INCREASING RN ATTENDANCE IN FAMILY-CENTERED ROUNDS: A QUALITY IMPROVEMENT PROJECT

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INCREASING RN ATTENDANCE IN FAMILY-CENTERED ROUNDS: A QUALITY IMPROVEMENT PROJECT

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INCREASING RN ATTENDANCE IN FCR

TABLE OF CONTENTS

ABSTRACT .................................................................................................................................5

INTRODUCTION .........................................................................................................................7

  PROBLEM DESCRIPTION .......................................................................................................7
  AVAILABLE KNOWLEDGE ......................................................................................................9
  RATIONALE ..........................................................................................................................18
  SPECIFIC AIM .......................................................................................................................20

METHODS ...............................................................................................................................20

  CONTEXT .............................................................................................................................20
  INTERVENTIONS ..................................................................................................................22
  STUDY OF THE INTERVENTION ..........................................................................................23
  MEASURES ...........................................................................................................................24
  ANALYSIS ............................................................................................................................25
  ETHICAL CONSIDERATIONS ...............................................................................................25

RESULTS ....................................................................................................................................26

  RESULTS ................................................................................................................................26

DISCUSSION ............................................................................................................................34

  SUMMARY ............................................................................................................................34
  INTERPRETATION ..................................................................................................................36
  LIMITATIONS .......................................................................................................................40
CONCLUSIONS ..............................................................................................................41

REFERENCES ..............................................................................................................43

APPENDIX A ..................................................................................................................45
Abstract

Background: RN attendance in Family-Centered Rounds (FCR) is an essential component to family-centered care. In many pediatric settings, RN attendance in interprofessional rounds is mandatory—FCR is noted by the American Academy of Pediatrics as the gold standard of care. Lack of RN attendance in FCR causes ineffective communication, workflow inefficiencies, and potential safety errors.

Aim: To identify barriers to RN attendance in FCR and increase RN attendance in FCR. A problem with RNs attending FCR was identified at a rural children’s hospital’s pediatric unit and this quality improvement project had the goal of increasing RN attendance in FCR. The specific aim was to increase the percentage of pediatric RNs participating in FCR from an average of 40% to greater than 60% by July 1st, 2022.

Methods: Over a six-week timeframe within the Plan, Do, Study, Act framework, RNs and providers on a pediatric unit were surveyed to gather data about current perceptions of the FCR process. A pre-intervention survey, displayed educational poster, and a post-intervention survey revealed RN and provider’s thoughts and feedback regarding the current situation of FCR and especially RN attendance.

Results: Gathering enough survey respondents to make definitive conclusions was challenging, yet the qualitative data from both surveys indicate that FCR is valuable and important to the work on the unit—especially in communication processes. No conclusive increase in percentage of RNs attending FCRs occurred, but feedback from nurses and providers demonstrated that since the start of the QI project, there has been heightened awareness of this issue. Additionally, some RNs reported that they are being included more frequently in FCR. The director of
residents as well as the senior resident commented that they are making a point to teach incoming residents the importance of RN attendance in FCR.

**Conclusions and Implications for Practice:** This project demonstrates a connection between RNs attendance in FCR and improved communication, workflow efficiencies, and patient safety outcomes. The project is flexible, time conscious, and easily re-creatable in any unit or setting. The implications of RN attendance in FCR for nursing practice moving forward include both quality and financial-based outcomes and enhance both wherever this practice is implemented.

**Keywords:** Family-Centered Rounds, RN participation in FCR, RN attendance in FCR
Introduction

Problem Description

In the pediatric setting, consistent and transparent communication between the patient’s family and care team is critical. Fernandes et al. (2021) declare, “The fragility of sick children and their families in the hospital setting suggests an ethical requirement that communication be not only efficient and effective but also humanistic: kind, transparent, and respectful” (p.637). Fernandes et al. (2021) refer to a statement made by the American Academy of Pediatrics (AAP) that family-centered care is the gold standard of care. A core principle of family-centered care is Family-Centered Rounding (FCR), defined by Knighton and Bass (2021) as “…multidisciplinary rounds that occur in patients’ rooms in the presence of patients and family members and integrate their preferences in clinical decision-making” (p.680). In 2012, a joint statement was issued by the AAP and the Institute for Patient and Family-Centered Care with the recommendation that nurse and family participation in rounding should be the standard of practice (Committee on Hospital Care, 2003).

The mission of the unit where this project took place was as follows: to “Offer excellent trauma-informed, family-centered, resiliency-focused multidisciplinary care; Provide a safe and objective place for evaluation of a child’s or adolescent’s physical and emotional health; Contribute to child maltreatment and neglect prevention programs; Advocate for team members’ well-being” (Children’s Hospital at Dartmouth-Hitchcock, n.d.). As verbalized by leadership, FCR is the gold standard of care, yet an established structured process for FCR was not utilized. Additionally, attendance and participation by registered nurses (RNs) in FCR was without process and sporadic. This absence of structure contributed to lack of interdisciplinary collaboration and confusion regarding daily care plans on part of the family and RN.
Observational data gathered on six occasions tallying medical-surgical RN attendance in pediatric hospitalist service FCR found that RN attendance occurred an average of 40-50% of the time. Based on informal interviews of eight RNs, verbalized barriers to FCR attendance included time—such as rounds occurring in tandem with medication administration, and an overall perceived lack of time to attend. Other factors included not being informed when rounds were happening, RNs not having support for their patients while attending rounds, and RNs not prioritizing rounds. Six of the RNs reported feeling frustrated by the lack of communication about round timing and patient care plans, leading to confusion and workflow inefficiencies. Six of the RNs stated they had recently been confused by the patient’s daily plan of care, and five of the RNs stated they often need to follow up with the pediatric service on behalf of families as both the RN and the patient/family were unsure of the daily care plan.

Data gathered from an informal interview with the section chief of pediatric hospitalists confirmed the perceived issue of less-than-optimal RN attendance in FCR from the provider perspective. The director verbalized an awareness that the pediatric hospitalist service was not consistently upholding the standard of RN participation in FCR, and the issues needed to be addressed. In an informal interview with a senior resident, multiple processes for FCR were utilized with only one including the RN in FCR as a designated part of the process. Often, whether the RN was informed of rounding was provider specific or by chance.

The RN is the primary advocate between the families and providers and being disconnected when medical decision making occurs causes communication issues between RNs and providers as well as RNs and families. Overall, lack of RN attendance in FCR causes communication barriers, workflow inefficiencies, and potential safety errors.
Available Knowledge

RN participation in provider rounds is a relatively new research topic gaining traction in the early 2000s. There is limited evidence on the benefits of RN participation in rounding and even more limited statistical data. Ample qualitative data exists surrounding family-centered rounding (FCR) and its benefits, but there is reduced data on direct RN involvement in this practice. However, RN participation in FCR is critical to developing relationships with patients and families, streamlining communication with providers, preventing miscommunication, easing workflow inefficiencies, and preventing safety errors. Sharma and Klocke (2014) discuss the transition of medicine from a traditional practice of physicians and nurses working in silos—causing medical errors, ambiguity in practice, lack of accountability, and lack of patient centeredness—to a team-based practice where nurses have a valued role as practitioners of medicine. A scoping review, a randomized control trial (RCT), and four qualitative studies/projects are included in this review of the literature aimed at appraising the attitudes and benefits of RN participation in provider daily rounding. Inclusion criteria contained a mention of nurse attendance or participation in rounding, the practice of rounding with patients present, family-centered rounding, articles in English, and articles between 2014-2022. Exclusion criteria included no nurse participation mentioned in the article, articles not in English, and articles pre-2014.

