Standardized Scripting to Increase Healthcare Provider Compliance with Intentional Hourly Rounding

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Prepared for NU 6360 Healthcare Management Synthesis II, Dr. Renee Wenzlaff, Dr. Jane Paige, Professor Cathy Leffler, and Dr. Deb Jenks, submitted November 12, 2016.

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Abstract

The aim of this project was to determine if providing detailed education to healthcare providers using an evidence-based, standardized method of scripting would improve compliance with intentional hourly rounding (IHR), ultimately increasing patient satisfaction scores. A 24-bed acute care medical unit at a Magnet-designated, Midwestern pediatric tertiary care hospital implemented IHR scripting as an evidence-based quality improvement (QI) project. Healthcare provider compliance with IHR was measured for one year prior to the introduction of the QI project. In coordination with the unit's Partnership Council, all healthcare providers attended an educational session on keyword scripting for quality and consistency assurance of IHR. Compliance with IHR was measured during QI project implementation and two weeks post-completion of the educational scripting sessions. The QI project included a comparison of pre- and post-scripting audited data of healthcare provider compliance with IHR. Unit patient satisfaction scores were measured through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). Satisfaction scores were assessed pre- and post-scripting to determine if patient satisfaction improved as a result of the QI project. Fifty-three healthcare providers were required to meet with a quality council mentor on an individualized basis to practice using the standardized, evidence-based scripting tool. Significant improvement in healthcare provider compliance with IHR was seen post-QI project. No evidence of statistically significant improvements in patient satisfaction occurred as a result of IHR compliance improvements.

Keywords: intentional hourly rounding, healthcare provider education, compliance, standardized scripting, patient satisfaction

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The Affordable Care Act, instituted by the Centers for Medicare and Medicaid Services (CMS) in 2010, resulted in a transition of both adult and pediatric healthcare towards a pay-for-performance model of healthcare. In this model, hospital reimbursement is affected by the patient experience. In order to provide a standardized collection method of the patient experience, CMS developed the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. The post-discharge HCAHPS survey is the primary metric of measuring a patient's perception of care provided. Hospitals administering these surveys are expected to publicly report the patient-satisfaction results quarterly, allowing consumers to view comparisons made between hospitals, creating incentives for hospitals to improve the patient experience. According to Logan (2016), 30% of Medicare reimbursement is based on value-based care metrics, and is projected to increase to 50% by 2018. Value-based care measurements, such as the patient experience, pay providers based on the quality of care delivered to patients, rather than the quantity of patients treated.

Interventions targeted towards making patients comfortable while hospitalized are used to assure value-based care metrics, specifically the patient experience, are being met. Intentional hourly rounding (IHR) has been implemented across inpatient hospital units as an evidence-based strategy to address issues that have been identified from post-discharge patient satisfaction surveys. According to Allen, Rieck, and Salsbury (2016), this structured and purposeful evidence-based format of rounding is intended to meet common patient needs while hospitalized, including assessment of patients' pain, toileting, positioning, and ability to reach possessions. By

taking a proactive approach to bedside patient care, experience scores are correlated with reduced patient anxiety and fear leading to higher satisfaction with care by healthcare providers.

Purpose Statement

The success of IHR is impacted by the quality consistent approach used during implementation of the intervention. According to Kessler, Claude-Gutekunst, Donchez, Dries, and Snyder (2012), one mechanism to assure consistency in the delivery of IHR is the development of a standardized scripting tool. This paper reports how evidence-based standardized scripting implemented on an inpatient acute care unit affects healthcare provider compliance with IHR. The purpose of the quality improvement (QI) project is to evaluate whether standardizing the method of IHR scripting improves healthcare provider IHR compliance, and if increased IHR compliance results in increased patient satisfaction during the hospitalization.

Literature Review

Background

Ford (2010) indicated that patients value nurse-to-patient relationships and appreciate nursing reliability, responsiveness, and efficient communication. In order to address the issues that have surfaced with the use of patient satisfaction surveys, the evidence-based intervention of IHR is implemented to anticipate patient needs and enhance patient-to-nurse relationships. Factors enhancing the success of IHR include healthcare providers' consistency and quality approach during patient care. One means to enhance the delivery of IHR by healthcare providers is the use of evidence-based, standardized scripting. The use of scripting allows healthcare providers to become more familiar with keywords that should be used when performing IHR.

When these keywords addressing a patient's pain, toileting, and positioning needs are used in a consistent manner by healthcare providers, patients are more satisfied during their hospital stay.

Forde-Johnston (2014) stated that IHR comprises a six-step process. This process includes (1) introducing oneself and how IHR will be used on the unit, (2) asking open-ended questions prior to applying any checklist or scripting, (3) assessing the 4P's of patient needs and providing care accordingly, (4) completing documentation related to the care provided, (5) documenting IHR on the whiteboard within the patient room, (6) and explaining to the patient when the next round will take place while ensuring the call light is within the patient's reach. More importantly, a means of quality improvement, evidence-based IHR scripts are used to guide how the intervention is performed at the bedside by healthcare providers. In a study by Ford (2010), these scripts helped to elicit key information from the patient regarding his/her personal needs, and allowed nursing and patients to work cohesively in order to meet these needs.

Staff commitment and support for using IHR is necessary to consider when implementing standardized scripting. Therefore, rounding models are used in coordination with healthcare provider training to facilitate a deeper understanding of what needs to be completed during each round and why. This also encourages commitment with the rounding initiative. According to Hutchings, Ward, and Bloodworth (2013), upon completion of educational sessions, healthcare providers verbalized an increased understanding of how to effectively and consistently use the IHR 4P's. This teamwork approach to IHR allows for opportunities in improvement of practice through coaching and feedback with IHR mentors. As stated by Halm (2009), facilitating nursing research into bedside practice allows the profession to take ownership and accountability for their practice with the goal of improvement in patient care outcomes. The following sections

discuss the search strategies used to locate articles in the literature review as well as the relationship among the identified themes of hourly rounding, nurse education, compliance, and patient satisfaction.

Search Strategies

A review of the literature in this report includes the themes of IHR, patient satisfaction, healthcare provider education, and compliance. Seven electronic databases were included in the search: Academic Search Complete, CINAHL, Consumer Health Complete-EBSCOhost, Education Research Complete, Health Source: Nursing/Academic Edition, MEDLINE, and Ovid. The keywords used to search for articles included *hourly rounding, nursing, patient satisfaction, nurse education,* and *compliance.*

Inclusion/Exclusion Criteria

Articles published after 2005, written in English, peer reviewed, with references available, defined the inclusion criteria. Studies involving both pediatric and adult patients were included based on limited pediatric results. Excluded were studies conducted outside of an inpatient hospital system.

Search Results

The search strategies yielded 568 articles. Considering the relevance to the purpose of the literature review, 524 articles were removed based on duplication and screening of the article title and abstract. Table 1 illustrates the keywords used in each search, the number of articles located, and how many articles were saved based on removal of articles because of duplication and screening for relevance of article title and abstract.

Table 1

Initial Search Strategies

Keywords	Articles Located	Articles Saved
hourly rounding and patient satisfaction	112	19
hourly rounding and nursing and patient satisfaction	110	7
nurse rounding and hourly and inpatient and patient satisfaction	81	2
nurse rounding and hourly and inpatient and family satisfaction	71	2
education and compliance and hourly rounding and nurse	64	2
nurse education or nurse training and compliance or adherence and hourly rounding	77	3
standardized scripting and quality improvement and nursing	40	5
scripting in nursing and rounding and patient satisfaction and nurse education	13	4

After initial strategies were conducted, 44 articles were analyzed based on the contents of their full text. After review of these articles, an additional 27 articles were removed based on defined inclusion and exclusion criteria, leaving 17 articles to comprise this review.

Quality Appraisal and Characteristics of Articles

The 17 articles in the final sample were assessed for quality using rapid critical appraisal tools developed by Melnyk and Fineout-Overhold (2015). After analysis, all 17 studies were included in the review.

Literature Review Themes and Subthemes

From the 17 articles, the four major themes of hourly rounding, nurse education, compliance, and patient satisfaction emerged. Within each theme, subthemes were noted. Hourly rounding had three subthemes, nurse education had three subthemes, compliance had three subthemes, and patient satisfaction had two subthemes, discussed in the following section.

Hourly Rounding

Standardization and rounding. The first subtheme that emerged from hourly rounding was the use of standardizing the rounding approach. A study by Brosey and March (2015, April) implemented IHR in a structured, standardized manner monitoring for changes in outcomes of patient satisfaction, patient falls, and hospital-acquired pressure ulcers over a three-month period. Patient satisfaction scores were collected through the HCAHPS post-discharge survey and QI (falls and pressure ulcers) was measured through event reporting. Implementation of IHR in this study occurred in a structured approach. Prior to implementation, a meeting with the eight member unit-based nursing quality council resulted in unanimous approval to proceed with IHR implementation. The first step of implementation was a 20-minute educational session provided to all unit healthcare providers. Healthcare providers were presented with a brief overview of current evidence, a definition of structured hourly rounding, historical performance indicators, and goals for improvement in the upcoming fiscal year.

The quality council initially set a goal of 80% rounding compliance. IHR was considered completed when a healthcare provider entered the patient's room, evaluated the IHR 4P's, and documented on designated rounding flowsheets. During the three-month study period, 582 patients were discharged from the unit, with 81 patients returning the HCAHPS survey. Post-intervention, patient satisfaction measured through returned HCAHPS surveys increased from 6.1% to 30.9%, with the exception of responsiveness of staff.

Rounding and dialoguing. The second subtheme of hourly rounding examined how dialoguing was used when healthcare providers presented the use of IHR to patients. In a study by Ciccu-Moore, Grant, Niven, Paterson, Stoddart, and Wallace (2014), an IHR checklist was developed and utilized by healthcare providers throughout the IHR implementation period. This

checklist was developed after the authors evaluated other literature studies and found a dialogue should be used when healthcare providers initially meet the patient during daytime and nighttime rounding. Additionally, information in the form of a leaflet handout was provided to patients and visitors in order to improve communication on the use of IHR.

Data were collected for one year following the implementation of IHR. Comparisons of pre- and post-intervention results indicated a 39% reduction in falls, and a 36% reduction in the use of patient call lights. When reviewing patient experience questionnaires and staff evaluation, results yielded that rounding provided a quieter patient environment, appropriate assistance with food and fluids, improved communication between patients and staff, and increased staff satisfaction.

Rounding and scripting. The final hourly subtheme looked at another approach towards standardizing healthcare providers' use of IHR by scripting each round. Reimer and Herbener (2014) required healthcare providers to perform hourly rounds from 6am to midnight, and every two hours from midnight to 6am. The 3P's addressed during each round included pain, positioning, and proximity of personal needs. Documentation was standardized through an electronic patient rounding log and integrated into the patient's permanent medical record. The rounding log implemented consisted of the healthcare provider (1) knocking on patient's door, (2) introducing self, (3) explaining, (4) asking, (5) scanning the room, and (6) planning for the patient's future needs. Standardizing the purpose of each round was identified as a key component of the study's hourly rounding process.

Patient satisfaction was measured through two HCAHPS metrics: attention to special or personal needs and adequate precautions to protect safety. Both metrics demonstrated an upward trend post-rounding implementation. Additionally, Reimer and Herbener (2014) recommended at

the beginning and post-IHR implementation, that the unit should identify IHR champions, celebrate successes, and openly communicate expectations.

Nurse Education

Initial education and educational reinforcement. As a subtheme of the next major literature review theme, nurse education, the method of education for each scripting tool was determined to impact healthcare provider compliance with the IHR intervention. Graci (2013) studied the implementation of IHR in a Neonatal Intensive Care Unit (NICU). Healthcare providers were educated on the intervention during a mandatory informal presentation. This presentation included education on (1) the importance of IHR, (2) when rounds should be performed, (3) how to document IHR, (4) encouragement of parent involvement, (5) the focus of IHR, (6) definitions of the 4P's, (7) and the importance of ongoing communication with patient families. A summary of the IHR practice was placed in each patient room to encourage communication between provider and family. During IHR implementation, email reminders were sent to healthcare providers, and group huddles were performed. The admission nurse in the NICU was the designated provider to perform the initial introduction of IHR upon admission to the unit. Within this study, IHR was performed every two hours at night and every hour during the day.

The second phase of IHR implementation by Graci (2013) focused on reinforcement of the current practice. Recognition of previous IHR compliance was provided to staff. Monthly monitoring was conducted on patients at random to confirm continued compliance with IHR by healthcare providers. Suggestions for improvement were sent to staff by email and through in-services and huddles to discuss how to meet the needs of the patients and families. Comments and suggestions from parents obtained through post-discharge satisfaction surveys were

reviewed during an in-service, which allowed feedback and suggestions for improvements with IHR to be discussed.

Coaching and rounding. The second subtheme of nurse education looked at how coaching was used to educate healthcare providers on the use of IHR. Hutchings, Ward, and Bloodworth (2013) used the Caring Around the Clock model. Education of the model required managers to participate in a one-day workshop to learn how to provide real-time feedback to healthcare providers who would be using the model. The model required nurses to place a clock at the patient's bedside displaying the time the nurse's next round would be performed. Each round focused on the 8Ps: play, protect, position, pressure, pain, personal care, plan of care, prescriptions, as well as questions and support.

Responsibility within this model was assigned to the charge nurse to assure IHR was being performed by bedside providers. The charge nurse inquired with patients and families by asking specific questions to determine if staff was completing the rounding process. The charge nurse was expected to provide feedback to the staff. This study was piloted over 14 months, across 79 units. During this time, rounding coaches were available on all units to lead training and provide supportive assistance. The results yielded multiple benefits, including healthcare providers perceiving leadership to be more available, increased staff understanding of how to use the IHR 8P's, and improved opportunities for coaching and direct feedback between mentor and staff member.

Nursing education and enhanced communication. In the final subtheme of nurse education, the communication with healthcare providers and the importance of emphasizing the potential benefits of IHR were examined. From a fishbone analysis diagram completed by Downs, Standish, and Allred (2012), IHR was identified as an intervention to decrease the

incidence of falls, and the use of restraints and call lights, as well as to increase patient and nurse satisfaction. A change-of-shift bedside handoff tool was developed to enhance communication of IHR between shifts. This was tailored for the unit's specific needs and was developed by referencing sample tools obtained during a review of the literature. The scripting tool included examples of how to address each of the 4P's and was piloted on the unit. Staff using the handoff and scripting tools reported improved time management and enhanced workflow. Downs et al. (2012) concluded that education to all staff, persistent leadership, team champions, sharing successful outcomes, listening to feedback, and making adjustments to practice when necessary are essential to long-term IHR success.

Compliance

Nursing compliance and patient satisfaction. In the third literature review theme, compliance, the subtheme of how healthcare provider compliance with IHR impacts patient satisfaction emerged. Using the Participatory Action Research (PAR) methodological approach, Harrington, Bradley, Jeffers, Linedale, Kelman, and Killington (2013) studied the implementation of IHR on a medical unit. This approach has four cycles: assessment, implementation, evaluation, and reassessment, which act as phases to implement and assess the value of an intervention. The unit advisory committee developed evidence-based scripting cards and a nurse rounding log to promote the use of IHR on the unit. After 28 days of implementation, only 86 patients participated in IHR. The advisory committee who oversaw the project determined that 30% of the rounding logs were completed. Following a 33% return rate of post-discharge satisfaction surveys, patients rated their care *highly* in the categories of being seen promptly, providing assistance with meals, drinks and comfort, pain relief, safety, and respect.

