Impacting Patient Care Experiences: Hourly Rounding

Michelle R. Johnson Hernandez
mishnmatthew@aol.com

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IMPACTING PATIENT CARE EXPERIENCES: HOURLY ROUNDELING

Michelle Johnson Hernandez: University of San Francisco
Global Aim Statement

My global aim consists of cultivating staff responsiveness within a medical surgical telemetry unit in an urban setting in San Francisco, thereby reducing call lights and patient falls by 25% within three months. The implementation of hourly rounds has been proven to increase overall patient satisfaction by improving staff responsiveness and increasing patient safety (AACN, 2014). The measurement of effectiveness and success will be evidenced by seeing an increase in patient care scores and a reduction of falls within the unit; when these metrics are met, there is data that proves this evidence-based practice will drive the results to meet our goal of 25% reduction in call lights and patient falls.

Statement of the problem

In this busy nursing unit, there are many indicators that a more efficient workflow needed to be established. One such indicator was the constant sound of call lights ringing for non-urgent needs at an estimated 12 to 15 call lights in an eight hour shift and 20 to 24 call lights in a 24-hour period. Additionally, during a recent assessment where my goal was to explore operational processes with the aim of identifying opportunities for optimization of patient services, I found there were behavioral inconsistencies and a lack of standardization on how hourly rounds should be performed. Basic patient needs were not addressed within each visit from a staff member which led to the call light being utilized for repositioning, help reaching for water or phone, toileting or pain management. With all the alarms and call lights, the normal cycle of rounds was
not only disrupted by causing reprioritizing from the normal duties of clinical staff, it also altered
the rhythm of the unit and created an environment of reactivity. As a result, it was difficult for
staff to finish one task in order to move on to the next and also created a breeding ground for
situations putting patient safety in jeopardy.

A more severe characteristic of such an environment of reactivity can be illustrated when
considering the number of patient falls within the unit. After interviewing the management team,
I found they were experiencing an average of 10 falls per year, the highest fall number within the
hospital. My observations and interviews of patients, staff and nurse managers indicated the staff
was not checking on patients at regular intervals nor engaging patients by checking on pain
levels, positioning, potty, protection and proximity of personal items; otherwise known as ‘The
Five P’s”. My belief is an environment in which the patients took it upon themselves to address
some of these needs, due to a lack of available assistance, was the most likely culprit for this
higher instance of falls. I saw this as an opportunity to establish standardized protocols in which
staff would specifically address these basic needs at more regular intervals and thereby, reduce
the high frequency of call lights and more severe incidents such as patient falls.

Another key performance indicator of service level is staff responsiveness. Staff responsiveness
is a qualitative indicator defined as the percentage of patients who feel the staff is there when
they need them. This data is gained through a survey asked to the patients. The unit goal is 73%
of patients need to feel their needs are addressed by staff. Within the examined unit, the score is
55%. This data was gathered from 275 surveys. Obviously, there is great work needing to be
done. This number indicates patients’ needs were high and when the call lights were triggered,
clinical staff was not present in a sufficient amount of time to instill patient satisfaction. In fact, the patients’ impression of staff responsiveness and safety were found to be critically low.

In summary, the lack of consistency in the administration of a standardized, thorough protocol that addressed the basic needs in patient care created an environment of reactivity within the unit. This, in turn, caused for an increase in call lights, patient falls, decreased level of service and ultimately a major declination in the quality of patient care and increased a patient’s feeling that clinical staff was not there for them when they were in need. This resulted in ineffectively addressing the needs of positioning, toileting, pain, having items within reach and a lack of a safety check. As mentioned, the results of this were more frequent calls for assistance and many disruptions to the nurse while they are performing other tasks. The current data collected indicated only 55% of the patients felt the staff was responsive when they used their call light. By decreasing the need for using the call light, there is a direct correlation that it would increase their impression of responsiveness and more importantly, increase the quality of care. This root cause analysis indicated there needed to be a better understanding of the elements of hourly rounding, standardization of rounding practices as well as communication and training to clinical staff for it to benefit the nurse and patient in this microsystem.