Aragon et al. (2016) performed a level 6 evidence resident-led quality improvement project to incorporate nurses into the practice of Family Centered Rounds (FCR). Nurses on the hospitalist service were often unaware of patient’s daily care plan until late morning and providers had to spend extra time updating nurses. The major stakeholders of the project (nurses, attendings, and residents) agreed that nurses absent from rounds could be a contributive factor to
communication issues, teamwork inefficiencies, and an overall lower quality of patient care. The project had the original objective of increasing nurse participation in hospitalist rounds from 30% to 80% within in a three-month period in the setting of a 40-bed medical-surgical unit of a children’s hospital. Additional outcomes measured through surveying were the relationship between nurse-patient ratio and round attendance as well as perception changes towards FCR. Barriers to FCR attendance were first gathered through a focus group, followed by the implementation of four plan-do-study-act (PDSA) cycles, culminating in a survey to assess attitudes towards FCR. At the conclusion of the project, 59% of nurses attended FCRs and data from surveys exhibited an increase in positive perception nurse presence at FCRs. Additionally, almost all participants shared that it was helpful for a nurse to be present during FCR, and especially that it helped improve communication between the provider team and the nurse—the nurse was able to deliver up-to-date, valuable information that aided in improving the quality of care as well as providing a care plan earlier in the day. Limitations to this project include uncertain validity or reliability in data gathering tools as the surveys were created for this specific improvement, and that process measures were not tracked in assessing compliance. Additionally, there was no follow up to this project, or any measures put in place to evaluate the lasting effectiveness of the intervention. Finally, this project was limited to one service on one floor and process measures and attitudes may not be the same in other settings (2016).

This quality improvement project provides a useful tool—the key driver diagram—that allows for a structured methodology to perform PDSA cycles. This tool could be used to create PDSA cycles relevant to the pediatric unit this project took place on. Furthermore, many of the process measures have the potential to be successful on this unit, such as letting the nurse know before rounding starts and performing rounds in nurse blocks.
Knighton and Bass (2021) performed a level 1 evidence scoping review on the practice of family-centered rounds in the pediatric setting. As previously mentioned, the AAP and the Institute for Patient and Family-Centered Care established a joint policy recommending family centered rounds (FCRs) in the patient’s rooms as the standard of care (Committee on Hospital Care, 2003). Knighton and Bass’s (2021) scoping review seeks to explore the effects of this policy—specifically how FCRs are being designed, implemented, and evaluated. Within the information gathered, barriers, gaps, and future strategies to FCRs will become more apparent and actionable. Experimental and observational peer-reviewed studies from January 2009-July 2020 were included with 53 studies included in the review’s synthesis. Within the literature available, the authors focused on four areas of interest including the nature and scope, process, barriers, and strategies of FCRs. The scoping review included literature from Canada and Europe (9%) as well as Spanish-speaking families (6%), 96% of studies came from university-affiliated systems in which teaching (and therefore quality improvement projects led by students) is a key aspect of provider’s jobs. In 27 studies, clinician’s attitudes towards FCRs were accounted for, and in 26 studies patient/family attitudes towards FCRs were accounted for. Of the 36 studies with explicitly detailed FCR elements, nurses were included in the participant role of FCRs 100% of the time, with the opportunity for participation within the rounds only happening 72% of the time. Integration of family preference in the care plan was 69%, follow up with patients/families post-rounds was 17%, and written daily care plans were made available to the family 33% of the time. Perceptions of FCRs by many physicians and students were positive and highlight an important connection and collaboration with families, improving patient satisfaction. However, authors note a constant push-back by clinicians who view FCRs as inefficient and poor for educational development. Nurse’s and patient/family perceptions of FCRs were mostly
positive across the studies, with nurse participation self-perceived as strengthening alliances with patients. Overall, review results indicate that while there is growing acceptance of FCRs by most stakeholders, participation in FCRs is not as common. Additionally, Knighton and Bass (2021) found that nurses and families are still often excluded from FCRs due to structural barriers. Finally, a large barrier to FCRs universal implementation is the limited availability of what the authors describe as high-quality evidence on FCRs effectiveness as well as a standardized method to their success—there are varying definitions of what FCRs should incorporate, who is included, what are the outcomes to be achieve, what constitutes as success and how is this measured etc. (Knighton and Bass, 2021).

This review points again to a need of standardization of FCRs. Healthcare would benefit from a FCR process that can easily be repeated, followed, and streamlined across many institutions and settings. Review of studies and literature become difficult to compare without a standardized tool (e.g., checklist, process chart, script)—and this scoping review demonstrates that there is no standard for FCRs leading to difficulty measuring outcomes and evaluating data.

Monash et al. (2017) performed a level two evidence cluster Randomized Controlled Trial (RCTs) implementing a standardized method to morning rounds. The authors measured adherence and impact with a trained observers to audit rounds. The intervention of standardization in this trial was to include five activities in rounds: pre-rounds huddle, bedside rounds, registered nurse (RN) integration, real-time order writing, and whiteboard updates. The outcomes measured were patient satisfaction, provider satisfaction, efficiency (total time spent rounding daily), and adherence. The study included 1200 patient participants over 18 in which half were randomly assigned to the control group physicians’ service. Monash et al. (2017) hypothesized that patient satisfaction would be greater in those receiving the intervention of
standardized rounding, less total time would be spent in the provider’s workday due to real-time orders, and higher nurse participation would increase physician satisfaction. Rounds were audited by trained observers who kept track of adherence to the standardized methods, as well as surveyed patients post-rounds. The outcomes measured were patient satisfaction overall with morning rounds, as well as round duration (perceived/actual), and attending/med student satisfaction. Results on a 5-point Likert scale show slight increases in patient satisfaction from the intervention side of rounding (4.49 vs 4.25; p=0.01), and patients reported feeling better cared for by their provider team (4.54 vs 4.36; p=0.03). Medical students on the intervention team perceived rounds as lasting longer and being less satisfied with rounds although the intervention rounds were an average of eight minutes shorter. Limitations to the study include: one specific setting at a teaching institution, lower patient response to surveys, and potential observer bias by the auditors. The authors also performed what they call low intensity interventions where voluntary participation was necessary. However, the low intensity intervention has a better chance of being reproducible in other settings (2017). This study has gaps in that it does not focus on nurse participation or nurse satisfaction. It does not address the perspective of the nurse, nor include any data that demonstrates the outcome of nurse participation as its own measure.

This study demonstrates that a more structured and standardized form of rounding does increase patient satisfaction leading to the conclusion that incorporating a checklist or further structure into a rounding process that integrates RNs would be successful on this unit.

Riegel et al. (2018) performed a quality improvement (QI) project to glean the benefits of collaborative rounding that includes providers and nurses to reduce miscommunication and communication issues. A Level 6 evidence qualitative study, this QI project was undertaken in
response to nurse-perceived lack of communication and miscommunication between nurses, providers, and patients on a medical-surgical. Nurses often need to call providers to clarify orders resulting in disruption of workflow and decreased patient satisfaction reflected in Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) surveys. The intervention introduced was to place a picture and phone number of the nurse on duty at the patient’s door and have the provider contact the nurse before starting rounds. Success was measured by the number of calls the nurses had to make to the providers previous to and following the collaborative rounding. Additionally, HCAHPS scores including physician communication, nurse communication, and teamwork were included as key indicators of success. Following a two-month test period on four adult units (one medical-surgical unit, two progressive care units, and one acute care unit), there was a significant decrease in phone calls made to the provider on all four units (between 52-69%). Additionally, HCAHPS scores increased on three of the units for both nurse and provider communication (while decreasing on one unit for both) and increased for teamwork on two units (while decreasing on two units) (2018). Limitations and gaps in this quality improvement project included: additional stakeholder buy-in especially in involving outside professional teams (such as the photographer and marketing team); the number of units was limited, and the project was completed in one hospital setting with only 3 different types of units (Riegel et al., 2018); this study was only performed on adults and not in the pediatric setting.