Nursing accountability and compliance. As the second subtheme, accountability with IHR and how healthcare provider buy-in with the intervention impacts IHR compliance were explored. To determine how to achieve this buy-in and increase healthcare provider accountability with IHR, Kessler, Claude-Gutekunst, Donchez, Dries, and Snyder (2012) explored what patients' desire during an IHR. During post-discharge telephone contact, patients expressed a need for better pain management, improved responsiveness to call lights, and more attentive care while inpatient. Based on this information, council members designed the IHR protocol accordingly. It was determined that the rounding protocol enhanced unit teamwork, specifically with collaboration between healthcare providers.

Initially, educating healthcare providers on IHR involved completion of a pre-implementation assessment survey where education was provided in a one-hour workshop. During this workshop, healthcare providers signed a statement indicating their commitment, and pledged to adhere to the developed IHR protocol. Healthcare providers agreed to focus attention on pain, position, patient's personal needs, and to offer a scripted response to determine what other needs a patient may have prior to the provider leaving the room. Healthcare providers also agreed to educate the patient that within an hour, a healthcare provider would check on him/her.

IHR was listed as a regular agenda item at monthly staff meetings. A welcome letter to patients discussing the unit's IHR practices was developed at a unit staff meeting. The unit director and educator agreed to make daily rounds on each patient to assure the rounding log was completed. Recognition for compliance with IHR became a regular unit activity. As a result of the unit's success with IHR, healthcare providers became rounding champions, serving as role models of IHR for the entire hospital.

Prior to rounding being implemented, patients identified the unit's promptness of response to call lights through discharge follow-up phone calls and narrative comments on patient satisfaction surveys at 86.7%. Post-implementation of IHR, responsiveness initially increased to 88.7% after one year, and unfortunately trended in a downwards manner each year after. Pain control was not affected by the use of IHR. Patients' perceptions of how well staff worked together started at 90.8%, increasing to 92.1% after one year, but gradually decreased to 89.9% after six years. The unit won "Search for Best Practice Award" and saw a decrease in nurse vacancy from 19.5% to 0% within three years. Consequently, the unit's patient average fall rate started at 5.46 and ended at 2.19 after the six year time period.

Implementation method and compliance. The final subtheme of compliance is examining the method in which IHR is implemented in a healthcare system. In a transition of focus towards reducing patient falls and the prevalence of pressure ulcers, Lowe and Hodgson (2012) implemented IHR for best practice. A rounding log was developed to address a patient's pain, potty, position, and proximity of patient's possessions. Education on the log for healthcare providers was implemented through an email and informal verbal training. The training included the required documentation, and anticipated benefits of IHR. Information provided during the informal educational sessions was kept on the unit to be used as reference during implementation. Throughout the two-week rounding implementation period, several informal checks were conducted to assure each patient had an active rounding log, completed hourly. It was determined by Lowe and Hodgson (2012) that during the implementation period, 44 out of 51 rounding logs were completed.

Patient satisfaction

Rounding and patient satisfaction. As the final major theme of the literature review, patient satisfaction had two subthemes. The first was how IHR impacted patient satisfaction. A quasi-experimental study by Meade, Bursell, and Keelsen (2006, September) hypothesized nursing rounds on medical-surgical units would reduce call light use, increase patient satisfaction, and improve QI measured through recorded patient falls. Experimental and control group assignments were non-random, where the Chief Nursing Officers (CNOs) and nurse managers of participating hospitals assisted in these assignments. One-hour rounding was defined as rounds performed hourly between 6 am and 10 pm, and once every two hours between 10 pm and 6 am. Two-hour rounding was defined as rounds performed once every two hours during an entire 24-hour period.

There were 22 hospitals (46 units) who participated. Data from eight hospitals (19 units) were excluded from analysis because of poor reliability and validity of data collection methods. A *t test* was used to compare patient satisfaction scores from data collected on the every one-hour and every two-hour rounding units. This was compared with data collected during a four-week, pre-IHR implementation time period. Prior to IHR, the mean score during the 28-day period on units using the one-hour rounding approach was 79.9 on a 100-point scale. The mean score during the rounding protocol implementation on these units increased to 91.9 ($p= 0.001$). Prior to rounding, the mean score for the units participating in the two-hour rounding protocol was 70.4. During the rounding protocol for these units, the mean score increased to 82.1 ($p= 0.001$).

In another literature review, patient satisfaction results were studied by Mitchell, Lavenberg, Trotta, and Umscheid (2014, September). Medline, EMBASE, and CINAHL were

reviewed in compliance with an a priori protocol to ensure objectivity in the selected studies. For quality assurance, complete agreement between two analysts determined which articles met the inclusion criteria for the literature review. Eleven articles were identified, with nine observing improvements in post-discharge patient satisfaction score measures. From the eleven articles, seven used a statistical significance test to evaluate the data, with four finding statistically significant improvements in patient satisfaction as a result of IHR.

In a quasi-experimental study by Olrich, Kalman, and Nigolian (2012), patient satisfaction scores resulting from the IHR implementation were observed. Satisfaction data were collected for six months prior to intervention. The experimental unit was determined by the nurse manager's desire to be actively involved in the study. Two weeks prior to initiating IHR, the unit Certified Nursing Specialist (CNS) led an educational session on rounding. Additionally, medical-surgical float pool nurses and nursing assistants (NAs) who may be staffing the unit were educated on IHR. Rounding occurred hourly between 6 am and 10 pm and every other hour between 10 pm and 6 am. The following were designated tasks to occur during an IHR: (1) staff greeting the patient, (2) pain assessment, (3) toileting assistance, (4) positioning and comfort assessment, (5) environmental check, (6) discussion with the patient to determine if all needs are met, and (7) providing patient with information for when the next IHR will be conducted.

Leadership rounds performed three times a week verified the provider compliance with IHR. Four months after initiation, a one-hour refresher course taught by the CNS was mandated to reinforce expected rounding behaviors and to provide in-person feedback. Chi-square tests and rank sum tests were used to compare pre- and post-IHR data. No statistically significant differences occurred ($p=0.383$) in the experimental group based on post-discharge patient satisfaction score surveys. However, patients who had been frequently admitted to the unit noted

a difference in satisfaction with care after implementation of IHR, including an increase in perceived staff attentiveness while inpatient. Potentially influencing the results, during the study time period, an unexpected decline in hospital-wide patient census occurred, resulting in untrained float staff to fill the experimental unit needs.

Another review of the literature by Halm (2009) retrieved eleven articles on IHR, with ten of the eleven performing every hour rounding, and one of the eleven performing every other hour rounding. Nine of the eleven studies observed an increase in patient satisfaction scores post-IHR implementation, and the studies concluded the increase in satisfaction caused patients to recommend hospitals using IHR. Prior to IHR implementation, 52% of patients were neither certain nor uncertain they would receive their desired assistance if needed. When rounding occurred, 72% of patients reported they were very certain that caregivers would attend to their immediate needs.

Another review of the literature by Forde-Johnston (2014) searched the databases CINAHL, Medline, and The Cochrane Library using the keywords *nursing, intentional rounding, purposeful rounding,* and *proactive patient rounds.* From the searches, nine articles were examined. Qualitative data were included in the form of questionnaires, interviews, and patient satisfaction surveys. The review found better pain management, improved patient experience, and an increase in patient and staff satisfaction as a result of IHR. In one study, the number of formal complaints filed on a unit decreased from an average of 4.5 per month to 1.5 per month. Unfortunately, limited statistical analysis occurred throughout the studies in the review, affecting the ability to generalize the study results.

Gardner, Woollett, Daly, and Richardson (2009) hypothesized in a quasi-experimental pilot study that hourly comfort rounds would result in higher patient satisfaction scores

compared to units not practicing comfort rounds. In total, 61 patients and 23 nurses comprised the experimental group and 68 patients and 16 nurses constituted the control group. The Patient Satisfaction Survey (PSS) was used to illustrate the effects of IHR on patient satisfaction, and was subjected to psychometric testing to assure survey reliability. This instrument contains nine statements related to patients' perception of needs being met in the categories of timely manner, individualized care, attention to call lights, and nursing care. Patients were given the option to respond to each statement on a range from (1) to (5), with 1 being *strongly agree* and 5 being *strongly disagree*. Patient responses post-IHR clustered in the *strongly agree* and *agree* in both the experimental and control groups, and yielded no statistically significant difference between the two.

Patient satisfaction as a result of every two-hour rounding was also observed in a study by Blakely, Kroth, and Gregson (2011). Using the case study methodology, patient satisfaction data were collected on a weekly basis by the Gallup Organization. HCAHPS surveys were updated quarterly and viewed online. Patients were interviewed during hospitalization and results were compared against formal post-discharge survey responses. Staff surveys were administered to determine compliance of IHR and thoughts related to the implemented system. Staff reported a concern that everyone may not follow the same process while checking a patient's 4P's, and that there was a need for a more structured format of delivery of IHR to provide a consistent message to patients.

Post-implementation, patient satisfaction scores increased in correlation with IHR. Overall patient satisfaction was rated on a scale of 1 to 4, where 1 = *completely dissatisfied* and 4= *completely satisfied*. Two hundred patients were sampled with a starting patient satisfaction score of 3.50. At the end of a 101 sample measurement, satisfaction scores increased to 3.60.

Post-discharge, words that were used to describe staff included "kind", "considerate", and "compassionate". Blakely et al. (2011) recommended further maintenance of and enthusiasm for the rounding process.

Patient perception of nurse responsiveness and satisfaction. The final subtheme of the literature review looked at how patients' perceived healthcare provider responsiveness to change as a result of the implementation of IHR. In an attempt to learn what a *timely response* meant to patients, Tea, Ellison, and Feghali (2008) used the Plan-Do-Check-Act (PDCA) quality methodology to interview 113 patients. When patients were asked, "Did your caregivers make you feel like they were too busy to respond to your requests?" it was determined that 30% of patients responded *some or most of the time*. Additionally, 77% of patients felt that a reasonable caregiver response to general, non-urgent requests was within fifteen minutes. In regards to urgent requests, 49% of patients expressed the expectation of nursing responsiveness within two minutes. When asked how often caregivers responded sooner than expected, 28% responded *always* and 35% responded *sometimes or rarely*. Tea et al. (2008) also identified the most frequent healthcare provider needs of patients as bathroom/toileting, mobility/positioning, pain, and needing things within a closer reach.

This information in the study further identified five root-causes of decreased patient satisfaction as (1) staff not anticipating needs, (2) lack of a structured schedule for routine tasks, placing staff in a reactionary model of care, (3) lack of patient ownership, (4) lack of teamwork, making it easy to hand off issues and expect others to take care of patient needs, and (5) too many process steps in the *response to call light* procedures, leading to an increased potential for delays in patient care needs. From this data analysis, I Care Rounding was implemented as a purposeful rounding intervention. Staff educational needs on the model were met through role-

playing during staff meetings as well as direct managerial feedback. Post-IHR implementation, an additional 4,362 patients were rounded on. *Staff timely response to requests* improved from 47.6% to 84.6%, *staff anticipating needs* improved from 47.2% to 85.7%, *staff rounding hourly* improved from 34.5% to 89.7%, *staff asking 'Is there anything else I can do'* improved from 43.1% to 88.2%, and *RNs sitting discussing goals and needs* improved from 80.6% to 88.5%. The first four measures yielded statistical significance pre/post IHR, with the exception of the fifth measure yielding a nonsignificant *p* value of 0.0877. It was concluded that the use of I Care Rounding improved patient satisfaction with care provided.

Conceptual Theory

The Henderson (2012) Need Theory guided this project. According to this theory, nursing activities are categorized into fourteen components based on human needs. The theory assumes that nurses care for patients until they are able to care for themselves. It also assumes that nurses are willing to serve and devote themselves to patients, day and night. Consideration is focused on a nurse providing a patient with his/her biological, psychological, sociological, and spiritual needs. This theory applies a holistic approach to cover all needs of the patient. In particular, Henderson's (2012) Need Theory discusses the physiological components of a patient's needs. These include eating and drinking adequately, eliminating body wastes, and moving and maintaining desirable positions.

Implementation of IHR at the intended hospital serves the purpose of meeting the inpatient desires of the patients who are receiving care. The practice of IHR is implemented on an hourly schedule, all 24 hours, to patients on the unit. Healthcare providers who are practicing IHR are expected when asking questions regarding the patient's 4P's to address needs of the patients from a holistic standpoint. Within the theory, it is assumed that nurses are willing to

serve patients day and night, and that nurses should be educated to fulfill the patient's desire to return to a healthy state.

Each of the four identified theory concepts correlates with the use of IHR. The first concept is that of the individual, where a patient is presented as a sum of parts. This QI project uses the evidence-based intervention of IHR to consider the needs of a patient to be addressed to correlate with increased satisfaction with nursing care. The next concept of the theory is environment, which can be directly correlated with the IHR intervention. Using IHR in a scripted, standardized way assures that patients are comfortable, repositioned, and have their essential possessions within reach. Health and nursing are the final concepts addressed in the theory. The nursing process is used to temporarily assist patients with their activities of daily living, using an individualized plan of care for the patient. By using Henderson's (2012) Need Theory in everyday bedside nursing practice, nurses are able to fulfill patients' needs through an evidence-based, accepted practice.

Project

Background

In July 2015, the evidence-based intervention of IHR was implemented on a 24-bed acute care medical unit at a 296-bed Magnet-designated, free-standing Midwestern pediatric tertiary care hospital. At the time of initial implementation of IHR in 2015, education was lacking to unit healthcare providers on the purpose or expected use of IHR. Additionally, resources were not provided to unit healthcare providers regarding how or when to present IHR to patients and families. On a designated start date of July 1, 2015, it was indicated during an email sent to all unit healthcare providers that IHR would be an added expectation of patient care. Assurance of

quality and consistency in the delivery of IHR to patients and families were not ideal prior to IHR implementation.

The unit Partnership Council set a goal to achieve 90% healthcare provider compliance with IHR by July 1, 2016. Compliance with IHR was assessed through the form of manual audits performed by two members of the Partnership Council. These audits consisted of an auditor entering into the patient's room and determining if the communication whiteboard was completed by the healthcare provider with the last time the patient was assessed.

Completing a manual audit consisted of first determining how many patient beds were occupied at the time of the audit. The unit had a total of 24 beds, indicating that the highest number of audits that could be completed for one audit would be 24 if the entire unit was full. To calculate healthcare provider compliance with IHR, the auditor divided the total number of whiteboards completed with an updated time the patient was last checked on, by the total number of whiteboards audited on the unit. For instance, if the unit census was 18 at the time of the audit and 14 whiteboards were updated as on time, the total percentage of healthcare provider compliance for that audit was 14/18= 78%. Each completed audit was added to an Excel spreadsheet and saved to the hospital shared network for each auditor to have equal access to for updating after audit completion.

