients, families, executive leaders and nurses to prevent falls among the hospitalized adult patient population.

After carefully studying the evidence, the author had decided to implement a quality improvement project at the facility, implementing hourly rounding with a multidisciplinary approach. Hourly rounding was implemented at the facility in the year twenty sixteen and although at the beginning of the implementation it was regularly done, nursing staff have drifted away from the process. For hourly rounding to be successful there must be collaboration between healthcare providers, leadership, nursing and ancillary staff. “Everyone for the prevention of falls” must be the hospital’s aphorism. Decreasing LOS is crucial for facilities to receive reimbursement from the Center for Medicare and Medicaid Services (CMS). Falls have been classified as one of fourteen hospital acquired conditions listed by CMS and can result on lesser or no reimbursement for treatment received after a fall event (Center for Medicare and Medicaid Services, 2020). After an extended study of evidence, in which hourly rounding was implemented there was a decrease on fall rates among all twelve articles selected. A plan has been developed to carry out the process. The purpose of this quality improvement project is to determine if hourly rounding with a multidisciplinary approach will affect fall rates among adult patient population in the acute care setting.

Timetable/Flowchart

The plan for implementation consists of thorough review of evidence throughout four semesters of Graduate nursing school, from August two thousand eighteen through January two thousand and twenty. On September two thousand eighteen hourly rounding as an intervention to decrease fall rates was chosen. A meeting with senior executive leaders was conducted on February fifteen of two thousand and twenty which culminated with the Director of STC5 and

8N approval for the project for implementation. The chosen units are similar in the number of beds (thirty-eight on 8N and thirty-six on STC5) as well as the acuity of patients. STC5 serve the homeless, self-paid patient population suffering from multiple comorbidities and 8 North served the oncology, sickle cell and obstetric patient population. The staff in STC5 will be provided with one hour of hourly rounding education for a period of four days, including weekends and night shift. 8N staff will not receive education. One month prior to implementation a search of internal data within the EPIC chart system and Quality Management MIDAS report system will be conducted to identify high fall risk patients and to determine the amount of fall events in prior months on both units. After identifying high fall risk patients, hourly rounding intervention will be implemented for a period of thirty days in STC5.

The scheduled hourly rounds include a multidisciplinary approach including charge nurses (CN), unit supervisor (US), hospital unit clerk (HUC), patient care technician (PCT), respiratory therapist (RT), physical therapist (PT), case managers and physicians (MD) when appropriate. A sign on sheet will be placed in all patient's rooms next to white boards which have to be initial by the assigned member of the team every time a round is complete. To ensure the accuracy of the initials a different marker or color will be used every day. Rounds will be conducted hourly between six in the morning to ten at night and every two hours during the night shift from ten at night to six in the morning and all patient's needs must be addressed including the five p's: pain, potty, position, periphery and pump. After the thirty-day implementation phase period, inpatient fall data will be collected from the two units. Hourly rounding intervention will also be analyzed for accuracy and reliability. Statistical analysis will be conducted. Hourly rounding implementation and fall rates comparison results will be reported to the Director of both units. Fall rates and compliance with hourly rounding will continue to be analyzed at one

month and six-month post project implementation. Please refer to Appendix B flowchart. The pilot project was scheduled for implementation on March fifteen two thousand and twenty but amid the COVID 19 pandemic was cancelled and a benchmark project has to be developed. The pilot project will be implemented after the national emergency ends, tentative day for implementation is October first two thousand and twenty. Everyone involved with the planification phase is excited and anxious to implement an intervention that will reduce fall rates and will promote a culture of Zero Harm across acute care units.

Data Collection Methods

External data collection has been performed during a period of two years through the review of a myriad of studies that demonstrated the positive effect of hourly rounding on fall rates in acute care settings. Some of the studies were more reliable than others, weakness and strengths of each study were assessed and taken into considerations. Statistics report from government agencies were also collected. Internal data collection was obtained from the MIDAS report system and EPIC charting system and will be reassess a month prior to the implementation of the project, thirty days and six months post implementation. The nursing professional development and council research have been crucial for obtaining pertinent information and education and will continue to be an asset to all parts involved in the planning, implementation and dissemination of the hourly rounding intervention pilot project.