This project is useful in its demonstration of a simple and creative intervention aimed to introduce collaborative rounding resulting in a successful outcome of decreased calls made to providers as well as increased HCAHPS scores (in multiple areas). Both nurse and provider workflow were improved without adding multiple additional “tasks” or time.
Authors Sharma and Klocke (2014) performed a qualitative study examining the effects on nurse and patient attitudes after the implementation of interprofessional rounding (nurses and physicians with the patient). Noting the historical pervasiveness of the hierarchical relationship between physicians and nurses, the authors discuss the notion that physicians were seen as the only ones holding onto knowledge-based practice, and therefore prevented interprofessional collaboration. At the study hospital, bedside rounds prior to the intervention were completed without any nurse involvement leading to confusion on care plans, workflow inefficiencies, potential for reduced patient safety, and overall reduced patient satisfaction. Holding a level 6 of evidence, the purpose of the study completed was to improve perceptions on communication and collaborative care between nurse and physicians.

Methods implemented were a pre- and post-implementation survey for nursing staff on attitudes of a collaborative rounding process including the nurse, the physician, and the patient/their family. The rounds would include discussion on the patient’s current condition as well as a plan for the day. The survey was created by the authors and included close-ended questions with possible answers of *none, somewhat, and extremely*. The study was piloted with a smaller group of nurses and then recreated on all medical floors. The data was analyzed with online statistical software. Qualitative feedback was accounted for but not analyzed through the software. There was 67% nurse participation to both pre-and post-surveys and the data showed that nursing satisfaction related to rounding and communication by physicians significantly improved post-implementation. Additionally, workflow, feeling valued as team members, and job satisfaction increased. Nurses reported feeling like equal partners with regards to patient care, and perceived physicians as being more accessible through the increased face-to-face contact. The author’s also note that *good catches* with potential med errors and Hospital
Acquired Infections (HAIs) were prevented during the implementation period (2014). A limitation to this study was its voluntary basis of feedback resulting in a 67% return. Additionally, only nurses were surveyed—physician and patient attitudes were not collected. This study is beneficial in that it shows statistical evidence that nurse-physician rounding is beneficial in many ways to the nurse, but also improves workflow and overall patient safety and satisfaction which is a strong financial benefit to the hospital.

A level 6 evidence pilot project performed by Sturdivant et al. (2020) incorporated a nurse leader-physician bedside rounding protocol resulting in improved patient satisfaction with nurse-physician communication within 30 days. This improvement decreased this institution’s reimbursement loss risk from Medicare and Medicaid—a loss risk that is directly tied to patient satisfaction through reporting in Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). An institution with a lower score than the benchmark is at risk for financial loss and incentive through the Center for Medicare & Medicaid Services (CMS). In 2019, at the institution this pilot project was introduced, HCAHPS scores were below the 7th percentile range three months in a row. Prior to the implementation of this project, the project unit reported the average for the most positive answers relating to nursing communication as 74.8% and the average for the most positive answers relating to provider communication as 76.63%.

The nurse leader-physician rounding protocol took place on a 34-bed medical surgical unit at a teaching institution in the United States with the goal of reducing reimbursement loss risk tied to patient satisfaction. The tool used to implement this project is called the PATIENT Tool for Nurse-Physician Bedside Rounding: P-plan of care discussed with the patient and family; A- anticipated discharge/transfer is reviewed with the patient and family; T-Tests/diagnostic results are discussed with the patient and family; I- issues/concerns identified by
the patient are resolved; E-Explanation of medications, diagnosis, and prognosis with the patient and family; N-Nurse provides feedback regarding assessment and pain control; T- Thank the patient and encourage the patient and family to write down questions. This project utilized five physician led teams, and five nurse leaders (one nurse leader, two clinical nurse leaders, one charge nurse, and one unit educator) with one nurse leader being assigned to one of the five physician teams for rounding. The project timeline was 30 days with one extra week of education on the process and tool prior to the start. The communication tool and process info sheet were given to the nurse leader and the resident, and the PATIENT tool was put in patient rooms to encourage patient participation. The bedside nurse would give a report on their patient to the nurse leader who would be paged prior to the start of rounding. A rounding log was kept at the front desk and completed by each nurse leader post rounds including patient name, nurse leader name, physician name, admission date, rounding date, patient concerns, if family was present, and follow-up with the bedside nurse and present any concerns. Physicians would report on their patients later in the day in table rounds to a larger group.

In the 30 days, there was an 88.14% adherence rate to the pilot project, no statistical significance in HCAHPS scores related to nursing communication, but a 1.52% increase (compared to the three-month baseline time period of below average scores) in scores related to physician communication. Although there was no statistical significance in nurse communication scores, patient’s perceptions of nursing and physician communication reportedly increased.

Limitations of this study included difficulties in scheduling (especially with the pilot being at a teaching hospital), providing less consistency with rounding times as well as personnel in the rounding. This pilot was limited in that it was tested on the internal medicine service while there was a primary service on the floor as well (Sturdivant et al., 2020).
The small, but notable success of this project lends itself to success in future projects at different institutions. The PATIENT tool could be implemented in many settings and sets a standard for patients and the healthcare team to follow together. This tool provides the template for a level of care that is expected. While only involving nurse leadership is not part of the goal of increasing RN participation in provider rounding on this unit, nurse leaders could be helpful in allowing greater participation by offering their support.

In conclusion, the review of the literature points to many benefits of having RN participation in provider rounding not limited to, increased communication, decreased miscommunication, improved workflow, increased patient satisfaction, increased nurse job satisfaction, and overall increase in patient safety. Examining the evidence, it is clear the definition and standardization of a patient-centered rounding process and method/tool would allow greater success and benefit analysis of RN participation in provider rounding. Multiple tools used, such as the PATIENT tool, as well as nurse blocking, and whiteboard updates of daily plans could prove successful in this unit’s environment. Research supports a simple tool may be all that is necessary fully involve RN participation into rounding, however it needs to be a tool with constant use and measurement of benefits—a two-month quality improvement project may start the process, but long-term success will be determined by its continuity.

Rationale

This QI project was guided through the Plan, Do, Study, Act (PDSA) framework (Institute for Healthcare Improvement, n.d.). Within the PDSA framework, small changes can be executed and evaluated quickly for maximum potential of a working solution. This PDSA cycle was focused on incorporating RN attendance in FCR. A key factor to this project’s success was
to identify the barriers of consistent and successful collaborative FCR according to both the RNs and providers.

Plan

The Plan portion of PDSA cycle was planned to take place prior to May 23rd, 2022 and involved gathering stakeholder and team member buy-in; accessing support and partnership from the senior resident, CNL, and nursing leadership; creating a timeline for pre-intervention informal qualitative interviews to gauge perceptions on the value of FCR; implementation of nurse blocks, and education on the data measuring tool of tally sheets that the providers will fill out daily.

Do

The Do portion was planned to take place from May 23rd, 2022-July 1st, 2022 and involved conducting the pre-intervention informal interviews with both the providers and RNs on two separate occasions (during a one week timeframe), posting flyers in the unit reminding RNs and providers that RN attendance at rounds was valued and encouraged, partnering with the provider team to perform nurse blocks over a two week period, and conducting post-intervention informal qualitative interviews with both the providers and RNs over two separate days, attempting to interview the same staff.