Prior to implementation of the QI project, results were entered in Excel spreadsheets by month to determine a total monthly compliance for each category. From this, auditors recognized the initial goal of 90% healthcare compliance with IHR by July 2016 was not met (Figure 1). Data from audits revealed the unit compliance as of July 1, 2016 was 78%. However, during each month (Figures 1, 2, and 3), the unit did see an increase in compliance during the year prior to the QI project implementation. Additionally, a downward linear trend demonstrated the

number of late (Figure 2) and not documented IHR (Figure 3) decreased from July 1, 2015 through July 1, 2016. To be considered a late IHR update, the whiteboard had to have not been updated for at least an hour and a half at the time the audit was completed. For example, if the audit occurred at 4 pm, and the patient's whiteboard had not been updated since 2 pm, the compliance was considered late. To be considered as a not completed audit, the whiteboard did not have a documented time the patient was last assessed (Table 2).

Table 2

Defined categories of IHR completion times

"On Time IHR"	Patient's whiteboard updated with time last IHR was performed by healthcare provider within an hour and a half of audit completion time
"Late IHR"	Patient's whiteboard updated with last IHR performed by healthcare provider greater than an hour and a half of audit completion time
"No Documented IHR"	Patient's whiteboard not updated time last IHR was performed by healthcare provider at audit completion time

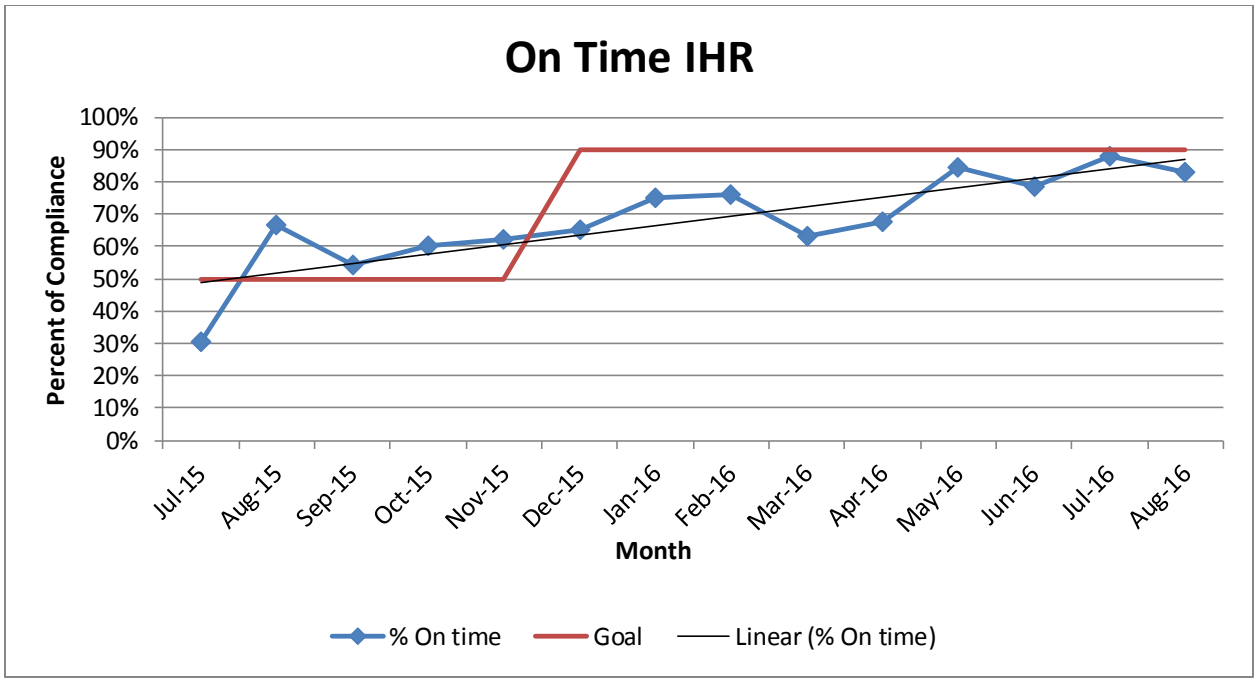

Figure 1. Percent of whiteboards completed on time by healthcare provider pre-QI project.

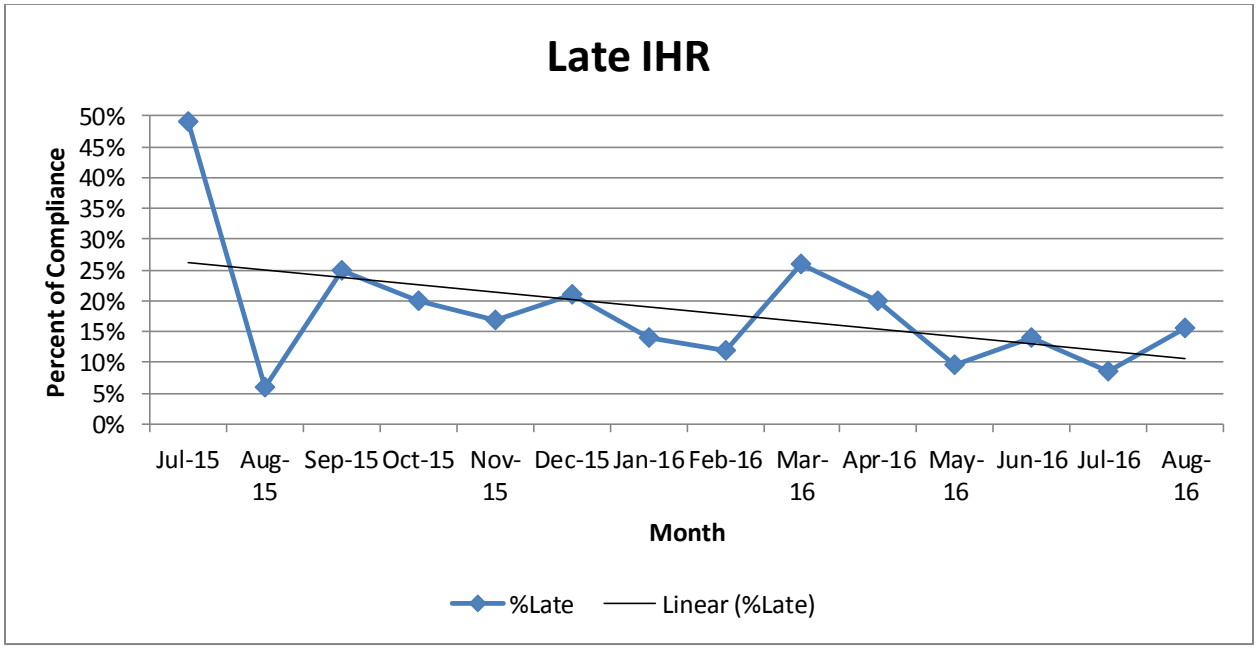

Figure 2. Percent of whiteboards completed late by healthcare provider pre-QI project.

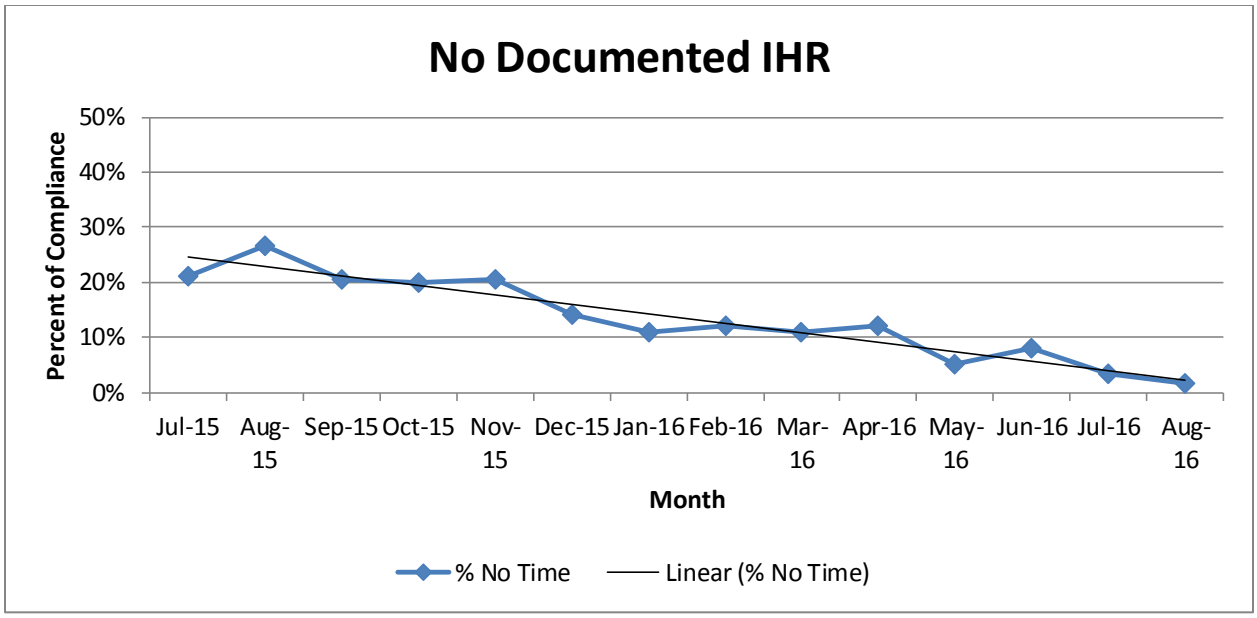

Figure 3. Percent of whiteboards without a time completed by healthcare provider pre-QI project.

The rationale behind auditing the whiteboard was to assess compliance of healthcare providers documenting each time the patient was last assessed for the 4P's as a means of improving communication between healthcare providers, patients, and families. On this unit, IHR was defined by the 4P's: (1) pain, (2) potty, (3) position, and (4) promise to return within an hour. Using the whiteboard in this manner communicates to the patients and families when to expect a healthcare provider next to meet their needs as defined by the 4P's.

Intervention

As a means to increase the unit's compliance with IHR, a standardized scripting tool was developed based on supporting literature by Allen et al. (2016). This scripting tool (Appendix A) was approved by the unit leadership team and was presented at a monthly unit Partnership Council meeting. An appropriate mechanism on how to use the tool, as well as how to educate other healthcare providers on the importance of standardizing IHR for quality improvement, was provided during a two-hour educational session to the council. After receiving education on the

tool, eight council members were designated as mentors to provide one-on-one education on the tool to all unit healthcare providers. The purpose of this scripting tool was reinforced during each educational session to promote consistency and to ensure quality IHR standards were being met among all unit healthcare providers. These healthcare providers were notified by email of the required education as well as a time period of when to complete it by. A reminder email was sent out halfway through the designated time period to remind staff of the educational requirements. One week prior to the designated completion date, the council chair sent a reminder email to each healthcare provider who had not completed the education session, as well as listing in the email the designated mentors who they could contact for completion.

During the educational session, the scripting tool was reviewed and healthcare providers discussed in a role-play format with the council member how they would use this tool in their current practice. This session was included to provide council mentors with an opportunity to promote staff development, to reeducate concerning the purpose of IHR, and to promote consistent use of the scripting tool with all healthcare providers in their everyday practice. When the session was completed, the council member recorded completion on a bulletin board displayed in the unit conference room. Unit management was designated to follow up with providers who did not complete the education in the designated time period. During and two weeks after completion of the education sessions, IHR compliance rates were monitored in the same manual audit data collection format. These post-education session data were compared with previous healthcare provider IHR compliance data to determine if the goal of 90% completion was met, and if nursing compliance with IHR significantly impacted unit patient satisfaction scores.

Key Stakeholders

The effect of IHR on patient satisfaction is an essential correlation to understand because satisfaction directly impacts hospital reimbursement. Based on this correlation, key stakeholders must be invested in the success of IHR. Resources for healthcare provider education on how to effectively present IHR to patients who are hospitalized can facilitate the success of the intervention. Based on findings of the literature review, the success of IHR will directly impact how satisfied patients are while hospitalized, which is indicated through HCHAPS post-discharge surveys. As a result of the value-based care initiative, quality of healthcare is impacted by the perceptions of patients. Thus, the hospital Chief Nursing Officer (CNO) and Chief Financial Officer (CNO) must be invested in the results of this QI project. On a larger scale, nursing research and quality committees who are pursuing the use of IHR to increase patient satisfaction scores must also be diligent in researching the correlation between this intervention and patients' perceived quality of care delivered by healthcare providers.

Methods

Setting and Participants

The setting for the project was a 24-bed acute care medical unit at a free-standing Midwestern pediatric tertiary care hospital. The participants included 43 registered nurses and 10 nursing assistants employed on the acute care medical unit. Nursing support staff, including health unit coordinators (HUC's), were excluded from participating in the required education, as they do not perform IHR as part of their job description.

Ethical Considerations

An Institutional Review Board (IRB) Protocol Application was completed and submitted to the academic university prior to starting this QI project. The academic hospital deferred

responsibility for review and oversight of the IRB protocol to the academic university. The IRB determined the project was a QI project. Informed consent from participants was waived since it was categorized as such.

Healthcare providers required to complete education were notified through their electronic work email. A designated deadline for education completion was provided one month in advance for providers to have optimal time to meet with a mentor during their work shift. Participants of the QI project were provided with a detailed description of the intent and purpose of the education, as well as an approximated time period required to complete the session. In the email, the unit mentors who had been trained on the script and were able to conduct the education session were identified for all unit healthcare providers.

Data Collection Procedure

Beginning July 2015, two auditors (one RN, one NA) were identified as IHR leaders on the unit. The auditors conducted randomized audits on the dedicated whiteboards and determined the percentage of whiteboards that were completed on time, late, or had no time listed. Each patient whiteboard had the words *last checked at* in the lower left section of the whiteboard.

On August 25, 2016, unit healthcare providers were informed by electronic email of the QI education requirement, and the deadline for completion on September 30, 2016. During this time, as well as two weeks post-completion of the QI project, audits continued to be collected with the same process as previously described. Data collection of both patient satisfaction scores and healthcare provider compliance with IHR was completed on October 14, 2016. In order to validate that healthcare providers had completed the education requirement, a sheet with all healthcare provider names was posted in the main unit conference room and recorded when

completed by Partnership Council mentors only. Also in this location were two printed copies of the scripting tool to be used by the mentor and healthcare provider during the education session.

Following completion of IHR scripting, access to patient satisfaction survey results was granted by unit management. A unit stoplight report was generated through Catalyst, an online system where HCAHPS scores for the unit are stored for viewing. On the stoplight report, questions that are asked on a post-discharge survey sent to patients are organized as drivers. These drivers are then quantified into quarterly time periods, where Quarter 1 represents January through March, Quarter 2 as April through June, Quarter 3 as July through September, and Quarter 4 as October through December of a year. These quarterly data are then compared against the National Research Corporation (NRC) 60th percentile.

On the report, each driver is color-coordinated to represent how the unit is performing against the NRC 60th percentile. Green indicates equal to or greater than the percentile, yellow is less than the percentile but not significantly, and red is a score that is significantly less than the percentile. The NRC compares patient care experiences to provide a consumer-driven healthcare economy among more than 50,000 hospitals and health care systems (National Research Corporation, 2016).

