

Original Publication

OPEN ACCESS

Improving Pediatric Resident Communication During Family-Centered Rounds Using a Novel Simulation-Based Curriculum

Priyanka Rao, MD*, Elizabeth Hill, MD, Courtney Palka, MD, Kelly Rea, Kori Jones, MEd, Kate Balzer, MSW, Timothy Cornell, MD, Deborah Rooney, PhD, Melissa Cousino, PhD

*Corresponding author: priyankr@med.umich.edu

Citation: Rao P, Hill E, Palka C, et al. Improving pediatric resident communication during family-centered rounds using a novel simulation-based curriculum. *MedEdPORTAL*. 2018;14:10733.

https://doi.org/10.15766/mep_2374-8265.10733

Copyright: © 2018 Rao et al. This is an open-access publication distributed under the terms of the Creative Commons Attribution-NonCommercial-Share Alike license.

Abstract

Introduction: While family-centered rounds (FCR) have become increasingly important in pediatrics, there is often no training for residents on appropriate FCR practice. This curriculum was developed to address this identified gap in pediatric trainee education through a combination of didactic presentation, direct observation, and simulated FCR. **Methods:** Residents participated in a didactic presentation on key components of FCR and tenets of communication with families. A subset of residents participated in a simulated intervention in which they practiced an FCR encounter using a mock patient case and received immediate feedback from a multidisciplinary team. Following the simulation, residents completed follow-up surveys and focus group discussions to assess their experience and comfort. Resident trainees were observed and rated during FCR by trained parent advisors using a novel FCR checklist both before and after participation in the simulation. **Results:** This curriculum was implemented with 10 pediatric interns (intervention group). These residents demonstrated statistically significant improvements in the areas of greeting family by name and soliciting rounding preferences, enhancing family comfort in participating in FCR, and increasing family engagement in FCR. Compared to controls, intervention group residents had higher ratings on the majority of performance items. Resident-reported self-efficacy in conducting FCR increased following the intervention, and the feedback portion of the intervention was highly valued.

Discussion: Simulation-based training is an effective model for teaching residents best practices in FCR with lasting impact on resident communication skills as seen in comparative analysis from before and after the intervention.

Keywords

Communication, Simulation, Family-Centered Rounds, Editor's Choice

Educational Objectives

By the end of this activity, learners will be able to:

1. Describe appropriate communication techniques with families during family-centered rounds (FCR).
2. Summarize the key components of FCR and how to include families in the rounding process.
3. Incorporate FCR best practices into patient care.

Introduction

Family-centered rounds (FCR) have become increasingly prevalent in pediatric medicine. In a joint policy statement, the American Academy of Pediatrics and the Institute for Family-Centered Care emphasized the critical role children and families play in medical decision making and encouraged rounding in the presence of the patient and family.¹ Additionally, the Accreditation Council for Graduate Medical Education requires residents to provide family-centered care that is tailored to the cultural and socioeconomic needs of patients and families.²

In light of the growing prevalence of FCR, research has begun to emerge on the numerous benefits of FCR for patients and families. Families report feeling better informed, having less anxiety, and

Appendices

- A. PFCC Rounds Checklist .docx
- B. Introduction to Family-Centered Rounds Video .mp4
- C. Communication Tips for FCR Annotated Presentation.ppt
- D. Observers for Simulation Email.docx
- E. FCR Simulation Goals and Objectives.docx
- F. FCR Simulation Time Line .docx
- G. Parent Role-Play Character Script.docx
- H. Mock Patient Cases for Simulation.docx
- I. Resident Self-Assessment Survey.doc
- J. Master Curriculum Implementation Resource Guide.docx

All appendices are peer reviewed as integral parts of the Original Publication.

experiencing increased overall satisfaction with care.³⁻⁵ However, health care providers describe concerns and challenges that do not always align with the patient experience.⁶⁻¹⁰ For example, providers express concern that patients and families do not understand the discussions on rounds, whereas families report feeling better informed when included in FCR. Providers worry that discussing sensitive matters in front of patients and families causes additional worries, but families report decreased anxiety when included in FCR.^{3,4,11}

Furthermore, medical trainees express discomfort answering questions, discussing sensitive issues, presenting information in patient-friendly language, and engaging in teaching during FCR.^{5,9,11} There is evidence that trainees do not appropriately introduce the team or the purpose of FCR. For example, Rubin and colleagues¹² observed 268 rounding episodes and completed a rounding checklist based on national standardized guidelines for family-centered care. In only 15% of observations were team members introduced to families, and only 3% clarified the purpose of FCR. These findings underscore the necessity for in-person training and feedback regarding FCR best practices.