Study

The Study portion of the PDSA cycle took place from July 1st, 2022-July 15th, 2022 and involved analyzation of data gathered during the Do portion – examining for themes and improvement.
INCREASING RN ATTENDANCE IN FCR

Act

The Act portion involved taking data analyzed and utilizing it to adjust or reframe the next PDSA cycle. With this data, planned measurement of improvement included an increased percentage of RNs attending FCR. In the Act phase, designating a champion to continue the work was key for sustainability of the improvement.

Specific Aim

The global aim of this project was to improve the process of interdisciplinary collaborative rounding on this pediatric unit. The specific aim was to increase the percentage of pediatric RNs participating in FCR from an average of 40% to greater than 60% by July 1st, 2022. Planned measurement of the aim included both qualitative data—gathered from informal qualitative interviews—and quantitative data—gathered through tally sheets that gave a percentage rate of RNs attending FCR after implementation of the intervention.

Methods

Context

The pediatric unit consisted of 19 beds addressing three levels of care: level-one pediatric medical-surgical patients, level-two step-down patients, and level-three critical care patients. There were four designated level-three pediatric intensive care unit (PICU) beds and four designated level-two step-down beds that could be flexed up to level-three PICU beds or down to level-one pediatric beds depending on need. PICU patients were followed by designated PICU service providers, medical-surgical patients were followed by pediatric hospitalist service providers (Pedi service) or a number of other designated providers such as gastroenterologists, hematologists/oncologists, and surgical providers. Level-two step-down patients could be followed by any number of these providers depending on the care needed (many were often
followed by the PICU service in addition to a hematologist/oncologist if the patient had an oncology diagnosis). Pedi service rounds occurred anytime between 1000 and 1400 daily and were comprised of a medical student intern, two-four residents, (usually) a fellow, an attending physician, the patient/family (if they wanted to be involved), and sporadically the patient’s nurse. This unit participated in Family-Centered Rounds—defined by Mittal (2014) as daily multidisciplinary collaborative rounds that incorporate the medical team, patient, and family into medical decision making. The Pedi service providers often performed rounds in FCR fashion at the patient bedside—however, there was not a formal written process for FCR that included times, participants, or designated talking points. Furthermore, no designated process existed for RN attendance or participation in FCR.

In a cost-benefit analysis of RN attendance in FCR, the cost of implementing a process was monetized in added time. This included time added for education around implementation of a new process, time conducting and participating in informal interviews, time involved in planning a new process for FCR, RN’s time to attend, provider’s time to keep track of RN attendance, and time to gather and analyze data. Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) surveys are a critical component of cost as they contribute to reimbursement for hospitals. If patients and families report lower than benchmark averages in several topics—not limited to physician communication and nurse communication, hospitals risk reimbursement loss from the Centers for Medicare and Medicaid Services (Sturdivant et al., 2020). This hospital fell at the national average (with a 30% survey response) of nurse communication at 80% (national average 80%, NH average 81%) and 2% below the national and stated average of 79% for physician communication (NH average 79%) (Medicare, n.d.). While
not specifically captured in the presented HCAHPS data, based on informal interview qualitative data, this unit may also have fallen under these benchmarks.

Poor communication perceived by families has the potential to cost the hospital reimbursement dollars. Additionally, communication inefficiencies result in RN and providers spending time clarifying orders and following up on care plans, causing longer workdays and time wasted—additional costs to the hospital. The initial cost of time to implement an intervention was outweighed exponentially by the value added of efficient communication and collaboration. Overall, good communication leads to efficient and timely patient care, and value added to the hospital’s bottom line.

**Interventions**

In the timeframe of this quality improvement project between May 23rd, 2022-July 1st, 2022, pre-intervention informal qualitative interviews were planned over two different days, one Plan-Do-Study-Act (PDSA) cycle was planned to take place over two weeks, and post-intervention informal qualitative interviews were planned to take place over two days. Before beginning the intervention portion of the project, buy-in from the stakeholders was critical. The stakeholders and team members included the section chief of pediatric hospital medicine (overseeing fellows, residents, interns), the senior resident (resident in charge of FCR and the other residents), residents, fellows, interns, the nurse manager, the clinical nurse leader, the RN educator, and the RNs. First, permission from the nurse manager and the section chief to implement an intervention was requested. Once this permission was granted and buy-in was verbalized from the nursing team as well as the provider team, partnership with the senior resident was essential. Part of the senior resident’s role is to plan and lead FCR daily and they were a critical stakeholder to the success of the project. After partnership with the senior resident
was established, the first step planned was to gather qualitative data through informal interviews highlighting nurse and provider perceptions of RN participation in FCR. The operational definition of ‘RN participation in FCR’ in this improvement project is attendance by RNs in FCR. The original plan was for pre-intervention informal interview data to be gathered from the providers and RNs on two separate occasions. The planned interview questions for the RNs consisted of: Do you participate in rounds? Do find RN participation in rounds valuable? What is valuable? What is hard? The planned interview questions for the providers consisted of: Do you let the bedside nurse know when rounding on their patient? Do you value RN participation in rounds? What is valuable? What is hard? Inclusion criteria for the pre- and post- intervention interviews were medical-surgical RNs and Pedi service providers (attendings, fellows, residents, and interns) working day shifts as FCR did not occur at night.

The planned start of this PDSA cycle was the end of May, with two days of informal interviews, the intervention, and then two days of post-intervention informal interviews. The intervention planned would have implemented the use of nurse blocking for FCR over a three-week timeframe. This process would have involved the senior resident structuring daily rounds around the nurse—each of one nurse’s patients is rounded on in a ‘block’ before moving on to the next nurse’s patients. Because this planned PDSA cycle involved a provider focused implementation, partnership with the senior resident would have been critical. Furthermore, data collection from the provider team would have been necessary for analysis and measurement of the intervention.

**Study of the Intervention**

Analysis of the planned intervention of nurse blocking would have been through a tick and tally chart managed by providers. The chart provided a simple way to gather data regarding
RN attendance on rounds each day. The chart’s purpose was to keep track of the patient census (on the Pedi service) and the number of patients rounds the RN was present during. Additionally, pre-and post-intervention informal qualitative interviews planned to appreciate how (and if) perceptions of RN participation in FCR shifted.

**Measures**

The informal interviews planned contained two questions with prompted answers of *never, sometimes, always*, and two open answer question asking about the value and difficulty of RN participation in FCR. It was intended that qualitative data from the pre-and post-informal interviews could be measured during the Study phase through categorical analysis of the *never, sometimes, always* questions. The open answer questions would have presented solid qualitative data that could have been used to plan a future PDSA cycle. A long-term goal and future PDSA cycle would be to increase verbal engagement of RNs in FCR, however, getting RNs to FCR was the first step. As the measurement tools being utilized were created by this author, psychometric testing indicating validity and reliability was not completed. Additionally, no content experts were asked to review interview questions for their validity.

Planned methods to be employed for assessing completeness and accuracy of data included encouraging participation in interviews in person, designating a process for providers to collect daily data of RN participation in FCR (which was planned to be in the form of a sheet of paper in the provider’s office to place tally marks on daily), and attempting to interview the same RNs and providers in the pre-and post-informal interviews to discern if perceptions shifted due to the intervention.
Analysis

Analysis of this quality improvement project planned to include both qualitative and quantitative methods. Informal interviews would have provided qualitative data used to assess perceptions on the value of RN attendance in FCR, and quantitative data would have provided a frequency and percent of RN attendance at FCRs. Planned variations in data included RN and patient census on the days of informal interviews, reasons for not attending FCRs (such as not enough time to attend, FCRs happened during medication administration, not wanting to participate, not knowing about FCRs), and lack of staff to interview. It was also likely that capturing and managing RN participation daily would have been challenging for providers (and collection of data potentially forgotten on some days). Additionally, interviewing the same RNs and providers pre-and post-implementation had the potential to be difficult due to scheduling conflicts.