**Project Overview**

The microsystem analysis of my CNL project is based on a busy cardiovascular and thoracic surgical nursing unit and my focus consists of improving responsiveness and safety within the
unit. The patient population consists of adult patients of all ages but mostly over 65 years old. The nonprofit hospital is located in San Francisco and is a cardiovascular and thoracic specialty hospital. Similar to this microsystem is the medical-telemetry Cleveland Clinic in Ohio who also experienced similar issues with staff responsiveness.

A plan is for a similar protocol with purposeful rounds to be implemented to improve the unit workflow. In this new implementation, the patients within the unit will be told when they will be checked on frequently and the nurse will notify the patient of when they will return, therefore, the hourly rounds would help manage patients’ needs and decrease anxiety. The Cleveland Clinic in Ohio has improved patient experiences and provided data indicating when needs are not met on a hourly basis and personal items are not within reach or toileting is not offered, there is a greater risk for a patient getting up without assistance and falling. After a fishbone analysis, I have identified the examined microsystem would similarly benefit with hourly rounds within the unit (See appendix 1). By utilizing “purposeful” rounding we will be able to improve the unit workflow, affect the patients’ perception of nurse responsiveness and decrease call lights.

**Rationale**

Change occurs with any approach to inspire, ideate or impact an environment and make any innovative improvements. Scientist Edward de Bono talks about the mental valleys that we can get “stuck” in and how we need innovation to see through a fresh set of eyes to take a different approach on how we look at the environment. If we are able to understand how to manage
change within our environment, we can find opportunities and imagine solutions to our everyday problems in healthcare. Here is my explanation of my thought process in planning the change within the unit.

Firstly, my innovation involves Lewin's Stages of Change with the first being the "unfreezing" stage which involves bringing an awareness of the need to improve our efficiency for nurse responsiveness. My plan involves a strategy to improve the understanding of the need and benefits for the purposeful hourly visits to the patient by staff. I created an action plan to implement with a time frame and a clear distribution of roles (See Appendix 4). In the "moving stage" I involved the technique PDSA, to test and implement the new approach within my unit. As stated by Fisher, “Each component can be addressed in isolation; however, the synergy created as these components come together is what will propel the transformation” (Fisher, 1996, p.6). With this change, it would be necessary to create the action plan with collaboration from the stakeholders, clear communication of the processes, commitment or buy-in from the staff. In the "refreezing stage" I created accountability to maintain and sustain the process and continuity of those involved. Managing the change would be crucial throughout the implementation. Moreover, the changes that will occur within the hourly rounding which will involve all these well planned processes were also monitored during implementation.

In order for this process to be sustained, I have incorporated teamwork and collaboration. The unit council has met to discuss the process and planning and we are working together so that this change involves a collaborative process. Having staff within the unit involved in the processes decreases the resistance to change and improves the success of the rollout. Also, the vision
should be lucid to the stakeholders of the many benefits of this implementation. In order to move forward and make improvements within my microsystem, as a CNL I will need to be a change agent and utilize the theory and tools to create innovations.

I realized I would also have to quantify the decrease in call lights by doing my own direct observations and data collection. As stated in Nelson, "a specific aim establishes the measurable outcomes you wish to achieve and a precise focus for tests of change. (Nelson, 2007). These changes helped me mitigate any misunderstandings of the focus of the project.

According to the American Journal of Critical Care, “by attending to patients’ comfort, safety and environmental needs by hourly rounds the workflow is organized, the efficiencies provide nurses time back as they are proactive and anticipate the needs of the hospital”. My focus is one of improving the care experience for the patient and improving workflows. Therefore, my project will exhibit my approach, tracking of improvements with data and my overall findings. In closing, I hope to achieve the quality improvement and the desired outcomes to improve patient care experiences within my microsystem and furthermore, to monitor progress with both qualitative and quantitative indicators.