The drivers selected in this QI project for comparison included the following: Figure 4 (Driver 1) *After pressing the call button, how often was help given as soon as you or your child wanted it?;* Figure 5 (Driver 2) *During this hospital stay, how often did your child's nurses listen carefully to your child?;* Figure 6 (Driver 3) *Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital?;* Figure 7 (Driver 4) *During this hospital stay, how often did your child's nurses listen carefully to you?;* Figure 8 (Driver 5) *During this hospital stay, how often did your child's*

nurses treat you with courtesy and respect?; Figure 9 (Driver 6) *During this hospital stay, did providers or other hospital staff ask about your child's pain as often as your child needed? ;* and Figure 10 (Driver 7) *During this hospital stay, how often did your child's nurses explain things in a way that was easy to understand?*

In order to compare monthly manual audits of IHR compliance against quarterly patient satisfaction data, audit data were compiled into a quarterly format that aligned with the months listed within each quarter on the Catalyst stoplight report. Included within the same Excel spreadsheet, linear graphs were developed that feature pre-QI project correlation between healthcare compliance with IHR to unit patient satisfaction scores. Figures 4 through 10 display line graphs of the selected drivers from post-discharge satisfaction surveys against the unit healthcare provider compliance with IHR.

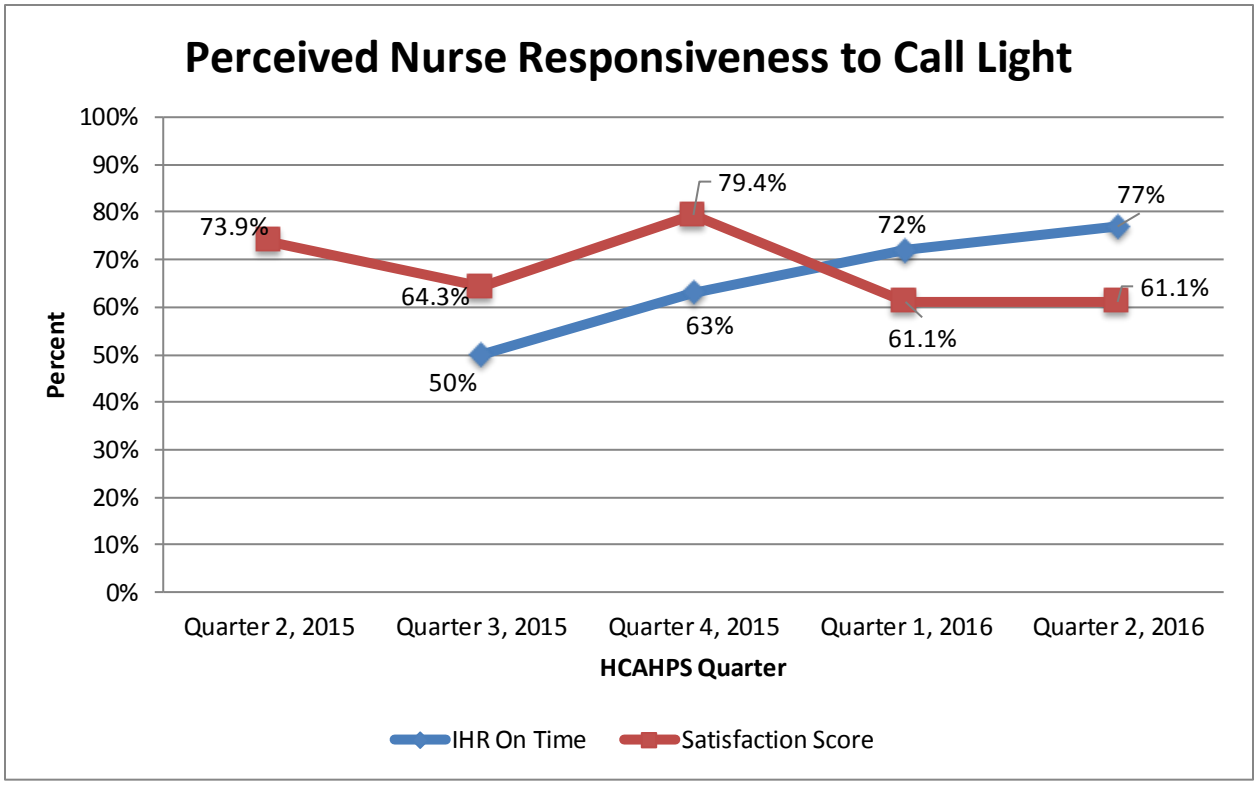

Figure 4. Pre-Intervention Driver 1: After pressing the call button, how often was help given as soon as you or your child wanted it? compared against percentage of on time healthcare provider compliance with IHR.

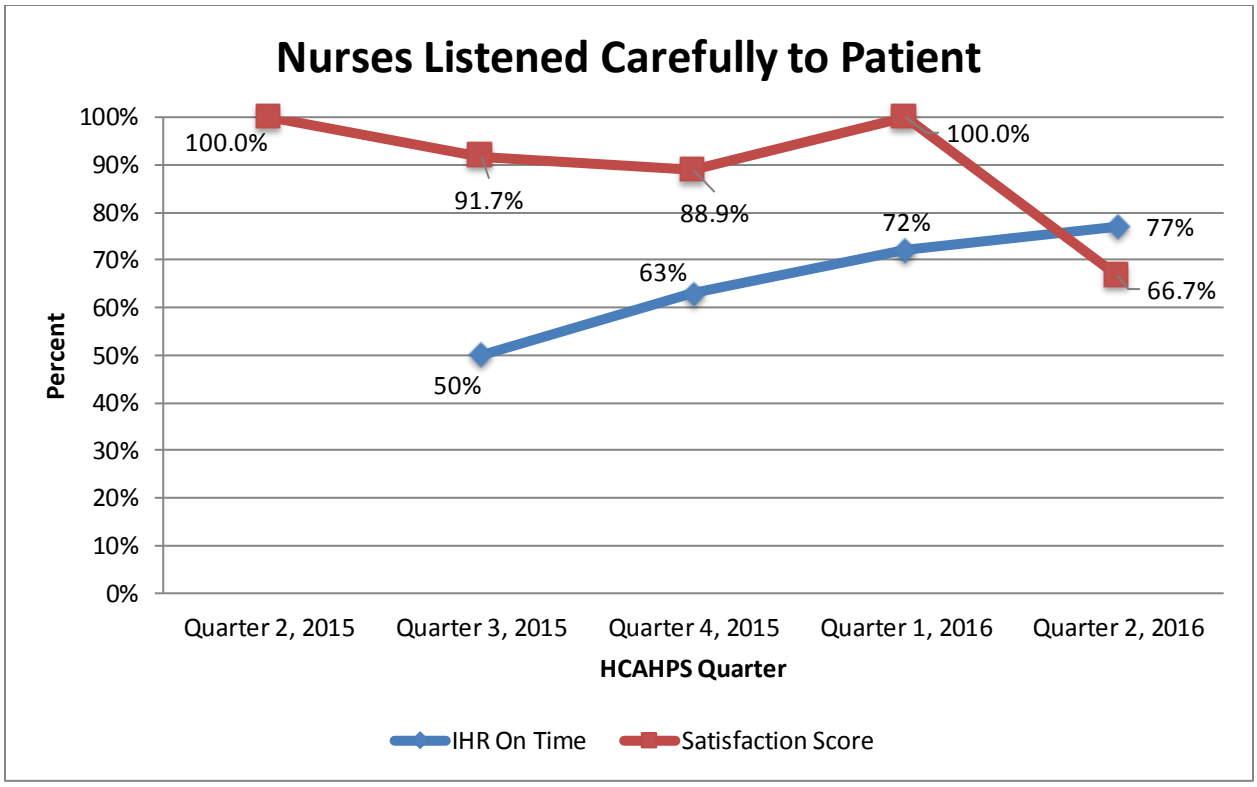

Figure 5. Pre-Intervention Driver 2: During this hospital stay, how often did your child's nurses listen carefully to your child? Compared against percentage of on time healthcare provider compliance with IHR.

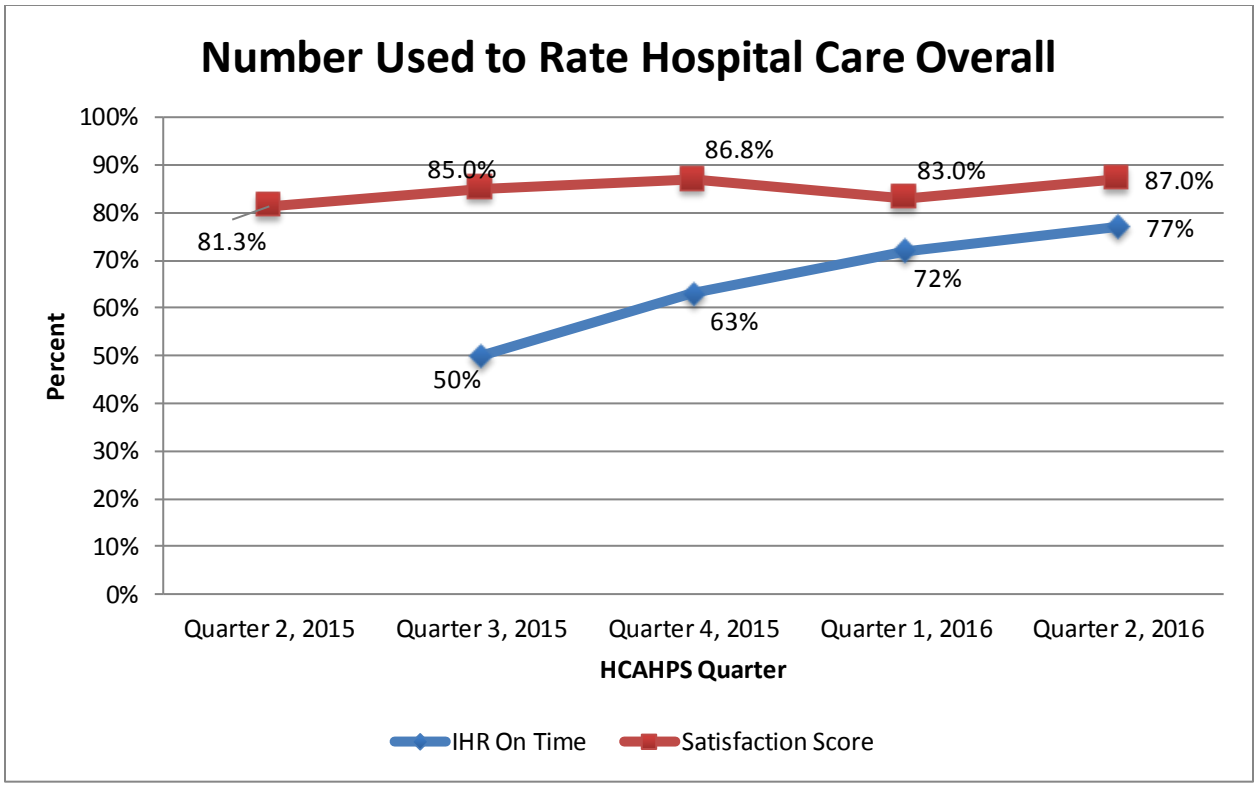

Figure 6. Pre-Intervention Driver 3: Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital? compared against percentage of on time healthcare provider compliance with IHR.

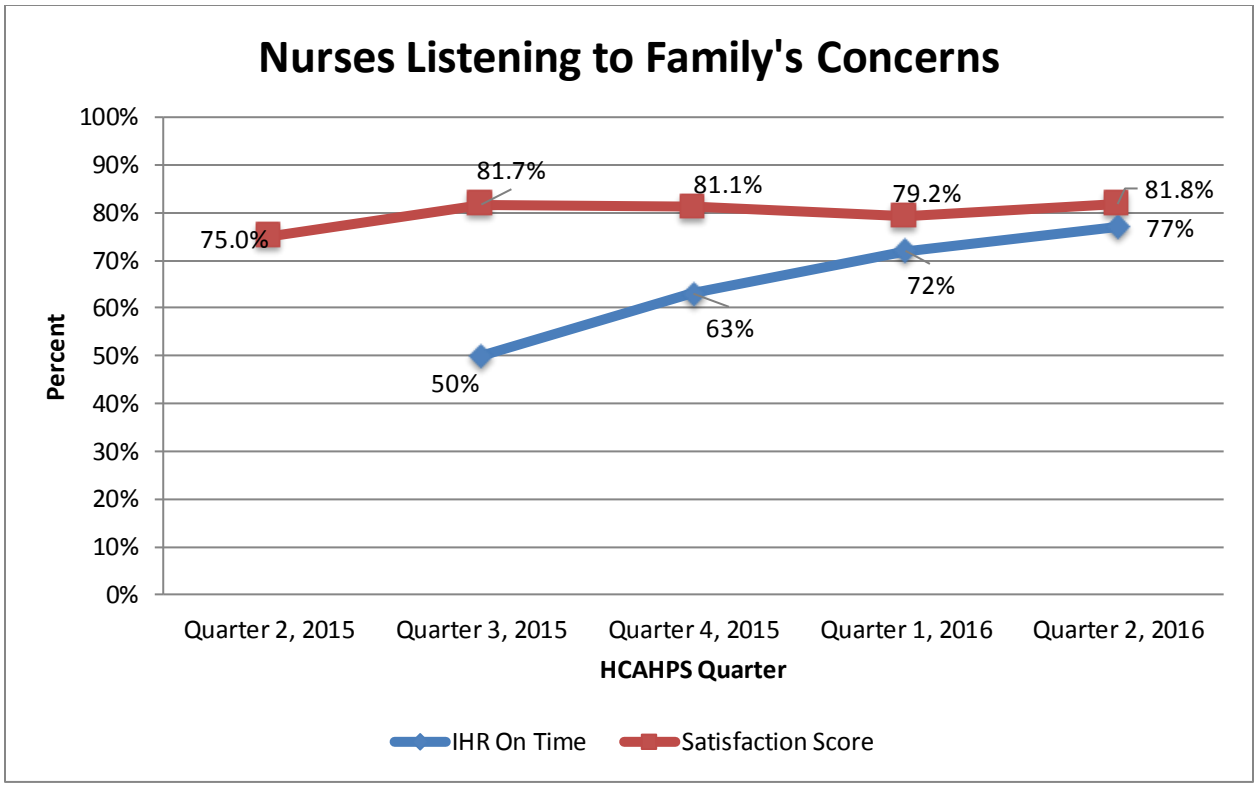

Figure 7. Pre-Intervention Driver 4: During this hospital stay, how often did your child's nurses listen carefully to you? compared against percentage of on time healthcare provider compliance with IHR.