Ethical Considerations

Ethical considerations included an awareness of time throughout the project. Time is a valuable resource, and one that is in constant need. The qualitative informal interviews as well as the intervention of nurse blocking needed to be thoroughly planned and implemented with consideration so as not to disrupt the balance of the unit’s current workflow versus the cost-benefit analysis. Additionally, a champion of the project was important—someone who could continue the efforts and contribute to greater improvement on the unit. The project proposal was reviewed by the University of New Hampshire Department of Nursing Quality Review Committee for congruence with descriptors of quality improvement projects that are deemed exempt from IRB review. The project proposal was reviewed by the nurse manager and the unit CNL, and facility approval was obtained through these stakeholders as well as through the nurse
educator and section-chief of residents. Written consent for survey participation was obtained at the beginning of each survey.

Results

Initial Steps of the Intervention and Evolution Over Time

As an unintended consequence, the planned intervention changed. After the initial planning and proposal, various contextual elements interfered with the execution of this intervention. These included vacation times of stakeholders requiring oversight of the project, resident cycles ending and beginning in the middle of the project, unforeseen challenges of gathering data on a daily basis (who would gather it and how often), and overall time constraints—leading to an alternative intervention. The intervention performed instead was the display of an educational poster with a flexible timeline and requiring less input from various stakeholders—only voluntary involvement was necessary for data gathering. The educational poster presented perceptions of RN attendance in FCR based on evidence, initial key findings from the pre-intervention survey, and feedback provided by the providers and RNs.

There was very little response to the change in format from RN and provider participants as they were aware a quality improvement project was taking place but unaware of what the specific intervention would be. Nursing leadership exhibited some concern to the original intervention based on time constraints and questioned the workload of providers gathering data daily regarding RN attendance in FCR. The change of intervention to an educational poster was suggested and approved by nursing leadership. The resident section-chief was supportive of both interventions.
Instead of post-intervention informal interviews, a post-intervention survey QR code was embedded into the educational poster so that measurement of the intervention’s success would be directly related to the viewing of the poster (and responses could be on a flexible timeline). The method employed to measure change was qualitative data gathered from the pre- and post-intervention survey. Data gathered from informal interviews (prior to the PDSA cycle) and the pre-intervention survey indicated that many nurses were not attending FCR. As a result of time constraints for project implementation, data gathering RN increased attendance in FCRs was not realistic. Therefore, the post-intervention survey’s aim was to identify whether the pre-intervention survey and poster had any effect on the perceptions or process of FCR. The post intervention survey questions were as follows; *Did you learn something new from this poster?*; *Did any of the data from the survey surprise you?*; *Did the pre-survey and poster influence your perceptions towards active RN participation in FCR?*; *Was this poster helpful?* Reliability and validity of these surveys are not available as psychometric testing was not completed.

While the performed QI project maintained the subject of increasing RN attendance in FCR, the implementation changed drastically due to contextual elements related to the intervention. These were elements such as time constraints, vacations, and competing priorities. Ultimately, time constraints drove the changes. The Do phase of the Plan, Do, Study, Act cycle lasted a duration of six weeks and deviated from the original plan of pre- and post-intervention informal interviews to pre- and post-intervention online surveys. Additionally, the intervention changed from nurse blocking to an educational poster due to time constraints and feasibility of stakeholder participation.

The pre-intervention tactic shifted from informal interviews to an online survey through Qualtrics® (an online surveying tool) which was more realistic in the two-week time frame due
INCREASING RN ATTENDANCE IN FCR

its accessibility through a quick response (QR) code versus in-person interviewing. Both the providers and RNs received similar questions tailored to each specialty respectively. An initial question of the survey asked the main barrier to RN participation in FCR with several choices based on the review of the literature, including a free-text section for additional comments. Seven (77.7%) of the provider respondents believed that the RN being difficult to find was the main barrier to RN attendance in FCR. The nurse responses were split with two (40%) choosing not having enough support for other patients, and three (60%) choosing lack of notification on rounding times as the main barrier. The remaining two provider responses chosen were Other: Please Specify and were not specified.

Pre-Intervention Survey Results

Figure 1

Perceived Main Barriers to RN Attendance in FCR
Pre-Intervention survey outcomes are based on aggregate data gathered from 14 respondents—nine providers and five RNs. The survey included questions on a five-point Likert scale ranging from *Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree,* to *Strongly Disagree* that compared perceptions of the current FCR process from the provider and RN perspective independently. The original intention in this QI project was for the pre- and post-survey responses to be compared. However, with limited post-intervention responses and comments from those who viewed the poster, comparing the responses by role was more meaningful.

For the question regarding notification and attendance of FCR, 100% of providers strongly or somewhat agree while 60% of RNs strongly or somewhat disagreed highlighting a disconnect between perceptions. For the question on asking for RN feedback, 89% of providers and 80% of RNs strongly or somewhat agreed showing congruence. For the question on whether RN attendance in rounds was viewed as valuable and necessary, 100% of the providers strongly or somewhat agreed while 40% of the RNs somewhat agreed, 20% neither agreed nor disagreed, and 40% somewhat disagreed showing disconnect. For the question on the value of RN feedback 100% of providers strongly or somewhat agreed, 80% of RNs strongly or somewhat agreed and 20% somewhat disagreed showing mostly congruence, with some disconnect. For the question on the value of RN active participation in FCR, 100% of providers strongly or somewhat agreed, and 80% of the RNs strongly agreed and 20% somewhat disagreed again showing mostly congruence with some disconnect. For the question on confusion regarding the daily care plan requiring follow-up 89% of providers strongly or somewhat agreed with 11% somewhat disagreeing, and 80% of RNs strongly or somewhat agreeing with 20% somewhat disagreeing—these responses showing congruence and especially highlighting large gaps in communication.
For the question regarding patients and families having clear understanding of the daily care plan, 100% of providers strongly or somewhat agreed, while 60% of RNs somewhat agreed and 40% somewhat disagreed demonstrating disconnect. For the question regarding comfort communicating, 100% of providers and RNs strongly or somewhat agreed, highlighting congruence. For the question asking about ease of accessibility (RNs to providers and vice versa), 78% of providers strongly or somewhat agreed, 11% neither agreed or disagreed, and 11% somewhat disagreed while RNs 100% strongly or somewhat agreed. It is interesting to note here that according to the initial question on main barriers, 78% of providers selected RNs were difficult to find during rounding time as the main barrier of RN attendance. These two questions show a disconnect in RN accessibility and further investigation into specifics around the ease of accessibility is warranted—perhaps during rounding it is difficult for providers to locate RNs, but throughout the day it is less challenging. For the question regarding collaboration being seamless and easy, 78% of the providers strongly or somewhat agreed and 22% somewhat disagreed, and 40% of RNs strongly or somewhat agreed while 60% somewhat disagreed highlighting disconnect. In the final question on RN presence and active participation in FCR increasing communication, 100% of providers strongly or somewhat agreed and 80% RNs strongly or somewhat agreed and 20% neither agreeing nor disagreeing, highlighting congruence (See Table 1).
Table 1