**Methodology**

My methodology includes collecting information and data to develop the best plan for my microsystem. The qualitative research began by the evaluation of the microsystem data with
analysis that will track my results from the National Research Data and by the data collection of patient falls. The National Research Company collects, measures, analyzes and reports data across the nation based on patient care and outcomes. "The integration of cross-continuum metrics and analytics uncovers insights for effective performance improvement, quality measurement, and many other factors that impact population health management" (National Research, 2015). This study practice has proven to decrease delays in patient care, increases safety, provides greater satisfaction of the care provided and enhances communication between patient and hospital staff (See Appendix 3). It also provides for less time spent on answering call lights which allows for more time for the nurse to do other tasks. I gathered data for 24 hours before and after on the number of call lights. I have developed a unit-based team that formulated an action plan to improve our hourly visitation which includes the expectations, action steps, accountability and date each will be met. This approach will allow for evaluation and align practice to sustain results. Lastly, I collected the quantitative hospital data on falls within the unit and show the correlation with the increase in nurse responsiveness and the decrease in falls. “The integration of cross-continuum metrics and analytics uncovers insights for effective performance improvement, quality measurement, and many other factors that impact population health management” (National Research, 2015).

With Healthcare Reform, data is easily visible to track quality and safety within a hospital. The voice of the patient is collected in the surveys. Utilizing these surveys is helpful as a clinical nurse leader to make the necessary improvements to improve patient care experiences within the microsystem. My focus is one of improving the care experience for the patient and improving workflows. Therefore, my project will exhibit my approach, tracking of improvements with data
and my overall findings. In summary, I hope to achieve the quality improvement and the desired outcomes to improve patient care experiences within my microsystem.

**Literature Review**

As stated by The Agency for Healthcare Research and Quality's (AHRQ) literature reviews and evidence-based practices are provided to “make health care safer, higher quality, more accessible, equitable, and affordable”. Literature reviews were therefore, extremely helpful when analyzing and planning my CNL project. My CNL project consists of improving patient care experiences with an evidence-based practice called ‘hourly rounding’ that has proven to decrease call lights, improve patients' satisfaction with responsiveness, and allows for more time for a nurse to manage other tasks. It also has many benefits in increasing patient safety and reducing falls. I found quite a bit of research pertaining to this project.

In the article “Hourly Rounds: What Does the Evidence Indicate?” the AACN described the way in which hourly rounds were implemented within the unit. The quasi-experimental study involved 10 rigorous analyses which explain all parts of the process that lead to the success of the CNL project. There were evaluations conducted in all hospital units including telemetry, medical-surgical, orthopedic, rehabilitation and gerontology specialties. The results yielded an 83% decrease in call light usage. The evaluations additionally documented a 20% reduction in distance walked by staff experiencing fewer call lights. Fall rates were reduced by 77%. The researchers found an 88% improvement in patient satisfaction and willingness to recommend the
hospital, satisfaction with the timeliness of staff responsiveness to personal needs and pain. The evidence proved that “making rounds is an appropriate, safe and useful practice (see Appendix 3).

Since 2012, upon the mandates with Healthcare Reform, hospitals are required to be more efficient, provide better care experiences and increase affordability and the literature articles exemplified all the substantial work being done to support these efforts. There were many scholarly articles that proved this practice can really impact the unit’s workflow within a very small budget which is financially feasible as well as operationally sound. By utilizing the American Association Colleges of Nursing’s (AACN) evidence-based practice research, I found the results I was seeking which underscore findings gathered for this study – increased rounds promote increased patient safety as well as patient satisfaction.

**Timeline**

This process started out with flowchart mapping with a timeline that was updated with a PDSA (plan, do study, act) application. I started the planning on May 1st with the goal of educating the staff on the new and improved process. By May 15th, the staff learned all the elements of purposeful hourly rounding and was ready to roll out the project shortly thereafter. The planning began by examining and sharing the objective and predications with staff. The PDSA ramp cycles were utilized to work through the change (See Appendix 2). In the Cleveland Clinic, in a busy, medical-telemetry unit similar to mine, this has vastly improved patient care experiences. Therefore, our goal or “act” was to clearly achieve an
improvement in staff responsiveness and an increase with the patient satisfaction scores and safety, resulting in a 50% decrease in falls within the unit.