Evaluation Method

Data will be extracted from the hourly rounding forms placed in patient rooms, EPIC charting system and the Quality Management MIDAS report system for the amount of fall events within the 30-day pilot study period. A comparison between pre and post implementation will be conducted to determine the effects of hourly rounding on inpatient fall rates. Fall rates pre,

during and post implementation will be measured as number of falls per one thousand patient days. As stated by the Agency for Healthcare Research and Quality (2013) there is a relationship between fall and fall with injury rates and how well nursing interventions are ensuring patient safety. Data will also be compared to the National Database of Nursing Quality Indicators (NDNQI) benchmark which according to Burns et al., (2020) is used by healthcare institutions in the United States to report inpatient falls. A survey will be sent to staff assessing the level of compliance and challenges encountered during hourly rounding implementation.

Cost and benefits

The cost for this project relates to the utilization of human resources and supplies. To educate the staff two nurse educators will be needed for a period of four hours per shift. The nurse educator will educate the staff during one hour during huddles (four huddles per shift) for four days, including nights and weekends which is a total sixty-four hours. The nurse educator's average salary is fifty dollars per hour totaling three thousand two hundred dollars. Two clinical coaches will be needed to support staff educational needs during the first week of implementation. Clinical coaches' average salary is thirty dollars per hour for one week working eight-hour shifts, cost amounts to three thousand three hundred and sixty dollars. Office supplies including papers, color markers and pens is one hundred dollars. The total estimated cost for the pilot project implementation is approximately six thousand six hundred and sixty dollars.

The estimated cost for a fall is about two thousand dollars and for falls with injury is about fourteen thousand dollars (Joint Commission Center for Transforming Healthcare, 2019). After a careful review of external evidence hourly rounding demonstrated a positive effect reducing fall rates within the adult population in acute care settings. In the month of November two thousand and twenty, there were twenty-eight falls (two of them with injury) reported across

the hospital's eleven acute care units. With an investment of six thousand five hundred and sixty dollars, falls can be prevented and fall rates will decrease. The estimated cost of twenty-eight falls including two with injuries based on the Joint Commission's statistics, twenty-six of those falls cost the facility about fifty-two thousand dollars and the falls with injuries cost about twenty-eight thousand dollars for a total of eighty thousand dollars in one month alone. Benefits of hourly rounding to decrease fall rates ought weights the cost of the pilot project implementation.

Conclusion and Recommendations

Patient safety must be a priority for every healthcare provider, nursing and hospital administrator, ancillary staff, families and patient's themselves. Falls are costly and can add anxiety, fear, mistrust, economic and social burden, and complications to patient's existing conditions (Avanecean et al., 2019). To obtain a culture of zero harm and safety at a Major Level I Trauma Center in Central Texas a multidisciplinary approach to hourly rounding must be promoted. Patient-centered care must be a priority for all. More need to be done to ensure the safety of the patient, everyone must be engaged and committed to take on initiatives for improvement to reach Zero Harm Areas in the acute care units and throughout the hospital. Promoting, motivating and engaging all members of the team for the implementation of hourly rounding to decrease fall rates must be a priority for all.

The recommendations are: to engage frontline staff as well as senior leadership, promote transparency and accountability, promote safety and a culture of Zero Harm and continue to work towards the implementation of hourly rounding across the continuum of care to decrease fall rates, patient injuries, patient dissatisfaction and increase safety and hospital reimbursements.