**RN and Provider Survey on RN Participation in FCR**

<table>
<thead>
<tr>
<th>Question</th>
<th>Provider n=9</th>
<th>RN n=5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provider:</strong> I make sure my patient’s RNs are notified of rounds.</td>
<td>3 (33.3%) Strongly Agree</td>
<td>2 (40%) Somewhat Agree</td>
</tr>
<tr>
<td><strong>RN:</strong> I attend rounds a majority of the time.</td>
<td>6 (66.6%) Somewhat Agree</td>
<td>2 (40%) Somewhat Disagree</td>
</tr>
<tr>
<td><strong>Provider:</strong> I ask my patient’s RN for feedback during rounds.</td>
<td>6 (66.7%) Strongly Agree</td>
<td>1 (20%) Strongly Disagree</td>
</tr>
<tr>
<td><strong>RN:</strong> I actively participate in rounds a majority of the time (i.e. I am asked for feedback during rounds)</td>
<td>2 (22.2%) Somewhat Agree</td>
<td>3 (60%) Somewhat Agree</td>
</tr>
<tr>
<td><strong>Provider:</strong> I view RN presence in rounds as valuable and necessary.</td>
<td>9 (100%) Strongly Agree</td>
<td>2 (40%) Neither Agree nor Disagree</td>
</tr>
<tr>
<td><strong>RN:</strong> My attendance in rounds is viewed by the care team (Pedi Service) as valuable and necessary.</td>
<td>1 (11.1%) Somewhat Disagree</td>
<td>2 (40%) Somewhat Disagree</td>
</tr>
<tr>
<td><strong>Provider:</strong> The care team (Pedi Service) views RN feedback in rounds as valuable and necessary.</td>
<td>8 (88.8%) Strongly Agree</td>
<td>1 (20%) Strongly Agree</td>
</tr>
<tr>
<td><strong>RN:</strong> My feedback (active participation) in rounds is viewed by the care team (Pedi Service) as valuable and necessary.</td>
<td>1 (11.1%) Somewhat Agree</td>
<td>3 (60%) Somewhat Agree</td>
</tr>
<tr>
<td><strong>Provider:</strong> I view RN feedback in rounds as valuable and necessary.</td>
<td>9 (100%) Strongly Agree</td>
<td>2 (40%) Strongly Agree</td>
</tr>
<tr>
<td><strong>RN:</strong> I feel like a valuable part of the care team.</td>
<td>2 (40%) Somewhat Agree</td>
<td>3 (60%) Somewhat Agree</td>
</tr>
<tr>
<td><strong>Provider:</strong> The care team (Pedi Service) views RN participation in rounds as valuable and necessary.</td>
<td>7 (77.7%) Strongly Agree</td>
<td>4 (80%) Somewhat Agree</td>
</tr>
<tr>
<td><strong>RN:</strong> I view my attendance and active participation in rounds as valuable and necessary.</td>
<td>2 (22.2%) Somewhat Agree</td>
<td>1 (20%) Somewhat Disagree</td>
</tr>
<tr>
<td><strong>Provider:</strong> On a daily basis, RNs follow up with me with confusion regarding the daily plan of care and/or medical decisions made during rounds.</td>
<td>5 (55.5%) Strongly Agree</td>
<td>3 (60%) Strongly Agree</td>
</tr>
<tr>
<td><strong>RN:</strong> I have confusion of the daily plan of care and/or medical decisions made during rounds, requiring follow-up with the provider.</td>
<td>3 (33.3%) Somewhat Agree</td>
<td>1 (20%) Somewhat Agree</td>
</tr>
<tr>
<td></td>
<td>1 (11.1%) Somewhat Disagree</td>
<td>1 (20%) Somewhat Disagree</td>
</tr>
</tbody>
</table>
INCREASING RN ATTENDANCE IN FCR

<table>
<thead>
<tr>
<th>Provider: The patient/families have clear understanding of daily care plans and medical decisions made during rounds.</th>
<th>3 (33.3%) Strongly Agree 6 (66.6%) Somewhat Agree</th>
<th>3 (60%) Somewhat Agree 2 (40%) Somewhat Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN: The patient/families have clear understanding of daily care plans/medical decisions made during rounds.</td>
<td>8 (88.8%) Strongly Agree 1 (11.1%) Somewhat Agree</td>
<td>4 (80%) Strongly Agree 1 (20%) Somewhat Agree</td>
</tr>
<tr>
<td>Provider: I am comfortable communicating with the RNs.</td>
<td>3 (33.3%) Strongly Agree 4 (44.4%) Somewhat Agree 1 (11.1%) Neither Agree nor Disagree 1 (11.1%) Somewhat Disagree</td>
<td>4 (80%) Strongly Agree 1 (20%) Somewhat Agree</td>
</tr>
<tr>
<td>RN: I am comfortable communicating with providers.</td>
<td>2 (22.2%) Strongly Agree 5 (55.5%) Somewhat Agree 2 (22.2%) Somewhat Disagree</td>
<td>1 (20%) Strongly Agree 1 (20%) Somewhat Agree 3 (60%) Somewhat Disagree</td>
</tr>
<tr>
<td>Provider: RNs are easily accessible for communication.</td>
<td>8 (88.8%) Strongly Agree 1 (11.1%) Somewhat Agree</td>
<td>3 (60%) Strongly Agree 1 (20%) Neither Agree nor Disagree</td>
</tr>
<tr>
<td>RN: Providers are easily accessible for communication.</td>
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</tr>
<tr>
<td>Provider: Collaboration between providers and RNs on the unit is seamless and easy.</td>
<td>3 (33.3%) Strongly Agree 4 (44.4%) Somewhat Agree 1 (11.1%) Neither Agree nor Disagree 1 (11.1%) Somewhat Disagree</td>
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</tr>
<tr>
<td>Provider: RN presence in rounds increases communication between providers, RNs, and families.</td>
<td>8 (88.8%) Strongly Agree 1 (11.1%) Somewhat Agree</td>
<td>3 (60%) Strongly Agree 1 (20%) Neither Agree nor Disagree</td>
</tr>
<tr>
<td>RN: RN presence and active participation in rounds increases communication between providers, RNs, and families.</td>
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<td>4 (80%) Strongly Agree 1 (20%) Somewhat Agree</td>
</tr>
</tbody>
</table>

*Post-Intervention Survey Results*

Post-intervention survey outcomes are based on aggregate data gathered from three respondents—one provider and two RNs. Two RNs stated they *learned something new* from the poster, one RN stating the poster helped to *increase participation ideas* in the feedback box; one provider stated *no*. One provider was *not surprised* by any of the data from the poster; one RN respondent was *surprised* by the data on the poster showing that providers have difficulty finding RNs at rounding time. One RN respondent answered *yes* that the pre-survey and poster influenced their perceptions towards active RN participation in FCR and in the feedback box stated, *increased notification from providers before rounds*; one RN respondent answered *no.* When asked if the pre-survey and poster influenced perceptions towards active RN participation
in FCR, one provider and one RN responded no and one RN responded yes. When asked if the educational poster was helpful two RN respondents answered yes and provided feedback stating, 

Yes! I would love more participation from all interdisciplinary team members. It highlighted great ideas, and yes, highlights the importance of RN participation in rounds; no providers responded to this question. The educational poster can be found in Appendix A.