On June 1st, we started to see the data collected from interviews with the patients and audits from observations of the number of call lights. We started providing feedback to the staff to ensure consistent practices and competency in the hourly rounding. We continued to check-in with the staff on what was working well and what was not going well. There were very little complaints. From their perspectives, the plan made sense and they seemed to be willing to improve efficiency in their workflow. If we had someone new assigned to our unit, it was difficult because they were not well informed of the process. Overall, the project was going well.

Notably, there was resistance at first because this was something new and a change in the usual routine. Also, it was difficult to meet with the unit council because they only meet monthly. I was anxious to get things started so part of the process started without them. But, on June 16th, the unit council met and created an information board for everyone to see and there was a greater collaboration and buy-in for the project. Also, their involvement helped with monitoring to ensure all the elements were being performed so that we were proactive with our approach and less reactive. My analysis showed that the biggest change in practice evolved amongst the care partners. This seemed to really bring more structure and efficiency to their usual routine. So far, we have had no falls in June and July. The hourly rounding and staff responsiveness scores have trended up substantially for June. We are continuing to track our improvements and data.

Utilizing the PDSA is extremely helpful in our implementation to maintain focus and meet our deadline. In order to achieve sustainability, we needed to continue with positive reinforcements and sharing of data
with the staff. With every project, there are obstacles to overcome. The main barriers that I encountered have been multiple efforts placed on many improvements within the unit at once. There were many projects going on at the same time that had taken equal precedence. It was a struggle to have so many changes in a microsystem at once. Also, I did not want to overwhelm the staff but needed to meet my objectives to create the desirable change. It was challenging to redesign a process to improve hourly rounding to improve nurse responsiveness. My analysis showed that hourly rounding wasn't being done on the evening and night shift. At that point, we looked at what changes needed to be made. We documented problems and unexpected observations and provided the necessary corrections in accountability amongst the nurses and care partners. It was helpful that there is an overwhelming amount of evidence that proved that my efforts would stimulate the change that would benefit the workflow.

**Expected Results**

There is a projected cost benefit to purposeful rounds. The total annual budget in year one represents a significant benefit, considering the staff training and educational material necessary (see Appendix 5). The cost benefit analysis for year two represents the net savings after the evidence-based practice is proficiently and consistently practiced throughout the hospital amongst all shifts every day by all staff. The represented numbers are estimated from statistics and are subject to change. The minimal budget for such a program undertaking is a small investment that has the potential to lead to huge cost-savings from decreased falls, increased patient satisfaction and decreased hospital stays. While there is no budget figure that can truly represent how this program will improve the patients’ quality of life, these estimates represent potential improvements towards lessening the burden of anxiety during hospitalization from sustaining a life threatening event such as open heart surgery and having delay in response when
calling for help. Moreover, this evidence based practice will improve the workflow within the unit, allowing for a reduction in incremental overtime from answering lights during nursing handoffs at shift change.

**Nursing Relevance**

My implementation will reduce call lights and increase nurse responsiveness within the unit. By doing a SWOT analysis, I was able to strategically identify the strengths, weaknesses, opportunities and threats to make a proper objective assessment of my microsystem. This project is aligned with the CNL competency to be a clinical outcome manager by making improvements in my microsystem. As stated in the White Papers in by AACN, “a CNL assumes accountability for patient care outcomes through the assimilation and application of evidence-based information to design, implement, and evaluate patient care processes and models of care delivery” (AACN, 2013).

