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# Hourly Rounding to Reduce Patient Falls - A Quality Improvement Project

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# Hourly Rounding Process to Reduce Patient Falls – A Quality Improvement Project

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By

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**Contents**

## Executive Summary

Patient safety is a cornerstone for providing excellent healthcare. A fall will result in increased cost for the patient as well as the facility due to increased hospital stay and treatments. Most falls that occur within acute care settings are preventable and fall prevention is the key to reducing falls that will result in injuries and increased expenses. “For adult patients in the hospital (P) how does hourly rounding (I) compared to no hourly rounding (C), affect incidence of falls (O) during the patient’s stay? This PICOT question was formulated to attain evidence through scholarly literature research that proves that purposeful hourly rounding can help reduce inpatient falls. Hourly rounding is a process already utilized on most acute care units. My project involves using the PDSA method to implement a revised hourly rounding process with aim to decrease the fall rate. Costs associated with this improvement project are minimal but the benefits of reducing injury and costs associated with a fall, are vast. This project involves educating staff on the revised rounding process, implementing the new process over a three-month time, and comparing fall data from three months prior to the project’s implementation to data from the three-month implementation time period to evaluate the effect that purposeful hourly rounding can have on fall reduction. Fall rate comparisons, video monitoring, chart audits, and patient surveys will prove that the new rounding protocol has been implemented and provide evidence of the benefits that rounding can have on patient safety.

## Rationale

Every year anywhere from 700,000 to 1,000, 000 falls will occur for inpatients. Injuries will result from 30-35% of these inpatient falls. A typical fall can cost around 14,000 in increased treatment cost and extended hospital stay costs. In fact, in 2013, inpatient falls for older patients cost the US Healthcare system $34 billion, (MarketScale, 2020). Many of these costs, related to an inpatient fall, will not be reimbursed by Medicare. One source, (PSNet, 2019), states that falls happen at a rate of 3 to 5 per 1000 bed days. Falls can result in severe injury and even death. According to the CDC, in 2018, approximately 54 out of 100,000 patients in Texas die because of a fall, and falls are the leading cause of injury related deaths among patients aged 65 and older (CDC). Injuries that result from a fall not only may require expensive treatments, and lengthen the hospital stay but they also decrease patient confidence. Patients may lose confidence in their mobility and become more sedentary because of fear of falling again. Measures can be taken to prevent a fall. Many patients fall while trying to do a simple task, unaccompanied, such as going to the restroom or trying to find a possession such as a cellphone. Hourly rounding includes assessing the patient's environment, addressing any needs they have, making sure the call light is within reach, and the bed alarm is activated. These simple tasks can have a large impact on fall prevention. While hourly rounding is already utilized on most nursing units, this project includes a more in-depth rounding process and required documentation in the patient's electronic chart. Through literature research, evidence has been accumulated that proves that purposeful hourly rounding will help to increase patient safety and reduce costs associated with a fall.

## Literature Synthesis

Research was conducted using eleven scholarly articles that used hourly rounding as a fall prevention tool. The articles chosen for appraisal showed a decrease in the fall rate post intervention implementation. One article, (Hicks, 2015), was a literature review that summarized fourteen study findings related to hourly rounding used as a fall prevention intervention. In all fourteen studies investigated in this article, only one showed an increase in the fall rate after hourly rounding, and two showed no change. Eleven of the study findings incorporated in the fourteen-study article, highlighted a decrease in fall rate after implementing hourly rounding. Of the other ten articles that were critically appraised, eight had a dramatic decrease in the fall rate after hourly rounding was implemented. Only two articles did not find a significant decrease in the fall rate post implementation of the hourly rounding process. Kuwaiti & Subbarayalu, 2017, found a dramatic drop in the fall rate after adding an hourly rounding process from 6.57 to 1.91. Another article found that the number of falls decreased from 442 to 247 as well as an 81% reduction in costs associated with falls after adding hourly rounding, (Jenko, M., Panjwani, Y., & Buck, H., 2019). Spano-Szekely et al, 2019 also found a 54% reduction in the fall rate and a savings of $84,000 in costs associated with falls after using an hourly rounding process. Through deep research using scholarly articles that detailed study finding related to using hourly rounding as a fall prevention tool, many article findings resulted in a reduction in the fall rate as well as money saved from fall related costs. This evidence proves that incorporate a realigned rounding process to patient care will have a beneficial impact for the acute care unit and healthcare facility.

## Stakeholders

Stakeholders of this project include administration, the education team, nurses and other caregivers, and the patients. Administration will give approval for the project, make assessments regarding data attained from the projects implementation, create documentation that will be incorporated in the patient's chart, create patient surveys regarding the rounding interactions, and set policies for how hourly rounding will be utilized in other areas of the facility. The education team will be incorporated in educating staff during, staff meetings, on the new rounding procedures, and role-model staff interactions with patients during these rounds. The patients are stakeholders for this project as well. This project is centered around fall prevention and increasing patient safety. Patients will be interacting with staff during the rounds and will also be asked to complete a survey about the hourly rounds.