Missing data includes the perspective of the remaining RNs and service providers on staff (and those residents who participated in the beginning of the project but finished their rotation before the end). There is a potential for survey data to be skewed as there are about 25 staff RNs on the unit and only five responded to the pre-intervention survey and two on the post-intervention survey. Similarly, nine providers responded to the pre-intervention survey and only one to the post-intervention survey, causing a large gap in outcome measurement. This one response was mainly due to the change in residency rotation concurrent with the display of the educational poster and post-intervention survey. In the pre-intervention survey, about twice as many providers responded as RNs, which provided valuable data from the provider perspective, but is difficult to compare due to the lack of responses from the RN perspective. On the post-intervention survey, twice as many RNs responded as providers, and the sole provider respondent did not leave any feedback. The lack of survey response is attributed to many factors including the timing of the survey at the beginning of summer vacations and during the shift of resident cycles, its voluntary nature, competing priorities, and the challenges of integrating the survey into the daily workflow on the unit.
INCREASING RN ATTENDANCE IN FCR

Discussion

Summary

The Global Aim of this project was to improve the process of interdisciplinary collaborative rounding on a pediatric unit at a children’s hospital. The specific aim was to increase percentage of pediatric RNs participating in FCR from an average of 40% to greater than 60% by July 1st, 2022. While this specific aim was not met at the conclusion of the first PDSA cycle, qualitative data gathered through completion of the project validated the need for increased RN attendance and participation in FCR which in turn will improve the process of FCR and thereby address the global aim. Due to the time constraints and change of intervention, the percentage of RNs attending rounds post-intervention was not measured. However, RNs and providers indicated an increased awareness of the dysfunctional processes of FCR and, in some instances, immediate increases in RN attendance occurred—contributing to this project’s global aim.

Key Findings

Key findings in the QI project included a shared value for FCR, process and timing challenges of FCR, gaps in communication between providers and RNs, and competing priorities. As noted in the results section, there is congruence between provider and RN response in the areas of RN value as part of the care team, daily confusion regarding the care plan requiring follow-up, ease and comfort of communication between RNs and providers, and that RN presence in rounds increases communication between providers, RNs, and families. There are gaps in the areas of making sure RNs are notified of rounds, providers asking RNs for feedback during rounds, RN views on their presence in rounds, provider views of RN participation in rounds, patients and families having a clear understanding of daily care plans and
medical decision making made during rounds, accessibility of RNs for communication purposes, and collaboration on the unit between providers and RNs being seamless and easy. While the congruencies highlight the importance of RN attendance and participation in FCR, the gaps demonstrate multiple areas where there are current communication barriers and highlight areas for improvement.

Communication is the critical aspect to congruencies and gaps between provider and RN responses. Responses from the pre-intervention survey include a similar viewpoint of RNs and providers on the value of RNs attending and participating in rounds, as well as a disparity between the RN and provider perceptions on the ease of communication on the unit. Interestingly, both providers and RNs demonstrated 100% agreement about being comfortable communicating with each other. In the post-intervention survey, an RN expressed surprise at the finding that providers did not all think that the RNs were easily accessible for communication. Results from both surveys further highlight a disconnect between provider and RN perceptions of current communication processes between these two groups. This gap in communication exhibits a starting point for many future PDSA cycles. Consequently, conversations about the importance of RN attendance and participation in FCR have started between all stakeholders. One response in the post-intervention survey specified providers had been including more RNs in rounds since the start of the project, indicating that the project had already (partially) met the global aim.

Strengths

The project’s theme of RN participation in FCR was a key strength. As the literature and data show, providers and RNs see immense value in RN participation in FCR. During the microsystem assessment and research of the problem, RNs and providers verbalized a marked
decrease in RN attendance in FCR over the past few years—essentially once COVID-19 started. About five years ago, a similar quality improvement project was implemented with the goal of increasing RN participation in rounds and was successful. A quality improvement project of the same theme and history of success was timely and encouraged by RNs and providers. Having the support of both the RNs and providers as well as leadership allowed for greater accessibility to perceptions and feedback in the pre- and post-intervention surveys. The problem of RNs not attending FCR was becoming more noticeable before this project began with stakeholders verbalizing a need for change. This recognition for change embodied by the very people the change would affect the most (RNs and providers) was critical to the project’s strength. Additional strengths lay in the project’s timeliness—it was able to be completed easily in six weeks and its ease of replication. This project can be done on any unit with minimal commitment and time required from stakeholders and participants.

**Interpretation**

Qualitative results from the post-intervention survey suggest that this quality improvement project has increased awareness around RN attendance and participation in FCR. In some instances—based on verbal feedback—this project has even increased RN attendance. The association between the intervention and outcomes were largely based on qualitative data. Qualitative data from the intervention poster and the pre- and post-intervention surveys positively indicated that RN attendance and participation in FCR was valued by both RNs and providers, and that this process could be improved. While the post-intervention survey only contained RN responses (three), respondents felt that this quality improvement project in its entirety had an impact on the way FCR is handled by providers, and are noticing slight changes—an RN respondent shared that providers are informing her of rounds more often. One
stakeholder—the section chief—emphasized that since the start of this quality improvement project, her residents are coming to her saying they going to make an effort to teach the incoming interns and residents that RNs should be included in rounding—and lead by example. In the post-intervention survey RNs reported a shift in provider awareness of RN presence during rounds and have felt more included.

One finding especially relevant in relation to the available knowledge was that the absence of RNs in rounds resulted in time wasted through RN follow-up and clarification. Aragon et al. (2016) and Riegel et al. (2018) both discussed that the absence of nurses in rounding caused communication issues, teamwork inefficiencies, and lower quality patient care. In this quality improvement project, eight of nine provider respondents stated that RNs follow up with them daily with confusion regarding the care plan. This is time wasted that could have been avoided had the RN been involved FCR. Additionally, In Knighton and Bass’s (2021) scoping review, structural barriers were highlighted as a key factor to the lack of RN attendance in FCR. Within this quality improvement project, the lack of structure for FCR was a top finding on part of both providers and nurses as a reason RNs were not in attendance. Sharma and Klocke (2014) discussed past hierarchical notions of rounding as physician-centered with the provider responsible for knowledge dissemination and passing it to the RN. Sharma and Klocke (2014) performed a study that revealed collaborative rounding involving RNs increased communication and RN job satisfaction. RNs also reported the increased accessibility to physicians through face-to-face contact led to fewer medical errors. Notably, in the project performed in this paper, both providers and RNs felt that the other was easily accessible for communication. Sturdivant et al. (2020) piloted a rounding protocol introducing a tool—the PATIENT® Tool—that required RN participation and was successful in obtaining an 88.14% adherence rate in 30 days. The available
data underscores that small scale quality improvement projects with minimal and simple changes can be widely successful. Use of a rounding tool, creation of a rounding schedule, and collaborating to create a daily plan on the patient whiteboard were ideas that were found within the available knowledge that were also presented as feedback within this project. Each are re-creatable, were successful in their implementation settings, and likely to be successful in this pediatric unit.

The impact this QI project on the people and systems on the unit—whether large or small—will be determined by the percentage of RNs attending rounds post QI project and the champion performing the next PDSA cycles. Qualitative data confirmed increased education around FCR and peer perceptions contributed to a shifting awareness on the unit of the current state of FCR versus the ideal state. An RN respondent on the post-intervention survey expressed surprise that seven of nine provider respondents shared “difficulty finding the RN during rounding” as a key barrier to RN attendance in FCR. This surprise suggested a larger communication gap that may be occurring on the unit, especially as new interns and residents cycle through every few months while the RN staff remained relatively constant. Additionally, both providers and RNs noted lack of a rounding schedule as a current problem—affecting each team differently but sharing in the difficulty it produced. These two areas highlight opportunity costs that the unit could take advantage of with future quality improvement projects.