The qualitative benefits for patients at this facility are immeasurable. This purposeful hourly rounding plan could improve the overall hospital experience of all, therefore, bringing greater enrollment in the health plan resulting in a net profit of millions of dollars. By improving the workflow and efficiency within the unit with hourly rounding we could impact patient care experiences by improving overall quality, safety and clinical outcomes.
My CNL project utilized the PDSA ramp cycles to Plan, Do, Study and Act to reduce falls and increase nurse responsiveness within the unit. By doing a SWOT analysis, I was able to strategically plan by identifying the Strengths, Weaknesses, Opportunities and Threats to make a proper objective assessment in designing and implementing a hourly rounding plan for my microsystem. I utilized a timeline and process flowsheet to maintain focus and document my process.

These processes aided me to design, implement and evaluate patient care processes. The strengths identified were that the hourly rounding was already introduced to the staff. The implementation or "plan" involved holding the staff meeting in which the evidence-based practice was reintroduced and the vision explained. The hourly rounding elements, while kept simple, were also well defined. The weakness of the hourly rounding was that it was not being performed purposefully during patient visits to include a focus on addressing the patients' pain, toileting, repositioning, and call light and personal items within reach. The practice was inconsistent amongst staff and between shifts. The threats or barriers for the implementation included short staffing and staff coming from other units who hadn't attended the educational in-service provided on the purposeful rounds. Therefore, the plan was to clearly define the expectation. Also, the data collected could not solely rely on patient surveys. I also monitored success by the reduction in falls and call lights.
The current patient survey scores showed opportunities to improve patient experiences. The data collected indicated only 55% of the patients felt the nurse was responsive when they needed help. By anticipating the patients’ needs, we were able to decrease the amount of times that the patient got up by themselves. There was also a need to have a better understanding of the benefits of hourly rounding for it to benefit to get the "buy in" from the staff. The final result was a reduction of falls by 50%.

As I studied previous results from patient surveys I realized that these results only reflected those patients who took the time to fill out surveys. Also, the data needed to be measured within a certain timeframe so I added the three month time frame. I also intended to quantify the decrease in call lights by doing my own direct observations and data collection. As stated in Nelson, “in order to establish the measurable outcomes you wish, you need to achieve a precise focus for tests of change.” (Nelson, 2007). Another data-source was taken from reports generated monthly that would provide patient falls within the unit. I also endorsed the unit clerks to count and document the amount of call lights. The planning process helped me mitigate any misunderstandings and keep a clear focus on the goal of the project. Clearly identifying performance indicators in both qualitative and quantitative measures would be used to help quantify a fiscal perspective in evaluating overall efficacy of the hourly rounding project.

This project is aligned with the CNL competency to be a clinical outcome manager by making improvements within my microsystem utilizing SWOT analysis, Lewin’s Stages of Change and the PDSA cycle (See Appendices). The data will prove that the hourly rounding implementation
was effective in increasing nurse responsiveness and thereby, reducing falls saving the hospital significant costs and mitigating risk substantially.

Overall, my efforts in this project have been successful as evidenced by an increase in patient survey scores for nurse responsiveness. Additionally, there have been no falls for the after my implementation. I was able to mitigate the effects of many changes occurring at once within this microsystem by keeping staff informed, monitoring measures and keeping the project prioritized by working with senior leadership. As stated by DeBono (1992), "if you understand an underlying concept on which a specific idea is based, you can use that concept to develop numerous ideas and options." The time I spent assessing the issues, collecting information from patient and staff interviews and data collection helped to clarify issues causing the problem and the effects that were occurring. I was able to share those results with the staff which created a trust in the new process as well as buy-in. By applying the PDSA, I was able to improve a process and make a more efficient hourly patient visit which decreased falls and improved patient satisfaction.

In retrospect, my advice would be to follow the change concepts in as clearly articulated a process as possible and more importantly, to communicate every phase of the implementation with all key stakeholders so that they can truly gain insight on what would help refine their idea and provide the results they need. This process would always involve gathering information from the team and patients who would be affected by the clinical process that would be changed. This reminds me of a quote, "The higher the goal, the greater the climb, but taken each day, one step
at a time, the dream is accomplished” (Anonymous author). In other words, do not skip steps and work through the change concepts when making incremental improvements in clinical processes.