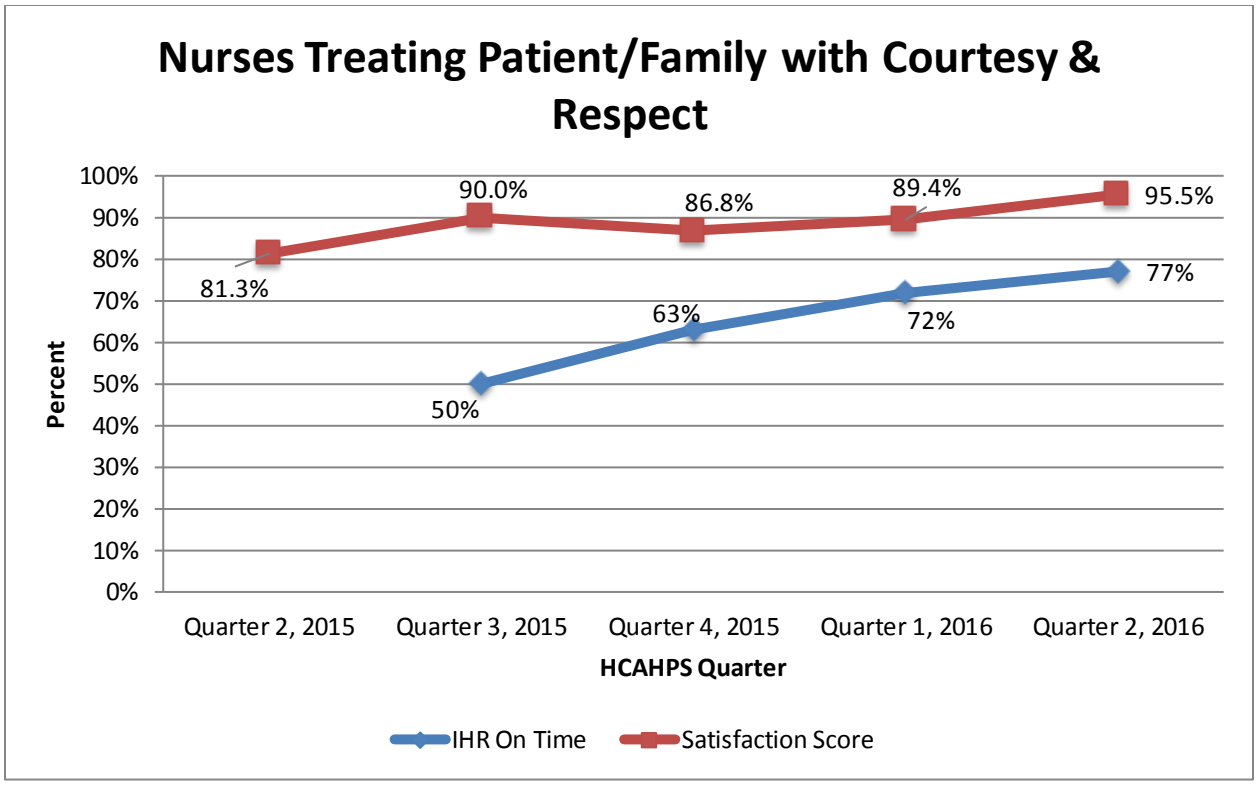

Figure 8. Pre-Intervention Driver 5: During this hospital stay, how often did your child's nurses treat you with courtesy and respect? compared against percentage of on time healthcare provider compliance with IHR.

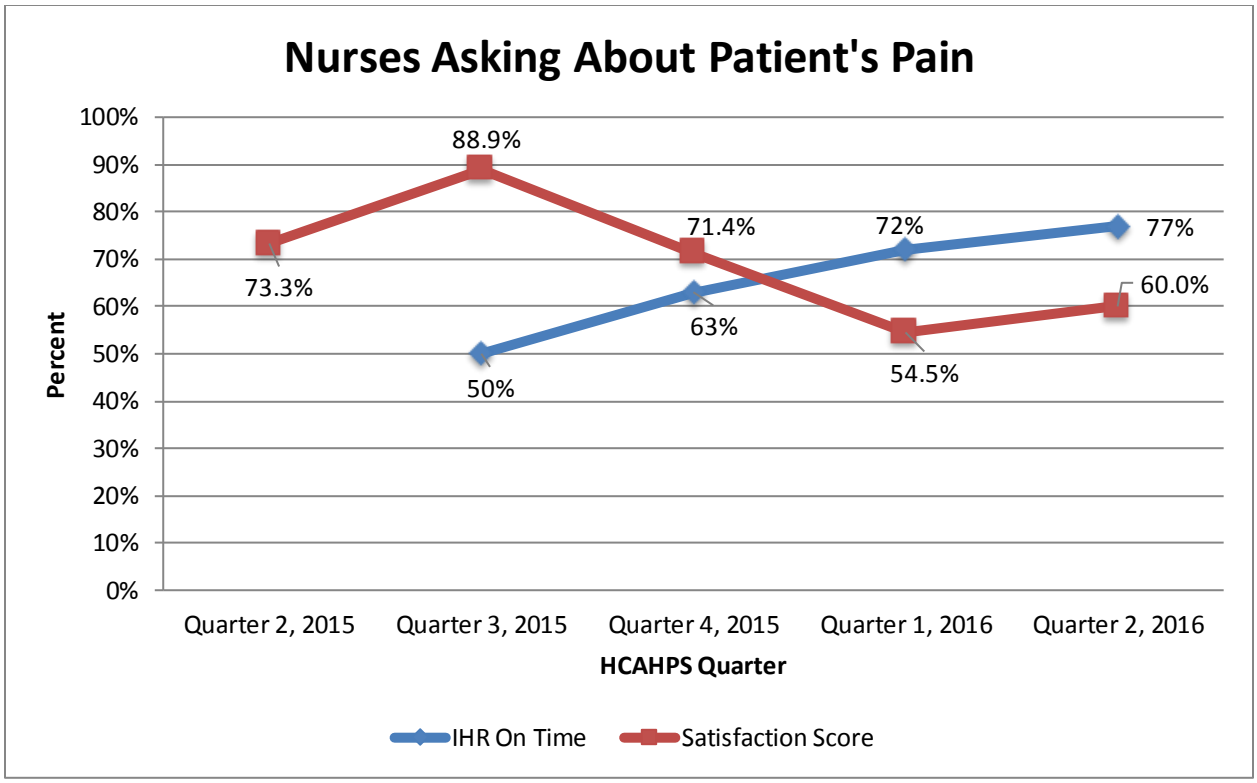

Figure 9. Pre-Intervention Driver 6: During this hospital stay, did providers or other hospital staff ask about your child's pain as often as your child needed? compared against percentage of on time healthcare provider compliance with IHR.

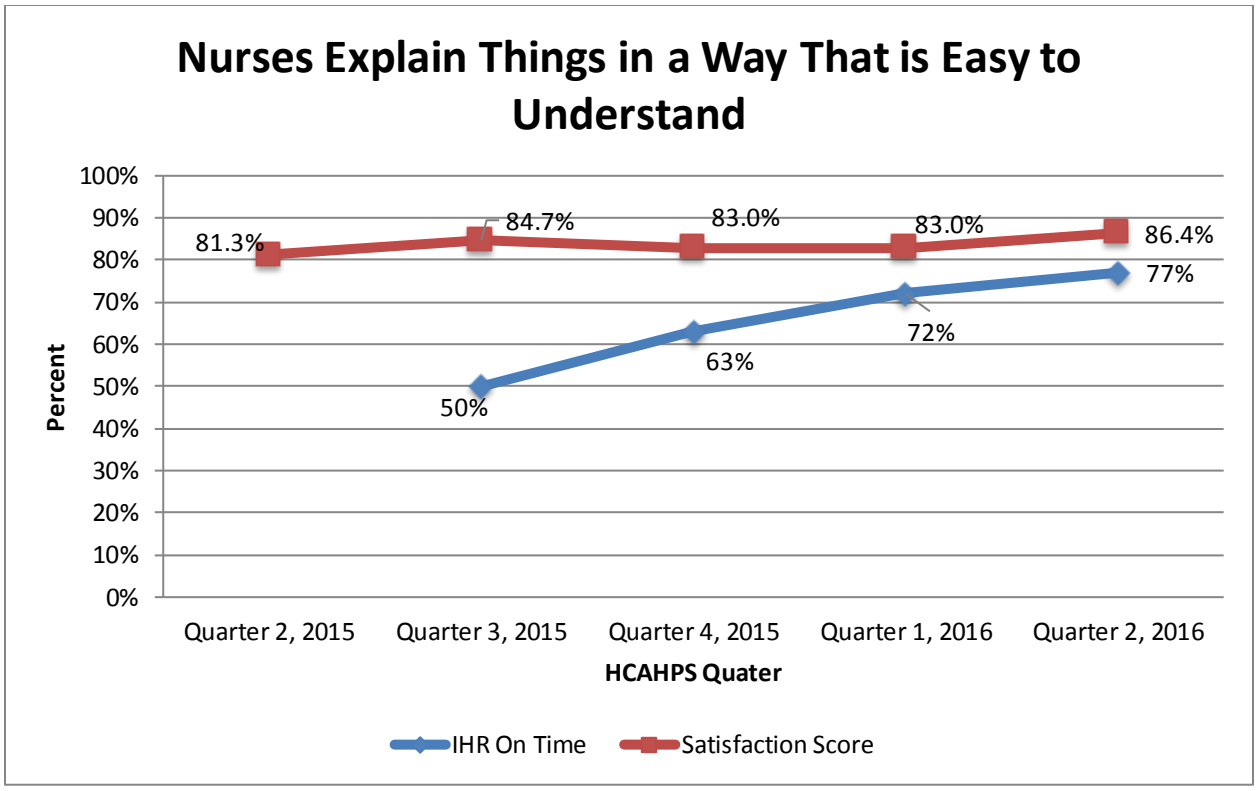

Figure 10. Pre-Intervention Driver 7: During this hospital stay, how often did your child's nurses explain things in a way that was easy to understand? compared against percentage of on time healthcare provider compliance with IHR.

Data Analysis

A total of 53 healthcare providers on the unit were required to attend the scripting session by September 30, 2016. There were 45 healthcare providers who had completed the session, yielding an 85% compliance rate. Prior to the initiation of the QI project, healthcare provider compliance with IHR was 83%. Upon QI project completion, IHR compliance was 82%. Healthcare provider compliance with IHR and the scripting education continued to be monitored through October 14, 2016. By this date, all 53 healthcare providers had completed the educational session, yielding a 100% compliance with IHR. A chi-square contingency table test for independence was used to determine if there was a statistically significant improvement in

healthcare provider compliance with IHR as a result of the scripting intervention. There was a statistically significant improvement (*p=0.0093)* in healthcare provider compliance with IHR (Figure 11).

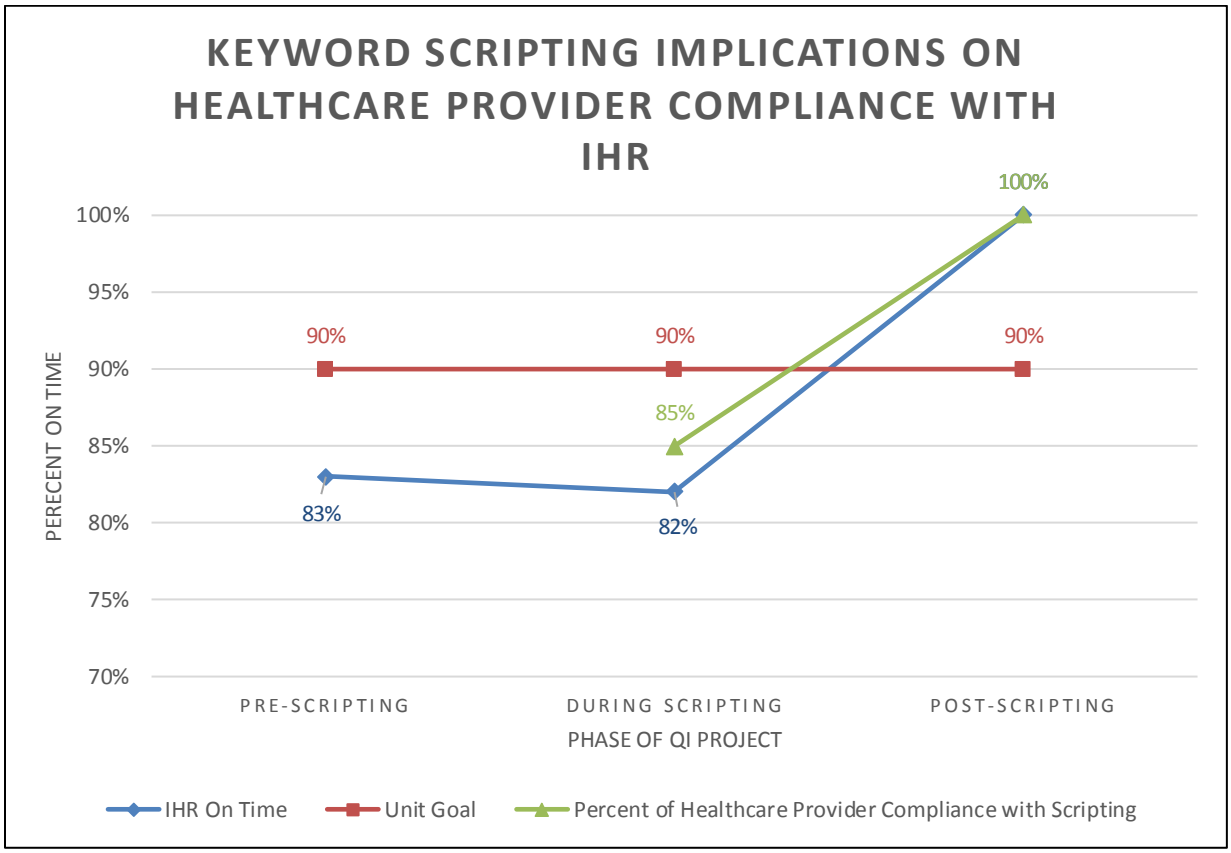

Figure 11. Comparison of healthcare compliance with scripting session and on time completion of IHR.

The graph in Figure 11 is divided into three categories of pre-scripting, during scripting, and post-scripting. Pre-scripting, the percent of healthcare provider compliance with the QI project was not measured, as the project had not been implemented yet. The Partnership Council goal of 90% IHR compliance is shown throughout the graph. As provider compliance increased to 100%, the percent of IHR on time increased to 100% as well. The results of data analysis

indicated a statistically significance (*p=0.0093)* correlation that as scripting was completed, on time IHR increased.

Healthcare provider compliance with IHR during the scripting intervention and for two weeks post-scripting completion was determined through audits, performed in the same manner as pre-scripting audits. Audit data were entered into the Excel spreadsheet (Figures 12, 13, and 14). Given the same parameters of a late documented IHR, in August 2016, 16% of IHR had not been documented in the 90 minutes prior to the audit. In September 2016, late IHR compliance decreased to 8%, and in October 2016 late compliance with IHR was at 0% (Figure 13).

If a whiteboard had not been updated at the time of the audit with an IHR completion time, this was categorized as not documented IHR. In August 2016, IHR had not been documented in 2% of completed audits, increasing to 10% in September 2016. In October 2016, when data collection was completed, not documented IHR was 0% (Figure 14).