With the change to the intervention in its entirety from nurse blocking to education, the anticipated outcome of a definitive increase (measured through percent) in RN attendance in FCR was not achieved. The intervention of an educational poster provided challenges in that it had to be placed out of patient visibility which left the RN break room and the provider office—both with minimal space for a poster and no guarantee that many would see it. Differences
between observed and anticipated outcomes from the RN perspective largely included the lack of RN respondents on the pre-intervention survey and lack of total respondents on the post-intervention survey. Both pre-and post-intervention surveys were easily accessible and posted in various locations ensuring visibility. The surveys required less than 15 minutes and the pre-intervention survey likely had more respondents due to the gift card being offered. An email with the survey link was sent to RN staff for both surveys with no increase in response, possibly due to competing work priorities and no incentive offered in the post-intervention survey. The lack of response from critical stakeholders on the post-intervention survey posed challenges when analyzing the results for association between the intervention and outcome.

The main difference between observed and anticipated outcomes on the provider side that most of the resident providers completed the pre-intervention survey. It was anticipated that very few would respond due to the hectic nature of their schedules. An email with the survey link was distributed to the provider team which resulted in an 80% increase in responses from the initial poster with the QR code (two - nine respondents), and further qualitative data giving insight into the perceived problem from the provider side. Unfortunately, only one provider responded to the post-intervention survey. The lack of response from providers was likely due to the timing of the survey being posted the day before resident rotations were ending. The residents who had been present at the beginning of the project were no longer present at the end of the project and the incoming residents did not have context for the project.

Tangible costs, including the cost of the gift card and posters (both addressed by the project lead) were minimal and provided a substantial opportunity benefit to the unit. The issue of RN attendance at FCR was re-introduced to the unit and is now being incorporated into provider training and has been brought to the attention of the nurse manager and unit Clinical
Nurse Leader. The project has started a conversation that can easily be continued and has the buy-in from the necessary stakeholders. The success of increasing RN attendance in FCR will increase communication between the care team, decrease time wasted on follow-up, and provide better quality and safer care to patients—ultimately providing the hospital benefits that greatly outweigh their costs.

**Limitations**

This project had many limitations contributing to the lack of participants and data gathered. The most substantial limitation was time. The project had a six-week time frame, curbing the interventions that were realistic. The original intervention of nurse-blocking required more time than allotted, so edits were made to fit the intervention portion of the project in this time. Time was also a barrier for key stakeholders as many staff members (RNs and leadership) were taking summer vacations. Additionally, two cycles of residents and interns occurred during the project making it difficult to have consistent feedback and survey respondents. There was a limitation as to where the intervention portion of the project could be displayed, making sure the data wasn’t visible to patients and families. This may have contributed to the lack of responses by the staff since the poster could have been missed or overlooked. Furthermore, the aggregate data gathered made it difficult to changes from the pre-intervention survey to the completion of the project with the post-intervention survey making a project outcome challenging to measure. The lack of response on the post-intervention survey also limited analysis of the effectiveness of the intervention—however, the two groups can be compared for enhanced meaning.

A factor that may have limited internal validity was the imprecision in the design and measurement of the surveys. The intention was for the pre-and post-intervention survey to be almost identical but doing so would not have allowed for the measuring of the intervention. The
post-intervention survey was changed to measure the intervention and asked very specifically if the intervention may have influenced perceptions on RN attendance in rounds. Additional thought at the beginning of the project on both surveys could have provided more meaningful data, however with the time constraints and shift of the intervention mid-project provided challenges. Efforts to adjust around these limitations were made—largely by changing the intervention to fit the timeframe. Additionally, surveys were available for at least a week at a time which—a suggestion by the clinical nurse leader—that allowed for an increase in respondents through multiple reminders both in person and through email.

With each of these limitations, the project is still easily re-creatable in other settings. The distribution methods of the surveys may change, but surveys and education are simple, time-efficient interventions that can be replicated. The project gathered qualitative data with feedback and ideas for change which will be helpful—and could be starting points—in creating future projects and improvements.

**Conclusions**

In medicine, consistent and transparent communication in critical to quality care and positive patient outcomes. In the pediatric setting, the necessity of good communication is magnified in efforts to care for patients and their families to achieve family-centered care. As reiterated in the introduction, a core principle of family-centered care is FCR, which is also considered the gold standard of care by the American Academy of Pediatrics (Fernandes et al., 2021). The RN is an essential connection between families and care teams and disconnect from medical decision-making can often contribute to negative outcomes. RN attendance in FCR is critical for effective communication, efficient workflow, and patient safety.
Next steps should include PDSA cycles testing the ideas presented by the providers and RNs as feedback from the pre- and post-intervention surveys. Additionally, ideas found in the available knowledge are re-creatatable in this pediatric setting. These ideas include nurse blocking, collaboration on a care plan written and available in the patient room, creating a process and schedule for rounding that can be realistically adhered to, creating identifiable RN information posted outside of patient rooms, notifying RNs five minutes before FCR on their patient starts, and providing support to RNs while they attend FCRs. The clinical nurse leader on the unit was supportive of this project and acknowledged the need—she, along with the director of pediatric residents, would be the best resources and champions in translating these ideas into reality.

RN participation in FCR is the most sustainable process for quality patient-centered care. The available knowledge and this improvement project provide ample evidence (both qualitative and quantitative) that RN attendance in FCR eases communication barriers, minimizes time wasted, improves workflow, and improves patient safety. Increasing RN attendance is also a care-based and financially sustainable option providing a huge cost benefit to the institutions that implement and adhere to this practice. This QI project has the potential to affect interprofessional relationships on pediatric units as well as adult units ranging from critical care, medical-surgical, and clinical environments. Exceptional family-centered care is team-centered care, and one cannot exist without the other. Therefore, RN attendance in interprofessional family-centered rounds is the only viable way to provide exceptional family-centered care in the future of healthcare.
References

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Appendix A

Educational Poster Intervention

INCREASING RN ATTENDANCE IN FCR

OBJECTIVES
- Identify barriers to RN attendance + participation
- Identify starting points to increasing RN attendance + participation
- Identify useful methods and tools for increasing RN attendance + participation in FCR

RN ATTENDANCE: RNs ARE PRESENT AT 45+ RN PARTICIPATION IN FCR IS AN ACTIVE PART OF FCR DISCUSSION

INTRODUCTION
Based on a microsystem assessment of the unit, informal interviews with RNs, providers, and leadership, and observed rounding, RNs are attending Peer service Family-Centered Rounding (FCR) an average of 50-90% of the time.

REPORTED BARRIERS TO RN ATTENDANCE
- 7 of 9 providers reported recent shift changes make it difficult to find nurse availability
- Providers report RNs are sometimes hard to find in the hallway

TOP SURVEY FINDINGS
- 3 of 5 RNs and 3 of 5 providers do not think that collaboration between RNs and providers in the unit is seamless and easy
- 100% of respondents view RN participation in FCR as important and increases communication between nurses and physicians

PEER IDEAS FOR INCREASED RN PARTICIPATION
- Collaborative creation of the patient’s daily plan on the whiteboard in their room
- Create a set schedule for FCR
- FCR by nurse assignment (nurse blocking)
- Shorten nurse attendance portion of FCR (RN attendance at change points or medical decision making points)
- All rounds outside of patient’s room (not in the provider room)

KEY TAKEAWAYS
- RNs and providers would benefit from a more structured process to rounding
- Addition of rounding tools, such as nurse blocking, creation of daily care plan on patient whiteboard, and a set rounding schedule could increase active RN participation in FCR

RELATED LITERATURE
- Centers for Health Care Education and Academy of Pediatric Nurses. 2019. Family-Centered Care and the Pediatric Nurse. Pediatrics 143(3)(Suppl), e20183472