With metrics and benchmarking, I was able to demonstrate the effects of my CNL project within a busy telemetry unit. The benchmarking came from the National Research Database for patient surveys for the month of May, June and July (see appendix 6). This database collects surveys from the patients and it is publicly posted. The patients are questioned regarding the elements of hourly rounding with questions specifically asking 1) if the call light and items were placed within reach, 2) if they were asked about comfort level and 3) pain level and 4) informed when someone would return. These four questions create the score based on ‘always’, ‘sometimes’ and ‘never’ performed. It is necessary to receive "always" for it to count to result in a positive score.

As stated in the Benchmarking article by Sower, benchmarking becomes the report card with charts, graphs of data that is made public. It cannot be used alone because being the highest in the nation may not necessarily show an excellent best nursing practice or hospital process. With the implementation of the hourly rounding best practice, it can show an increase trend or improvement. For example, when we scored high nationally in our ‘quiet score’ which was in the 50s, it still represented that only 50 percent of patients felt it was quiet.

My project showed an upward trend in patient satisfaction and perception of staff responsiveness. The upward trends in the metrics were visually significant and happened quickly after the educational support was provided in May. It was exciting to see hourly rounding really impact a patient's perception of quality and safety of care within nursing practice in such a short span of time. As a CNL, we can impact patient care experiences and serve as a patient advocate by implementing evidenced based practices and utilizing benchmarking to show clinical outcomes.
After initiating an improvement plan, according to the Institute of Health Improvement, there are five factors that influence the sustainability. These five factors were found within my CNL project. One important factor was that the goal of providing high quality, safe, patient care within the nursing unit and aligned with the mission and vision of the hospital. The Unit Council, which consisted of 8 strong leaders from the floor, became involved as ‘champions’ to help be resources for those who had questions about the hourly rounding practice. Having champions who believe in the project kept the practice being performed when I was not present. There was an in-service illustrating the benefits of the practice so the staff could see the value in the new practice and more importantly, provided support from the stakeholders.

Another component of the cycle consisted of modifying existing practices to become more efficient in the daily nursing tasks. The hourly rounding practice was standardized with a clear explanation of roles and expectations and then applied to daily activities. It was determined later that the care partners would do the rounds on the odd hours and the nurses would round on the even hours to support nurse handoff and medication passes. This helped alleviate missed hourly rounds. The processes were reevaluated throughout the implementation so that there would be consistency in performances and we could meet our goals. As a CNL acting as a change agent, I am able to be innovative and have an influence on improving nursing practices.

My CNL improvement project would provide many financial benefits to any hospital. Firstly, Healthcare Reform has created financial incentives and reimbursements based on patient safety metrics. With these demands, it benefits the hospital to ensure safety within hospital practices. Hourly rounding provides many safety benefits such as a reduction of falls. The data I have
provided proves there is a correlation between hourly rounding and a decrease of falls. Next, I have calculated the total anticipated cost of falls (not including any litigation fees), based on a 50% reduction in fall rate (based on data provided in a study by Mead et al., in 2006). The total projected cost of falls came to $365,925.80. Hourly rounding could provide a 92% return on investment. In other words, the hospital could save more than 92% of total costs from the implementation of this by instituting an hourly rounding protocol.

There is great value, both fiscally and clinically, in improving the quality of patient care experiences since payouts would be based on increasing patient satisfaction. Hourly rounding has also been proven to improve patient survey scores. Overall, by improving patient experiences reported in surveys, which now are made available to the public, there is a potential to increase membership. An increase in patients would not only increase revenue and yield financial gains for the hospital, but it could also differentiate us as a leader in healthcare.