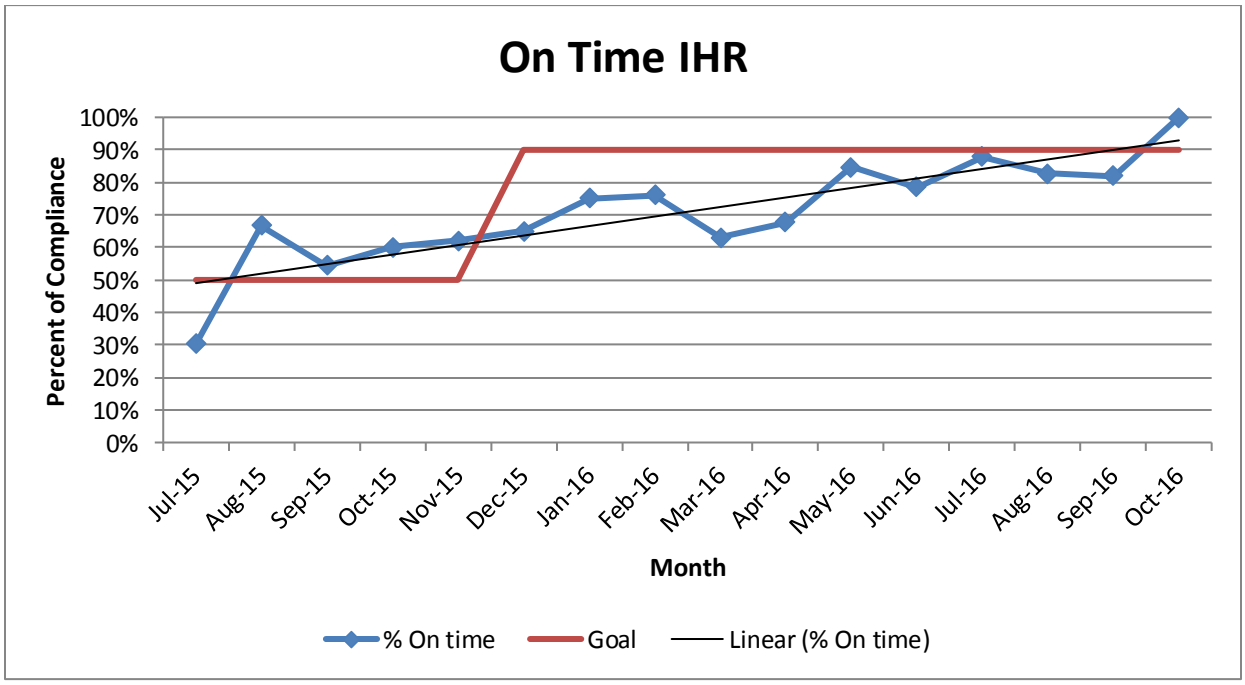

Figure 12. Percent of whiteboards completed on time by healthcare provider post-QI project.

The percent of whiteboards that were completed in the defined parameters of on time is displayed in Figure 12. The QI project was implemented at the end of August 2016. As shown in the line graph, the percent of healthcare provider compliance with IHR decreased initially in September 2016, but then surpassed the Partnership Council's 90% IHR compliance goal in October 2016.

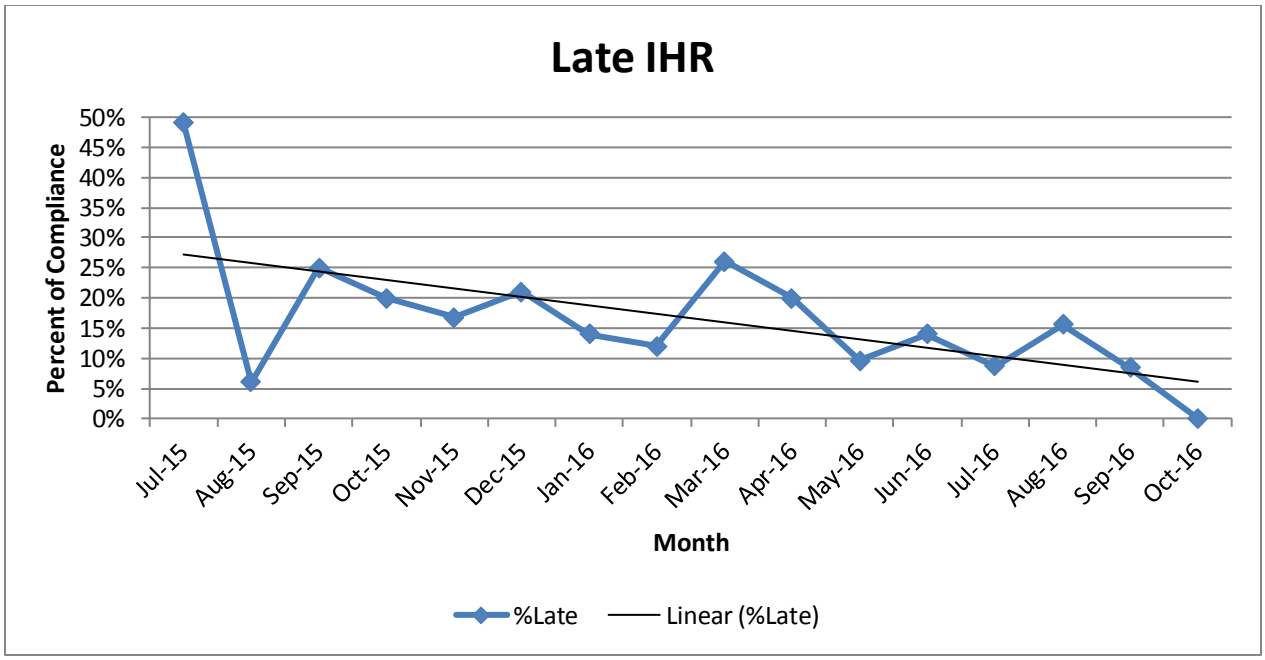

Figure 13. Percent of whiteboards completed late by healthcare provider post-QI project.

In Figure 13, the continued decrease in the number of whiteboards that were updated late occurs from August 2016 through the end of data collection in October 2016. At the end of the QI project, 0% of the audited whiteboards were updated late.

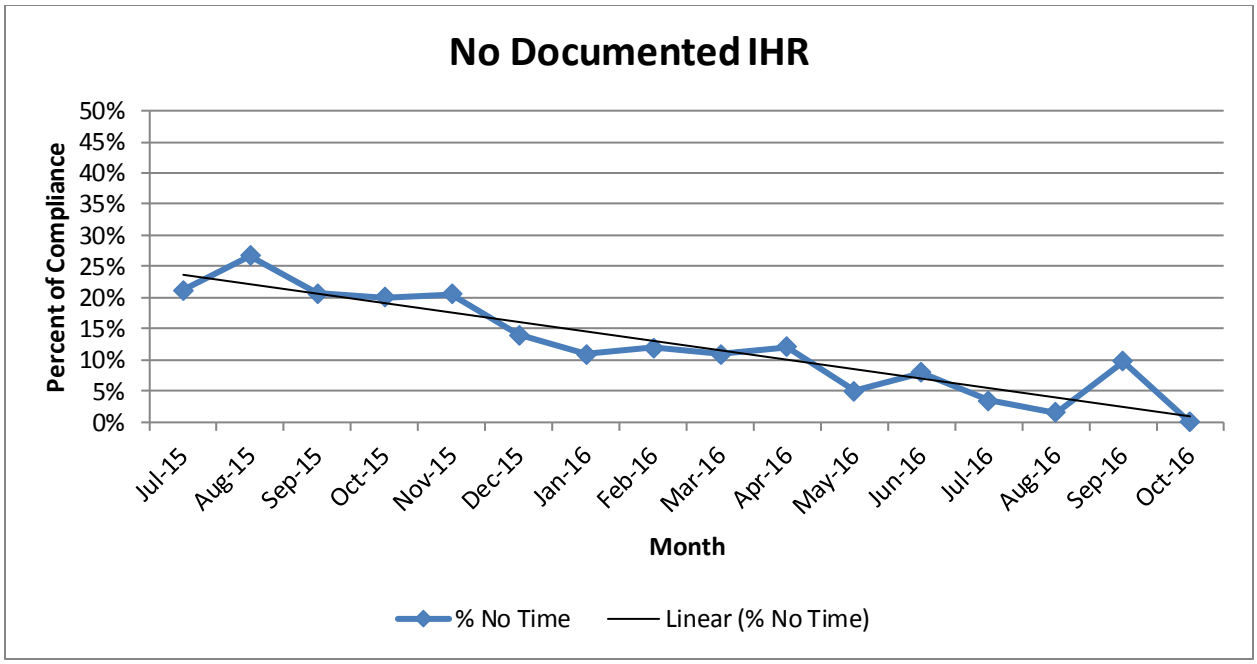

Figure 14. Percent of whiteboards without documented IHR by healthcare providers post-QI project.

Figure 14 illustrates the percent of audited whiteboards that had not been documented by healthcare providers. There was an initial increase in September 2016, with a decrease to 0% not documented whiteboards in October 2016. After the initial deadline of September 30, 2016 for healthcare providers to have the scripting session completed, patient satisfaction scores collected through the post-discharge surveys were obtained. As this date fell in the middle of Quarter 3, 2016 for discharge surveys to be returned, it is important to note that the sample size of surveys may not be a true reflection of the total amount of surveys that would be returned from that quarter. On October 14, 2016, patient satisfaction scores from post-discharge surveys were collected a final time to indicate the end of data collection and the completion of the QI project. September 30, 2016 after initial completion of the QI project is indicated in the following figures as Part 1, Quarter 3, 2016 and October 14, 2016 is indicated as Part 2, Quarter 3, 2016, as both data collections occurred during the same patient satisfaction collection quarter.

Given the two-week difference between the two data collection periods, the change in the sample size is potentially unreflective of the true amount of surveys that may be returned within the quarter. It was hypothesized prior to implementation of the QI project that as healthcare provider compliance with IHR increased, patient satisfaction would increase. A hypothesis test of paired observations for all drivers on the HCAHPS satisfaction survey was performed. There was no statistically significant improvement in patient satisfaction as a result of the IHR scripting session for all seven drivers. Statistical testing yielded negative *t* values in all key drivers, reflective of a negative correlation between the QI project of standardized scripting with patient satisfaction. This result would indicate that as healthcare provider compliance with IHR increased, patient satisfaction scores decreased. Unaccounted-for factors could have impacted the results of this data analysis, as discussed in the limitations section of this paper. Figures 15 through 21 display the correlations between selected satisfaction key drivers and compliance with IHR on the unit.

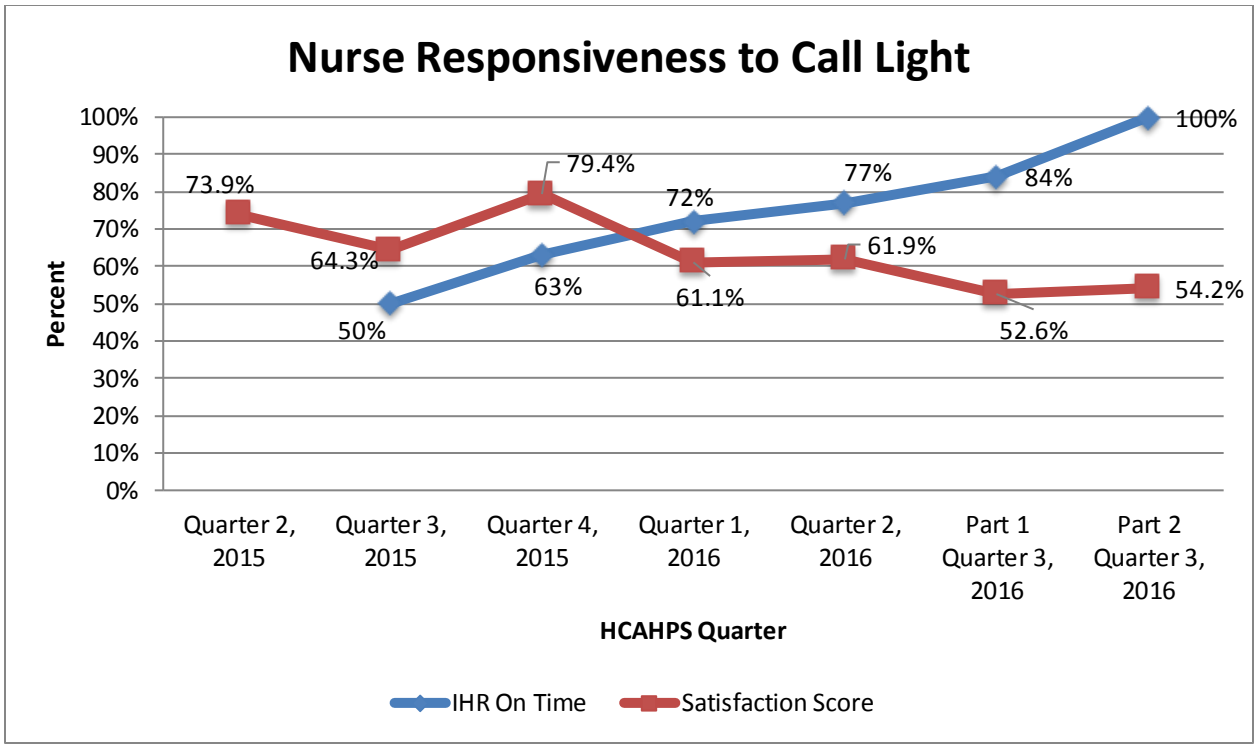

Figure 15. Post-Intervention Driver 1: After pressing the call button, how often was help given as soon as you or your child wanted it? compared against percentage of on time healthcare provider compliance with IHR.

The first driver assessed from the patient satisfaction survey and how it correlates with healthcare provider compliance with IHR is displayed in Figure 15. Data prior to the QI project are displayed in Quarter 2, 2105 through Quarter 2, 2016. Part 1 and Part 2 Quarter 2016 occurred during and upon completion of the QI project. There was no statistically significant increase ($t = -3.469$) in patients' perception of healthcare provider responsiveness to call light as a result of the QI project. The negative t value indicates that as healthcare provider compliance with IHR increases, perceived responsiveness to call light decreases.

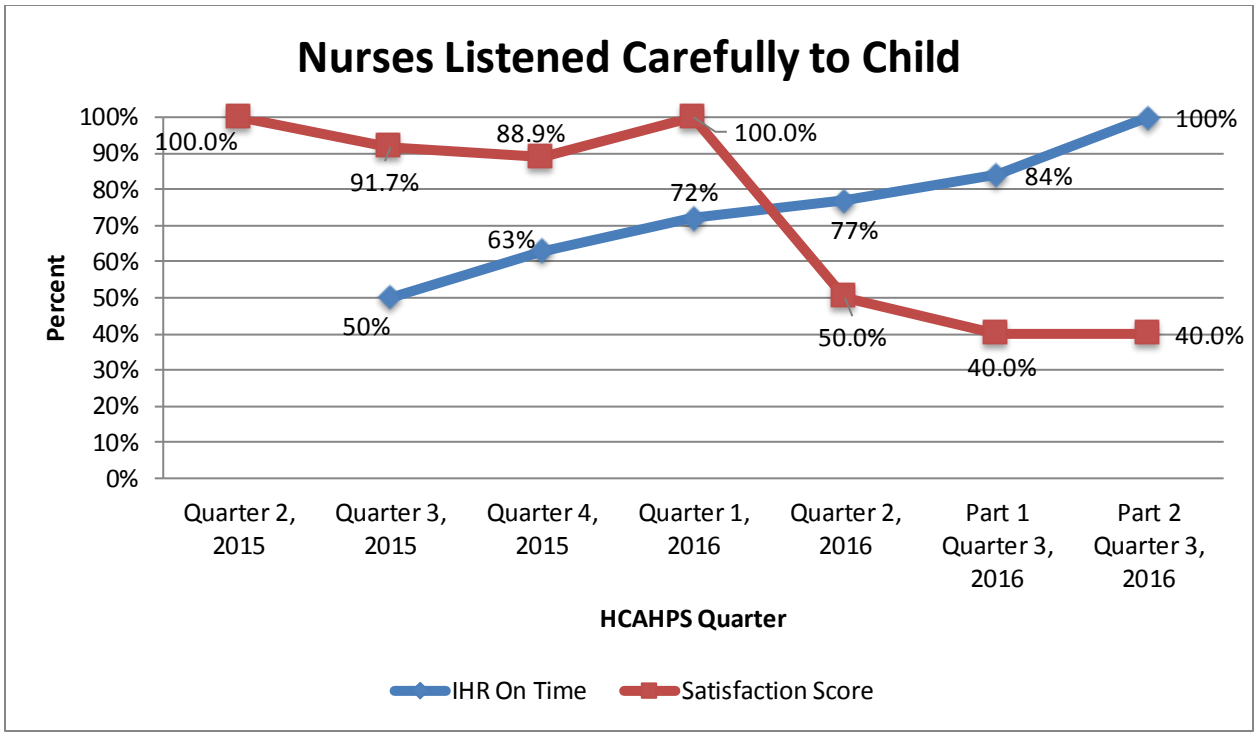

Figure 16. Post-Intervention Driver 2: During this hospital stay, how often did your child's nurses listen carefully to your child? compared against percentage of on time healthcare provider compliance with IHR.