## Implementation

Hourly rounding is an intervention that has potential to decrease the fall rate. This is a quality improvement project plan to implement structured hourly rounding process using the Plan, Do, Study, and Act method.

### Plan Stage – 2 weeks

Research conducted has proven that many facilities have implemented hourly rounding that has proven effective for fall prevention. Purposeful hourly rounding involves checking on patients, at regular intervals to assess and address the patient's pain level, body positioning, proximity to possessions, bathroom needs, and peacefulness of environment. During these rounds, staff are to also identify potential fall hazard, patient's access to the call light, and usage of bed rails/bed

alarms. During this planning stage, evidence from research of scholarly articles will be shared with administrators and other stakeholders. Following the projects approval, unit administrators, safety committee members, and staff educators will develop training and education that addresses the need for this intervention, how the process works, required documentation, and accountability measures connected to the project's implementation. Staff will observe role modeling of required hourly rounding interactions. This training will take place during required staff meetings.

**Do Stage – 12 weeks**

After staff education about purposeful, hourly rounds and all expectations connected to the process, the intervention will be implemented over a twelve-week time. The rounds are to be completed hourly from 0700 to 2200 and every two hours from 2300 to 0600. During the rounds, staff are to assess the patient's pain, bathroom needs, proximity to possessions, body positioning, and peacefulness of their environment. Staff will also assess and monitor for trip hazards, closeness of the call light, and use of bed rails/bed alarm. These rounds will be documented, after completion, in the patient's electronic medical record. Patients will be given a survey to fill out on the day of discharge, about the rounding experiences.

**Study Stage – 1 week**

During this stage, the fall rate from twelve weeks prior to implementation of the hourly rounding process will be compared to the fall rate for the twelve-week implementation time. Any fall that occurs during this time must be analyzed using root cause analysis to determine if it was accidental or intentional. An audit of video monitoring and chart audits of hourly rounding

documentation will be used to evaluate if hourly rounding had been completed, as expected. Feedback scores from patient surveys will be compiled and evaluated.

**Act Stage- 1 week**

After evidence of the effect that hourly rounding has on fall reduction, this process will be adopted as policy. New rounding policy and procedure will be adopted, and the process will be extended to and shared with other units within the facility.

## Timetable/Flowchart

**PLAN Phase – 2 weeks -** Project evidence shared with stakeholders; project education completed

**DO Phase – 12 weeks –** Hourly rounding implemented, patient surveys on rounding sent to patients to be completed and returned

**STUDY Phase – 1 week –** Fall rates for pre and post implementation period is compared, video monitoring completed, chart audits of rounding documentation

**ACT Phase – 1 week-** Data shared with administration, new rounding policy adopted, rounding procedure policy expanded to other units

## Data Collection Methods

The center of quality improvement is the planned effort to test a change decipher its result on a desired outcome. One widely utilized method for testing and learning about a change and its desired outcome is the PDSA or, plan, do, study, and act, method, (Melnyk & Fineout-Overholt, 2019). This method will be used to implement my change project. After the "DO" phase, the

information gained will be analyzed and evaluated in the "STUDY" phase. Evaluation is an integral part of quality improvement projects and critical information can be gleaned from careful evaluation. Evaluation is useful for several different reasons including monitoring the impact of local projects, identifying, and dealing with issues as they arise within a project, comparing local projects to draw lessons, and collecting more detailed information as part of a bigger evaluation project, (Harvey & Wensing, 2003). To evaluate the effect that purposeful hourly rounding has on the fall rate, data from pre and post implementation will be compared. The fall rate for twelve weeks prior to the new rounding processes will be determined per 1,000 patient days. This number will be compared to the fall rate per 1,000 patient days during the twelve-week study period. These numbers will be compared to determine if a decrease in the fall rate happened after the change was implemented, using a chi-square test of independence to determine statistical significance. Chart audits to evaluate documentation of the hourly rounds as well as video monitoring of staff entrance/exit into patient rooms, will be evaluated. Patients will also be surveyed on the frequency and content of these staff rounds. Outcome information gathered will be shared with all stakeholders. Administrators will make decisions about adopting the new rounding policy and extending the policy and procedure to other units.

## Cost/Benefit Discussion

The safety benefits that this project has far outweighs the costs associated is implementing this project. Costs associated with this project include time devoted to training development with staff educators. Another cost associated with the project includes money need to add a rounding documentation component to patient charts. Additional costs include printing the patient surveys

needed to obtain patient feedback concerning the hourly rounds. Overall costs for this project should be minimal compared to the benefits of decreased falls and increased patient safety. Additional benefits include money saved from injury related costs that are unreimbursed through Medicare.