In conclusion, as a Clinical Nurse Leader and patient advocate, I have taken the information gained from the microsystem data and implemented the evidence-based practice of hourly rounding within a busy, medical surgical nursing unit which improved fiscal outcomes, service levels, overall safety, staff morale and most importantly, patient care experiences. The results have been significant and well received by patients, staff and leadership alike. In addition to creating more empowerment on the floor as well as reducing stress, it has increased patient satisfaction instilling confidence in the services we provide to our patients. In such critical times, the hourly rounding project has paid big dividends within our unit and given us another tool to use in striving for a higher level of care.
References:


Smith, R. 2007. The Seven Levels of Change: Different Thinking for Different Results,3e. Wyomissing, PA; Tapestry Press.


Tzeng, HM. 2010. Perspectives of staff nurses of the reasons for and the nature of patient-initiated call lights: and exploratory survey study in four USA hospitals. BMC Health Services Research. 10:52.


Appendix 1

Table Fishbone Analysis

Patients
- Post surgical-
  Cardiovascular and
- Fall Risk-pain
  medication
- Multiple Post op
  lines and drains

People
- RNs, PCTs, Unit
  Clerk
- Appropriate
  staffing to acuity
- Staffing skill mix
Appendix 2

Table: PDSA Ramp Cycles

Ramp Cycle 1
Ramp Cycle 2
Ramp Cycle 3

Appendix 3
Table: Benefits of Hourly Rounding at Various Hospitals

<table>
<thead>
<tr>
<th>Reference</th>
<th>No. and setting</th>
<th>Call lights</th>
<th>Falls</th>
<th>Restraints</th>
<th>Attendants</th>
<th>Patients' satisfaction</th>
<th>Level of evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meade et al&lt;sup&gt;1&lt;/sup&gt;</td>
<td>14 hospitals, 27 units</td>
<td>Decreased&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Decreased&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td>Increased&lt;sup&gt;a&lt;/sup&gt;</td>
<td>IIA</td>
</tr>
<tr>
<td>Johnson and Topham&lt;sup&gt;2&lt;/sup&gt;</td>
<td>1 unit, rehabilitation</td>
<td>Decreased</td>
<td>Decreased</td>
<td></td>
<td></td>
<td></td>
<td>IIb</td>
</tr>
<tr>
<td>Haack&lt;sup&gt;3&lt;/sup&gt;</td>
<td>1 unit, rehabilitation</td>
<td>Decreased</td>
<td>Decreased</td>
<td></td>
<td></td>
<td>Increased</td>
<td>IIb</td>
</tr>
<tr>
<td>Tea et al&lt;sup&gt;4&lt;/sup&gt;</td>
<td>202 patients, 4 orthopedic units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Increased</td>
<td>IIb</td>
</tr>
<tr>
<td>Bourgault et al&lt;sup&gt;5&lt;/sup&gt;</td>
<td>3 hospitals, all units (including intensive care units)</td>
<td>Increased</td>
<td></td>
<td></td>
<td></td>
<td>Increased</td>
<td>IIb</td>
</tr>
<tr>
<td>Sobaski et al&lt;sup&gt;6&lt;/sup&gt;</td>
<td>335 patients, telemetry units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Increased</td>
<td>IIb</td>
</tr>
<tr>
<td>Culley&lt;sup&gt;7&lt;/sup&gt;</td>
<td>3 units</td>
<td>Decreased</td>
<td></td>
<td></td>
<td></td>
<td>Increased</td>
<td>IIb</td>
</tr>
<tr>
<td>Assi et al&lt;sup&gt;8&lt;/sup&gt;</td>
<td>2 units, oncology and acute care for elderly</td>
<td>Decreased</td>
<td>Decreased</td>
<td>Decreased</td>
<td></td>
<td>Increased</td>
<td>IIb</td>
</tr>
<tr>
<td>Weisgram and Raymond&lt;sup&gt;9&lt;/sup&gt;</td>
<td>1 unit, telemetry</td>
<td>Decreased</td>
<td>Decreased</td>
<td></td>
<td></td>
<td></td>
<td>IIb</td>
</tr>
<tr>
<td>Kalman&lt;sup&gt;10&lt;/sup&gt;</td>
<td>2 units, medical surgical</td>
<td>No effect</td>
<td>No effect</td>
<td></td>
<td></td>
<td>No effect</td>
<td>III</td>
</tr>
<tr>
<td>Woodard&lt;sup&gt;11&lt;/sup&gt;</td>
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<td>Decreased</td>
<td>Decreased</td>
<td></td>
<td></td>
<td>Increased</td>
<td>IIb</td>
</tr>
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</table>

<sup>a</sup> P < .05.