The second driver assessed from the patient satisfaction survey and how it correlates with healthcare provider compliance with IHR is displayed in Figure 16. There was no statistically significant increase ($t = -4.583$) in parents' perceptions of healthcare providers listening carefully to the patient. The negative t value indicates that as healthcare provider compliance with IHR increases, parents' perception of healthcare providers listening carefully to patient decreases.

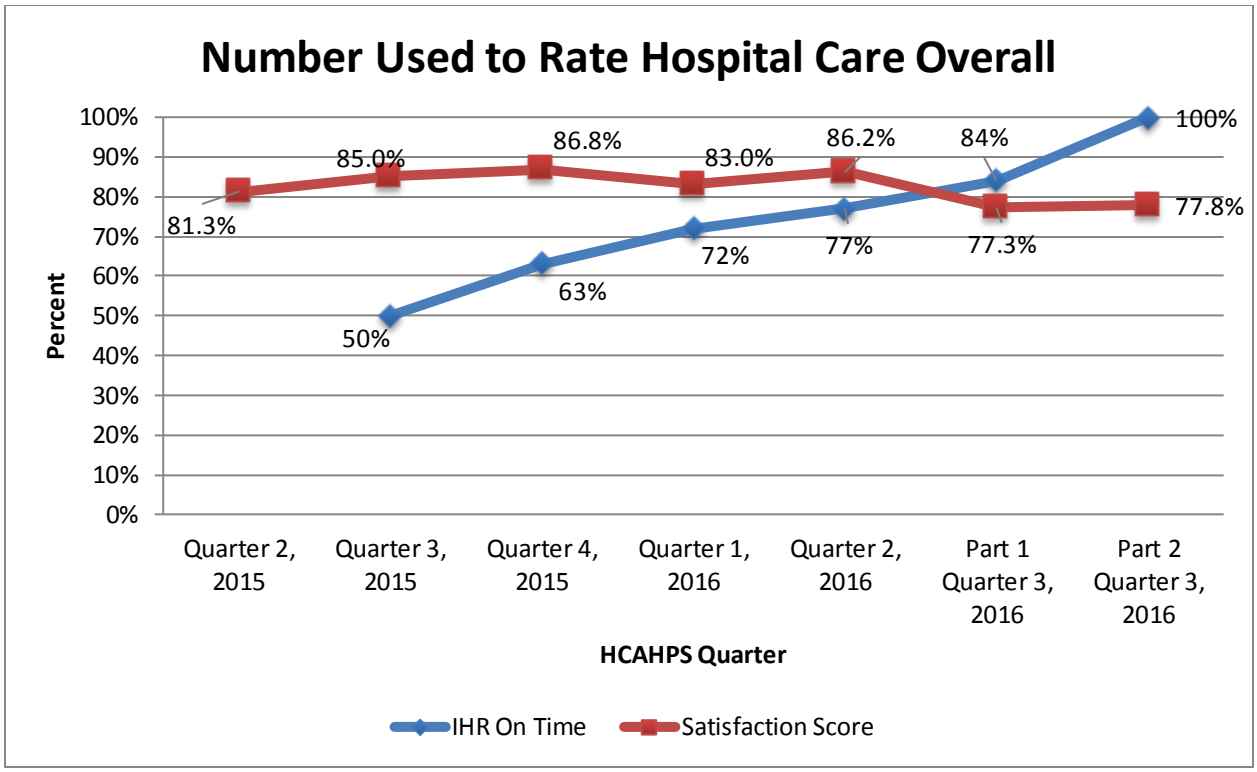

Figure 17. Post-Intervention Driver 3: Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital? compared against percentage of on time healthcare provider compliance with IHR.

The third driver assessed from the patient satisfaction survey and how it correlates with healthcare provider compliance with IHR is displayed in Figure 17. There was no statistically significant increase ($t = -0.724$) in patients' rating of hospital on a scale of 0 to 10. The negative t value indicates that as healthcare provider compliance with IHR increases, patient rating of hospital decreases.

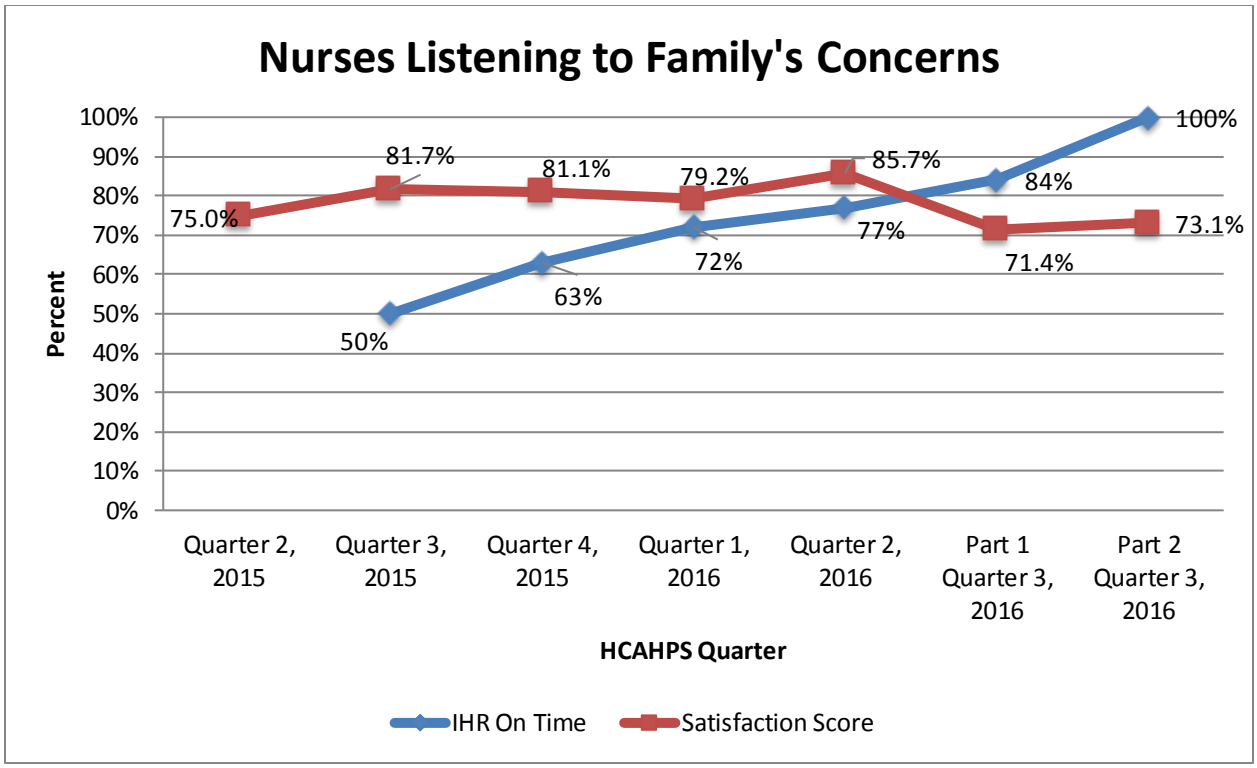

Figure 18. Post-Intervention Driver 4: During this hospital stay, how often did your child's nurses listen carefully to you? compared against percentage of on time healthcare provider compliance with IHR.

The fourth driver assessed from the patient satisfaction survey and how it correlates with healthcare provider compliance with IHR is displayed in Figure 18. There was no statistically significant increase (*t =-0.993)* in parents' perceptions of healthcare provider listening carefully to their needs. The negative *t* value indicates that as healthcare provider compliance with IHR increases, perceived healthcare providers listening carefully to parents' and families' concerns decreases.

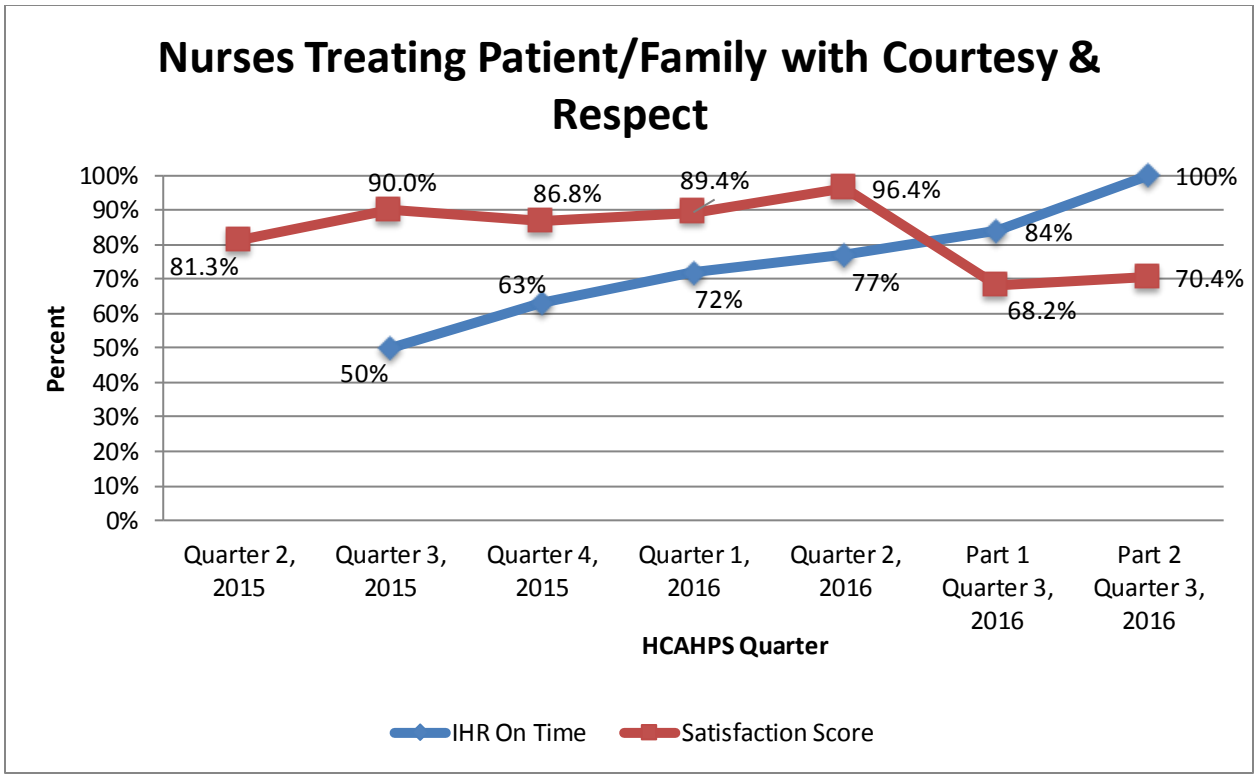

Figure 19. Post-Intervention Driver 5: During this hospital stay, how often did your child's nurses treat you with courtesy and respect? compared against percentage of on time healthcare provider compliance with IHR.

The fifth driver assessed from the patient satisfaction survey and how it correlates with healthcare provider compliance with IHR is displayed in Figure 19. There was no statistically significant increase (*t =-0.594)* in parents' perceptions of healthcare provider treating them with courtesy and respect. The negative *t* value indicates that as healthcare provider compliance with IHR increases, perceived healthcare providers treating patients and families with courtesy and respect decreased.

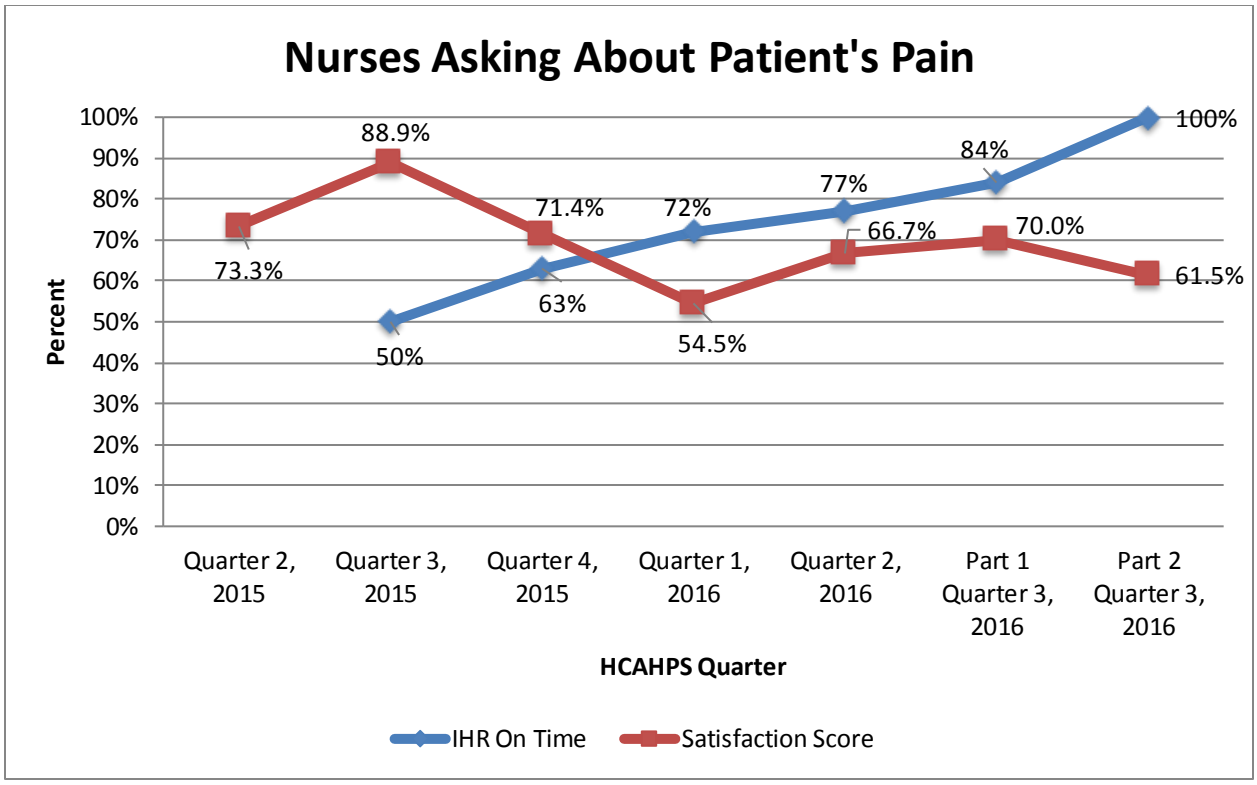

Figure 20. Post-Intervention Driver 6: During this hospital stay, did providers or other hospital staff ask about your child's pain as often as your child needed? compared against percentage of on time healthcare provider compliance with IHR.