## Overall Discussion/Results

### Recommendations

Based on results from study findings, I recommend that hourly rounding be implemented along with other fall prevention interventions to reduce potential for falls and/or fall related injury within the acute care setting. Falls have devastating and lasting repercussions on the patient, the patient's family, healthcare staff, as well as the facility. In my opinion, any intervention that has potential to decrease a fall and injuries related to falls, must be implemented. My PICOT question and article studies investigated the effects that an hourly rounding program can have on decreasing the fall rate. Most of the articles I selected to appraise, showed a decrease in fall rate. I also feel that hourly rounding be one component of a fall prevention program, but that other tools and interventions be applied. Through my research, I discovered that many facilities use an individualized fall assessment tool that helps tailor an assessment based on the patient's risks and needs. I believe that this assessment tool, prescribed interventions based on the assessment, and a systematic hourly rounding process, will help to reduce the incidence of falls. As a future leader I recommend that this well-developed hourly rounding procedure be established as policy within my unit and extended to other units for increased patient safety.

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# Appendix

## Appendix A

### Levels of Evidence Synthesis Table

| Level of evidence for intervention questions | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| I-Systematic Review/Meta-analysis of randomized controlled trials | | | | | |
| II-Single randomized controlled trials | | | | | |
| III-Quasi-experimental studies/non-randomized controlled trials | | | | X | |
| IV-Cohort or case-control studies | X | | X | | X |
| V-Systematic review/meta-synthesis of qualitative studies | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| VI-Single qualitative or descriptive studies/evidence implementation and quality improvement projects | | X | | | |
| VII-Expert Opinion | | | | | |

Studies in alpha-order: Brosey, Grillo, Kuwaiti, Olrich, Reimer

**Appendix B**

**PICOT Question:**
For adult patients in the hospital (P), how does hourly rounding (I) compared to no hourly rounding (C), affect incidence of falls (O) during the patient's hospital stay (T).

Evidence Synthesis Table

| Studies | Design | Sample | Intervention | Outcome |
|---|---|---|---|---|
| A | Systematic literature review | Sample Size varied for each of the 14 studies evaluated | Rounding | Brosey & March (2014) – FR decreased from 7.02 to 3.18/1,000 PD<br>Ciccu-Moore et al (2014) – FR decreased 39% during study period<br>Dupree et al (2014) – FR decreased from 4.001 to 2.613/1,000 PD<br>Fisher et al (2014) – FR decreased from 5.42 to 3.94/1,000 PD<br>Ford (2010) – No falls reported during the study<br>Kolin et al (2010)- FR decreased from 361 to 214<br>Krepper et al (2012) – FR on control and experimental units were similar<br>Kessler et al (2012) – FR decreased from 5.46 to 2.19/1,000 PD<br>Meade et al (2006) – 25 falls in four weeks prior to intervention, 12 falls during intervention period<br>Olrich et al (2011) – FR decreased from 3.37 to 2.6/1,000 PD, 23% decrease in falls<br>Saleh et al (2011). FR decreased from 25 falls to 4<br>Sherrod et al (2012) – FR slightly increased from 4.3 to 4.5 |

| | | | | |
|---|---|---|---|---|
| | | | | Tucker et al (2012) – FR 4.5, 1.6, and 3.2, decreasing at first then increasing<br>Woodward (2009)- FR decreased |
| B | Descriptive Study – pilot project | *N*=60 | IR | -FR decreased 44% from 442 per 1,000 PD to 247 per 1,000 PD from the pre-implementation to post implementation time<br>L/D P -There was an 81% reduction in replacement costs from pre-implementation and post-implementation time |
| C | Descriptive Study – clinical practice improvement project | N=245 | FPP | -With implementation of the FPP, there was a 54% reduction in FR from 2.51 per 1,000 PD for 2014, to 1.15 FR per 1,000 PD for the last half of 2016 and the first half of 2017.<br><br>-There was a 72% reduction in SU after the implementation of the FPP, that resulted in $84,000 in savings. |
| D | Explanatory cross-sectional Study | N=2,170 RN surveys | RNV– including BS, NL, AL, MN, | BS – 4.10 EM (0.69 SD)<br>NL- 4.03 EM (0.68 SD)<br>AL – 4.06 EM (0.69 SD)<br>MN – 3.88 EM (0.78 SD)<br>PP – 4.07 EM (0.69 SD) |
| E | Retrospective Study- medical record review | N=140 | FPP (including bed/chair alarms, hourly rounding, patient education) | FR decreased 0.6 falls per 1,000 PD |
| F | Descriptive Study – Virtual breakthrough series improvement project | PFH<br>N=19 teams<br><br>SE<br>N=15 teams | PFH<br>SE<br>IR | FR before interventions 28.5, FR post intervention 27.5 (p=0.136) = not significant<br><br>FRI= before interventions 6.6 (p=0.009), IJR post intervention 6.5 (p=0.005) |