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Appendix A

Synthesis and outcomes table with recommendations

Studies	Design	Sample	Intervention	Outcomes
A	Quasi-experimental	<i>N</i> = 2 medical-surgical units	Hourly round	FR ↓ by 23 %
B	Integrative Literature Review	<i>N</i> = 14 studies Mixed qualitative and quantitative studies	Rounding	FR ↓ in 10 of the studies reviewed
C	Pilot implementation project	<i>N</i> = 2 medical-surgical units	Patient-centered proactive hourly rounding	FR ↓ in the unit were leadership, unit champions, and education programs were available
D	Descriptive and repeated measure design	<i>N</i> = 2-29 bed postoperative orthopedic units	SNRI	FR ↓ during IP then ↑
E	Systematic Review and GRADE analysis	<i>N</i> = 16 articles meeting inclusion criteria Non- RCTs articles, 15 pre-post design studies.	Hourly rounding	Fall ↓ from 24% to 80 % with a median reduction of 57% in 9 studies measuring falls.
F	Quality improvement project	<i>N</i> = 1 medical-surgical unit	Hourly rounding	Falls rates ↓ (11 incidence of fall reduction saved the facility \$46,563)
G	Integrative literature review	<i>N</i> = 18 articles	Hourly rounding	Fall rate ↓
H	Nursing led improvement project	<i>N</i> = 1 medical surgical pilot unit and 4 control units	Intentional rounding (hourly)	Fall rate ↓ by 50%
I	Quality improvement project	<i>N</i> = 112 bed including 26 bed section with a 24 hour camera observation	Purposeful hourly rounding	The fall rate ↓ from 5.3 to 2.58 fall rate per 1000 patient days below the national average
J	Qualitative improvement project and literature review	<i>N</i> = medical surgical wards	Intentional hourly rounding	↓ in fall rates in research studies

K	Quality improvement project	N = all patients and nurses in 14 units (step down and med-surg)	Hourly rounding	Santa Monica Hospital – Fall rate ↓ from 4.13 to 1.95 per 1000 patient days San Francisco Hospital – Fall rate 2.54 to 2.10 (not a significant ↓)
L	Systematic Mixed method review	N= 21 studies	Intentional rounding (hourly)	11 studies demonstrated ↓ on fall rates after implementation of intervention

Legend:

A – Olrich, Kalman, & Nigolian (2012); **B** – Hicks (2015); **C** – Goldsack, Bergey, Mascioli, & Cunningham (2015); **D** – Tucker, Bieber, Attlesey-Pries, Olson, & Dierkhising (2012); **E** – Mitchell, Lavenberg, Trotta, & Umscheid (2014); **F** -Brosey & March (2015), **G**- Ryan, Jackson, Woods & Usher (2019), **H** – Morgan et al. (2017), **I** – Grillo, Firth, & Hatchell (2019), **J** – Hutchings, Ward, & Bloodworth (2013), **K** – Nuckuls et al. (2017) and **L** - Christiansen et al. (2017)

↑ - increase, ↓ - decrease, IP – implementation phase, HR – hourly rounding, FR – fall rates, SNRI – structured nursing rounds interventions

Recommendations:

1. To be successful in the implementation of hourly rounding and decreasing patient falls rates, it is imperative to have leadership engagement and training available for front-line staff.
2. The designation of unit champions it is an important tool to help and engage front-line staff in each unit.
3. Education regarding the correlation between falls rates and the negative effects on patient satisfaction scores, reimbursement, and overall financial burden to the healthcare facilities should be initiated. This education will make front-line staff aware of the importance of hourly rounding to decrease fall rates and negative patient outcomes.
4. The implementation of a multidisciplinary team is also important; hourly rounding should be an important task for everyone involved with patient care. “All hands onboard” is imperative to prevent falls and complications related to subsequent injuries.

Appendix B

Facility: 646 – bed Level I Trauma Center/Teaching Hospital in Central Texas



Appendix C

Hourly Rounding Pilot Project Cost

	Item amount	Single item cost	Total cost
Nurse educators	64 hours	\$50	\$3,200
Clinical coaches	112 hours	\$30	\$3,360
Paper	10	\$5	\$50
Color pen	5	\$5	\$25
Color markers	5	\$5	\$25
Total investment cost	N/A	N/A	\$6,660
Falls without injury November 2019	26	\$2000	\$52,000
Falls with injury November 2019	2	\$14,000	\$28,000
Total cost for falls events in November 2019	N/A	N/A	\$80,000
Total savings after investment of project implementation if falls decreased be 50% after 30 days implementation	N/A	N/A	\$33,340

Appendix D

STC5 - Daily Hourly Rounding Sign Off Sheet

Dates: _____ Room number: _____

***Please initial before leaving the patient's room**

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0600							
0700							
0800							
0900							
1000							
1100							
1200							
1300							
1400							
1500							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2400							
0200							
0400							
0600							