The sixth driver assessed from the patient satisfaction survey and how it correlates with healthcare provider compliance with IHR is displayed in Figure 20. There was no statistically significant increase (t =-2.336) in perception of healthcare providers asking about patients' pain as often as needed. The negative t value indicates that as healthcare provider compliance with IHR increases, perceived healthcare providers asking about patients' pain in a timely manner decreases.

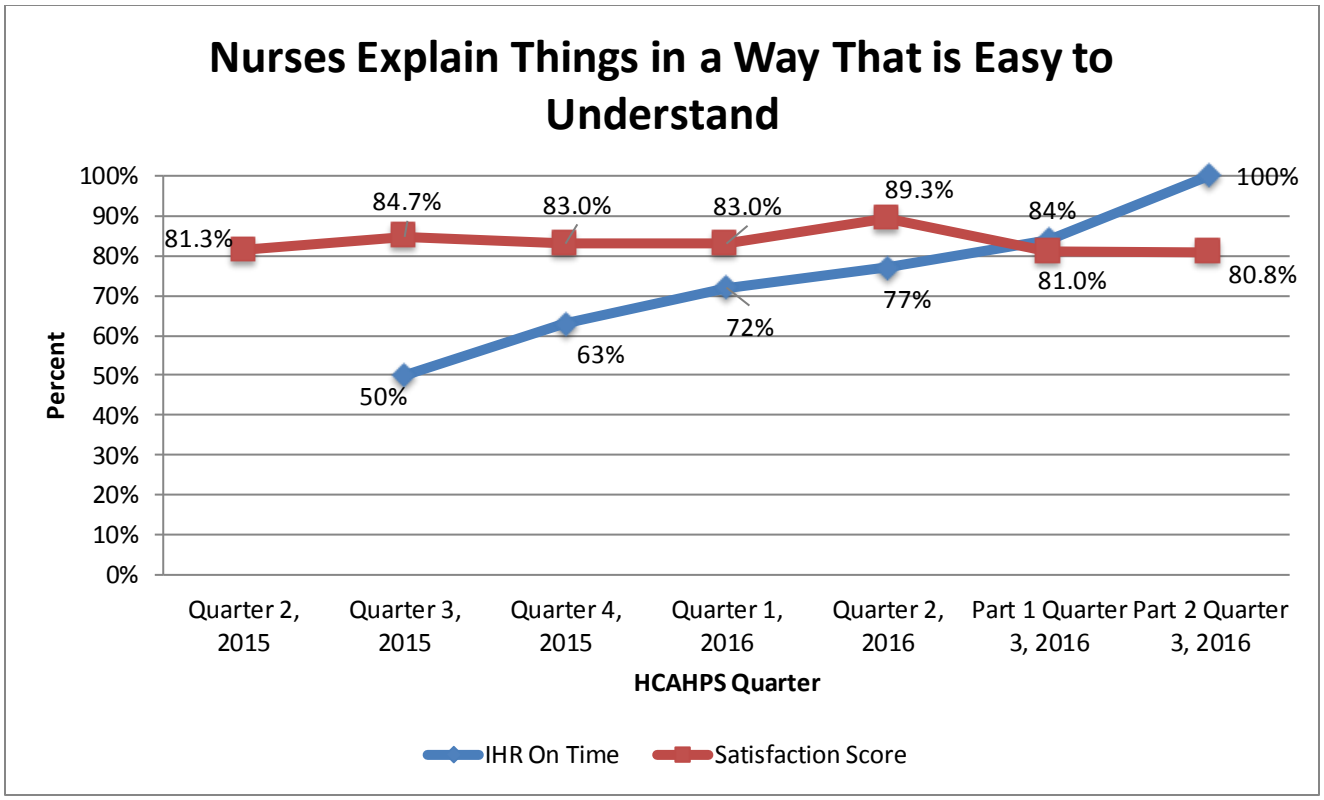

Figure 21. Post-Intervention Driver 7: During this hospital stay, how often did your child's nurses explain things in a way that was easy to understand? compared against percentage of on time healthcare provider compliance with IHR.

The seventh and final driver assessed from the patient satisfaction survey and how it correlates with healthcare provider compliance with IHR is displayed in Figure 21. There was no statistically significant increase (*t =-0.363)* in perception of healthcare providers explaining things to patients and families in a way that was easy to understand. The negative *t* value indicates that as healthcare provider compliance with IHR increases, perceived healthcare providers explaining things in a way that is easy to understand decreases. The correlations based on statistical analysis of the data are displayed in Table 3.

Table 3

Statistical testing performed via a hypothesis test of paired observations for each patient satisfaction key driver compared with healthcare provider compliance with IHR

Statistical Correlations of IHR compliance and Patient Satisfaction			
Driver	**t test**	**p value**	**Accept/Reject Hypothesis**
1	-3.469	0.074	Reject
2	-4.583	0.0445	Reject
3	-0.724	0.5441	Reject
4	-0.993	0.4255	Reject
5	-0.594	0.6127	Reject
6	-2.336	0.1417	Reject
7	-0.363	0.7515	Reject

Discussion

In the year prior to the implementation of the scripting education session, the unit Partnership Council was unable to meet their goal of healthcare provider compliance with IHR reaching 90%. As seen in Figures 11, 12, 13, and 14, as a result of the QI project, the council met the goal of greater than 90% IHR compliance for the first time since initiating the intervention of IHR in July 2015. The rate of late and not documented IHR also decreased, with both at 0% for the month of October 2016.

Limitations

The results of this data collection may not be indicative of a true correlation of IHR compliance with patient satisfaction, given many study limitations. In the literature review conducted prior to the QI project implementation, there were statistically significant correlations between IHR implementation and patient satisfaction results. For this QI project, patient satisfaction decreased in all drivers, yielding negative correlations. Outside factors that could have influenced the results include the amount of satisfaction surveys that were returned and assessed during the QI project time period. On the HCAHPS report, Quarter 3, 2016 is listed as a

small sample (n) size, indicating data results could be skewed. The HCAHPS surveys are sent in a paper copy through the mail to patients/families, resulting in a return time delay that may not be seen with other hospitals using electronic surveys.

Both intervals of survey data collection occurred during Quarter 3, 2016. At the time of data retrieval, all post-discharge surveys for that quarter had not been returned. HCAHPS surveys are distributed at random to patients/families after discharge, dependent upon previous data sampling. If a patient has received a post-discharge survey within the last 90 days, they are ineligible to receive another one until after that time period has been met. If a patient had been seen within the hospital healthcare system, for example in a different unit such as the emergency department (ED) or intensive care unit (ICU) within that stay, the patient is ineligible to receive multiple discharge surveys from the same hospitalization and may not have received one from the unit involved in the QI project. If a patient has required multiple hospital stays throughout a year, the patient is only eligible for a maximum of four post-discharge surveys to be received in that year time period. At the time of the QI project, the post-discharge surveys sent had a total of 45 questions requiring the patient/family to respond to, which may have affected the number of surveys returned.

The unit included in the QI project from August through October 2016 is considered off-season from the expected peak census, and thus the unit experienced a lower census than normal. The manner in which audits were completed may have been subjected to bias, as the same two auditors were used in the year prior to the QI project as well as during the QI project. The unit healthcare providers may have expected the audits to occur when the designated IHR leaders were completing their audits, as the one auditor collected data during the day shift and the other during the night shift. This may have influenced healthcare providers to update the patient

whiteboards because of the expectation an audit would be completed. As the whiteboards were only audited at random, there was not a way to determine if the total IHR compliance calculated was a true reflection of the total healthcare provider compliance with IHR.

Partnership Council members were designated as the unit mentors for healthcare providers to meet with to complete the scripting QI project. Although mentors were trained in how to complete the scripting project during a two-hour Partnership Council meeting, consistency in delivery of the QI project to all healthcare providers was not assured as each mentor may have presented the script differently. The scripting sessions were not monitored, and completion was based on a trust system. All healthcare providers had equal access to the conference room in which the completion sheet was posted on the unit bulletin board, and completion of this sheet was assigned to Partnership Council mentors. However, healthcare providers on the unit would have had access to the sheet, and in theory, could have filled out their completion without attending a scripting session.

Implications

Given the time constraints of the QI project, there are areas of data that need to be furthered developed. If a practice change were to be made based on the results of the study, it would appear that healthcare compliance with IHR leads to decreased patient satisfaction. Given the limitations previously discussed, further work needs to be completed to understand this correlation better. Patient satisfaction is impacted by numerous factors, with IHR being one evidence-based strategy correlated with its improvement. Given the wording of the post-discharge surveys, there were only two drivers that would directly address the work being completed through IHR: (1) *After pressing the call button, how often was help given as soon as you or your child wanted it? and (2) During this hospital stay, did providers or other hospital*

staff ask about your child's pain as often as your child needed? The other five drivers were selected based on relevance to nursing care, but were not directly related to the healthcare provider use of IHR.

At the time of the QI project, the hospital was in the process of changing the HCAHPS post-discharge surveys, in order to reduce the number of questions from 45 to 14. The unit participating in the QI project still utilized the 45-question survey. The new 14-question survey will be designed to be sent and returned from patients through an electronic format, and questions to assess healthcare providers will be based on Magnet-designated nursing standards.

With the statistically significant correlation between the scripting education session completion and IHR compliance, it is accurate to assume that standardizing the format in which IHR is delivered to patients and families increases healthcare provider compliance with IHR. This result may be because of an increased understanding and awareness of how to present IHR through use of the scripting tool in Appendix A.

Conclusion

The aim of the QI project was to determine if providing detailed education to healthcare providers using an evidence-based, standardized method of scripting would improve compliance with IHR, ultimately increasing unit patient satisfaction scores. After implementing IHR scripting as an evidence-based QI project at a 24-bed acute care unit, designated mentors met with healthcare providers to discuss keyword IHR scripting to assure quality and consistency of the use of IHR. Compliance with IHR as well as with the mandatory scripting was monitored for two months post-QI project implementation. As a result of the QI project, all 53 healthcare providers on the unit attended the scripting educational session by the end of data collection. A statistically significant increase in healthcare provider compliance with IHR occurred. Unit

patient satisfaction scores obtained through HCAHPS post-discharge surveys were assessed pre- and post-scripting to determine if patient satisfaction changed as a result of the QI project. No statistically significant improvements in patient satisfaction occurred as a result of IHR compliance improvements. It is concluded that to accurately assess if a change in patient satisfaction occurred as a result of the IHR QI project, data collection needs to continue to be monitored to yield a sample size that is large enough for inferences to be made. Correlations not seen in this QI project will continue to be assessed through further data collection and statistical analysis.

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Appendix A

Scripting Utilizing Current Practice of Intentional Hourly Rounding

Introduction to Patient and Family on Use of Intentional Hourly Rounding

- Make this a part of your admission/orientation to the unit education practice
- Review use of rounding at the start of your shift with patient and family
- Refer to the 4P's every hour until the end of your shift
- Example of an appropriate script:
    - *"Hello, my name is [nurse's name] and I will be your child's nurse for the next 8 hours. Every hour you can expect me in your room, checking to see if you need anything. We will be making sure your child has everything he/she needs, specifically checking on if he/she has pain, repositioning him/her to make him/her comfortable, and checking if he/she needs a diaper change. You will always know when to expect us next by looking at your whiteboard to see the last time the nurse or care partner was in the room, and know that someone will be back within the hour."*

Pain

- The following are some options on how to incorporate asking about pain every hour into your current practice:
    - For an older patient, it can be as simple as asking, "Are you comfortable right now?" Remember to ask for the patient to rate his/her pain if able through a pain scale
    - You could also give the patient some options to make him/her more comfortable such as, "Would you like me to turn down the lights?"
    - If a patient is an infant or unable to answer, remember to ask the parent questions such as, "Do you feel that your child is comfortable?"

PO/Potty

- Addressing this may consist of offering an opportunity to order food or use the restroom if ambulatory
- Remember to reiterate to the patient and/or family the patient's current intake and output plan
- If the patient is an infant, you can check on diaper supplies and offer to replenish
- Include statements such as, "I have time to help you to the bathroom right now," so that patients are more inclined to ask for assistance while you are present
    - If you suggest going to the bathroom during your check, they may be more likely to use the bathroom at that time rather than calling in between your hourly checks

Position

- Offer patients more pillows, to move to a chair or back to bed, into/out of swing, walk in hall

- For patients who can't move themselves, explain to families how and why you are repositioning to help build their knowledge level about the importance of positioning and preventing skin breakdown for patients in the hospital

Promise to Return

- Let the patient and family know approximately when you will be back and how they can reach you if needed before that time
    - Make sure the call light is within reach in case they need assistance sooner
- Remember to record on patient's whiteboard the last time you were in the room, even if there are no visitors at the time of your assessment
- At the end of your shift, let the patient/family know who will be the next nurse

Practice the 4 P's: Check Each Box when Staff Acknowledges that P during Scripting Session

☐ Pain

- Example of acceptable script:
    - *"I've noticed that [patient's name] is having a hard time getting to sleep and has been crying for a while. Do you think she/he is in pain? He/She has an as needed Tylenol order, would you like me to give that to him/her to help with his/her pain?"*

☐ PO/Potty

- Example of acceptable script:
    - *"It looks like [patient's name] didn't drink her whole bottle for his/her last feed. Would he/she prefer to have the formula warmed up? I could place the next bottle in the warmer to see if he/she would drink more formula to meet his/her intake goals that way. Are you still doing okay with the amount of diapers and wipes you have, or do you need any more for the room?*

☐ Position

- Example of acceptable script:
    - *"[Patient's name] has been lying on his/her back for a couple of hours. To prevent skin breakdown while he/she is in the hospital, I'm going to move him/her to his/her side. If you think he/she would prefer a swing, I can also bring one to make him/her more comfortable."*

☐ Promise to Return

- Example of acceptable script:
    - *"Remember you can always look at the whiteboard to see when your child was last check on by a nurse or care partner. You can expect to have someone in the*

room checking on his/her pain, potty, and position within the hour. I'm at the end of my shift now, but [nurse's name] will be taking over, and she is a great nurse!"

Appendix B

Definitions

Driver: Question sent to patient through the HCHAHPS post-discharge survey to assess satisfaction related to a specific area of healthcare provider care while patient was hospitalized.

Healthcare provider: Registered nurse (RN) or nursing assistant (NA).

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS): Standardized survey collecting and reporting patient satisfaction data.

Intentional Hourly Rounding (IHR): An evidence-based process in which healthcare providers purposefully enter into a patient's room on an hourly basis to assess the patient's 4P's: (1) pain, (2) potty, (3) position, and (4) promise to return within the hour.

Partnership Council: A council to address hospital and unit goals related to practice, quality, and staff engagement/development. Council membership is comprised of RNs, NAs, health unit coordinators (HUCs), and unit leadership. Council size is limited to any combination of eight staff members with meetings occurring monthly.

Patient Satisfaction: A measurement of care provided through the scope of the patient.

Standardized Scripting: A written narrative script used by healthcare providers to assure consistency in the method IHR is presented to patients and families.

Value-Based Care: Quality strategy implemented by the Centers for Medicare and Medicaid (CMS) to reform healthcare delivery based on quality of care provided to patients

Whiteboard: The communication tool between healthcare provider and patient, located in each patient room.