| | | | | |
|---|---|---|---|---|
| | | IR<br>N=13 teams | | |

Legend: A = Hicks, D., 2015, B = Jenko, M. & Panjwani, Y., & Buck, H.,2019, C = Spano-Szekely, L., Winkler, A., Waters, C., Dealmeida, S., Brandt, K., Williamson, M., Blum, C., Gasper, L., & Wright, F., 2019, D = Tzeng, H. & Yin, C., 2017, E = Wilbert, W. 2013, F = Zubkoff, L., Neily, J., Delanko, V., Young-Xu, Y., Boar, S., Bulat, T., & Mills, P. D., 2019, R=rounding, IR= intentional rounding, HR= hourly rounding, FR= fall rate, PD= patient days, L/D P= lost/damaged possessions, FPP=fall prevention program, SU=sitter usage, RNV= RN vigilance, BS=bathroom support, EM= effectiveness mean, SD=standard deviation, BS=bathroom support, NL=night light, AL=adjust lighting, MN=minimize noise, PP=personal possessions, PFH=post fall huddle, SE=staff education, FRI=fall related injury

Outcomes Table: Effect of hourly rounding on fall rate

| | A* | B* | C* | D* | E* | F |
|---|---|---|---|---|---|---|
| FR | ↓↓↓↓↓↓-↓↓↓↓↑-↓ | ↓ | ↓ | ↓ | ↓ | - |
| L/D P | | ↓ | | | | |
| SU | | | ↓ | | | |
| FRI | | | | | | ↓ |

Legend: A = Hicks, D., 2015, B = Jenko, M. & Panjwani, Y., & Buck, H., 2019, C = Spano-Szekely, L., Winkler, A., Waters, C., Dealmeida, S., Brandt, K., Williamson, M., Blum, C., Gasper, L., & Wright, F., 2019, D = Tzeng, H. & Yin, C., 2017, E = Wilbert, W. 2013, F = Zubkoff, L., Neily, J., Delanko, V., Young-Xu, Y., Boar, S., Bulat, T., & Mills, P. D., 2019, R=rounding, IR= intentional rounding, HR=hourly rounding, FR=fall rate, PD= patient days, L/D P= lost/damaged possessions, FPP=fall prevention program, SU=sitter usage RNV= RN vigilance, BS=bathroom support, EM= effectiveness mean, SD=standard deviation, BS=bathroom support, NL=night light, AL=adjust lighting, MN=minimize noise, PP=personal possessions, PFH=post fall huddle, SE=staff education, FRI=fall related injury

* = statistically significant findings

Recommendations

Based on results from study findings, I recommend that hourly rounding be implemented along with other fall prevention interventions to reduce potential for falls and/or fall related injury within the acute care setting. Falls have devastating and lasting repercussions on the patient, the patient's family, healthcare staff, as well as the facility. In my opinion, any intervention that has potential to decrease a fall and injuries related to falls, must be implemented. My PICOT question and article studies investigated the effects that an hourly rounding program can have on decreasing the fall rate. Most of the articles I selected to appraise showed a decrease in fall rate. Article A, (Hicks, 2015), was a literature review that summarized fourteen study findings related to hourly rounding used as a fall prevention intervention. In all fourteen studies investigated in this article, only one showed and increase in the fall rate after hourly rounding, and two showed no change. This review highlights eleven studies that found hourly rounding to have a decreasing effect on falls.

I also feel that hourly rounding be one component of a fall prevention program, but that other tools and interventions be applied. Through my research, I discovered that many facilities use an individualized fall assessment tool that helps tailor an assessment based on the patient's risks and needs. I believe that this assessment tool, prescribed interventions based on the assessment, and a systematic hourly rounding process, will help to reduce the incidence of falls.

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# Appendix C

Rounding Survey

Patient's Name: _____ _____
Last First

Overall, how would you rate your interaction with our staff?

Worst ☐ ☐ ☐ ☐ ☐ Best

1. Patients are to be rounded on, or checked on, every hour during the day and every two hours at night. Do you feel that this happened during you stay at our facility?

   YES ☐
   NO ☐

2. Did staff ask you about your pain level during these rounds?

   YES ☐
   NO ☐

3. Did staff ask you about your bathroom needs during these rounds?

   YES ☐
   NO ☐

4. Did staff make sure that your belongings were within your reach during these rounds?

   YES ☐
   NO ☐

5. Did staff check to see if the environment was comfortable for you during these rounds? (Room temperature, lighting, noise level)

   YES ☐
   NO ☐

6. Did staff look for trip hazards and make sure the call light was within your reach during these rounds?

   YES ☐
   NO ☐

Thank you for taking the time to complete this survey.