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Appendix 4
Timeline with Hourly Rounding Best Practice: Flowchart Mapping

**Hourly Rounding Best Practice: Flowchart Mapping**

**Appendix 5**
Table: Projected Cost-Benefit Analysis of Hourly Rounding

<table>
<thead>
<tr>
<th>Table 1: Cost Benefit Analysis</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in falls</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Reduction in patient days (assumed 25% of patients will get admitted and stay up to 3 days) from falls</td>
<td>150</td>
<td>350</td>
</tr>
<tr>
<td>Variable costs from incremental overtime</td>
<td>$50,410.95</td>
<td>$100,820.46</td>
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<tr>
<td>Increase in costs from avoidable hospital days</td>
<td>$1,975,000.00</td>
<td>$2,850,500.00</td>
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<tr>
<td>Educational costs</td>
<td>$57,982.00</td>
<td>$54,232.00</td>
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<tr>
<td>CBA amount</td>
<td>$1,967,428.00</td>
<td>$3,834,956.00</td>
</tr>
<tr>
<td>CBA ratio*</td>
<td>$33.06</td>
<td>$44.70</td>
</tr>
</tbody>
</table>

Table: Projected Budget

<table>
<thead>
<tr>
<th>Table 2: Budget</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse Manager and Assistant Manager planning</td>
<td>$24,024</td>
<td>$24,024</td>
</tr>
<tr>
<td>Meeting with Unit Council</td>
<td>$5000</td>
<td>$5000</td>
</tr>
<tr>
<td>Staff Meeting</td>
<td>$21,000</td>
<td>$12,000</td>
</tr>
<tr>
<td>Non-Personnel Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research, audits and data collection</td>
<td>$2,500</td>
<td>$1,500</td>
</tr>
<tr>
<td>Patient Hourly Rounding Letter (supplies annually)</td>
<td>$2,500</td>
<td>$1,000</td>
</tr>
<tr>
<td>Total Benefits</td>
<td>1967,428.00</td>
<td>3,834,956.00</td>
</tr>
</tbody>
</table>

Appendix 6
## SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Minimal start-up costs</td>
<td>• Requires all staff to perform consistently</td>
</tr>
<tr>
<td>• Supportive CNL leadership</td>
<td>• Limited resources for educational costs</td>
</tr>
<tr>
<td>• Project simplicity, already proven to benefit unit workflow</td>
<td>• Limited Supply of Staff Resources for changes</td>
</tr>
<tr>
<td>• Improves efficiency and teamwork</td>
<td></td>
</tr>
<tr>
<td>• Meeting patient needs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities</td>
<td>Threats</td>
</tr>
<tr>
<td>• Improved Patient Satisfaction</td>
<td>• Staff unavailability</td>
</tr>
<tr>
<td>• Potential Reduction of prolong length of stays and avoidable days</td>
<td>• Delays in rounding</td>
</tr>
<tr>
<td>• Improve patient outcomes</td>
<td>• Staff opposition to change</td>
</tr>
</tbody>
</table>

Appendix 7
Table: Summary with Benchmarking and Survey Results of Hourly Rounding

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>60.0</td>
<td>65.7</td>
<td>75.2</td>
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<tr>
<td>(n=53)</td>
<td></td>
<td></td>
<td>(n=48)</td>
</tr>
<tr>
<td>54.9</td>
<td>64.9</td>
<td>74.7</td>
<td></td>
</tr>
<tr>
<td>(n=56)</td>
<td>(n=47)</td>
<td>(n=48)</td>
<td></td>
</tr>
</tbody>
</table>