Although many institutions have implemented FCR as standard practice, there is scant literature on evidence-based training in FCR. In one study of medical students' pediatric clerkship experiences, trainees with greater opportunities to observe role models and practice for mastery reported higher scores on measures of self-efficacy in conducting FCR.^{13,14} FCR practices have improved with implementation of observations with feedback and clear expectations for FCR.¹⁵ In response to the need for FCR training, we aimed to develop and evaluate a novel FCR curriculum. Using the very small literature base on best-practice training for FCR, we incorporated elements from each of these studies, including didactic teaching, direct observation with feedback, and simulation-based FCR practice,¹³⁻¹⁵ into our curriculum.

This curriculum is a unique contribution to the existing literature on FCR. To our knowledge, no other such curriculum for residents has been published. Prior publications in *MedEdPORTAL* include didactic trainings for medical students,¹⁶ a workshop of challenging case scenarios during FCR,¹⁷ and user guides to promote presenter empowerment during FCR.^{18,19} However, none of these feature a curriculum with simulation-based training and feedback for resident trainees.

Methods

We designed and implemented a three-phase curriculum over the 2016-2017 academic year (see the [Figure](#)). The study was deemed exempt by our institutional review board as a quality improvement project.

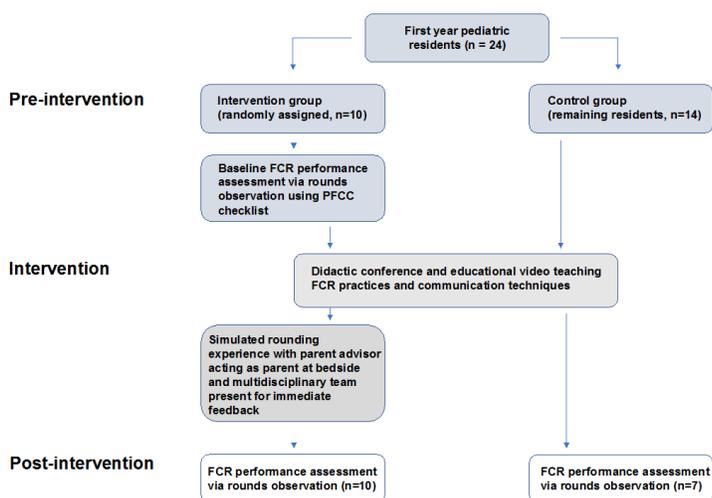


Figure. Family-centered rounds (FCR) simulation intervention. PFCC, patient and family-centered care.

Phase 1

In order to evaluate effectiveness of our curriculum, we developed an investigator-designed assessment tool, the PFCC (the Patient and Family-Centered Care) Rounds Checklist (Appendix A), based on previously established FCR best-practice guidelines.²⁰ This tool was later used to assess FCR performance of the intervention group pre- and postsimulation and to compare the group's performance to that of controls. A multidisciplinary team consisting of residents, attending physicians, psychologists, nurses, parents of children who had been hospitalized, patient advocates, and a medical librarian wrote and evaluated this checklist. The 13-item checklist consisted in part of eight items measuring residents' ability to engage in FCR across six domains. All domains were scored on a 3-point scale (1 = *no actions performed*, 2 = *some actions performed*, 3 = *all actions performed*), while an additional option, "I don't know," scored as missing data. The checklist also included one 4-point global scale and four items regarding impressions of communication and the overall rounding experience. Parent advisors (i.e., individuals whose children had been hospitalized at the study site and had participated in activities with the PFCC program at the children's hospital) underwent a 30-minute training session with one of the PFCC staff members who were part of the study team. During this training, they reviewed the PFCC Rounds Checklist (Appendix A) and discussed how to conduct observations of the interns. After this brief training, the 10 parent advisors observed a randomly selected group ($n = 10$) of first-year pediatric residents (intervention group), using the checklist to measure the quality and competency of intervention residents' FCR performance during actual inpatient rounds. Parent advisors received a \$25 gift certificate for each hour of time they volunteered for this project. On average, they spent 3 hours during preintervention observations.

Phase 2

During Phase 2, a 15-minute video containing content on the background and important tenets of FCR and a model example of rounding (Appendix B) was presented to all program first-year residents ($n = 24$). We also created a 45-minute introductory conference to discuss communication barriers and effective communication techniques (Appendix C). This conference occurred during the noon-hour lecture series that took place on a daily basis for residents in our program. Residents unable to attend were provided with a videotape of the lecture.

A multidisciplinary team consisting of a physician, psychologist, nurse, and parent advisor was recruited to observe residents during the simulation. Recruitment was performed through the study coordinators' professional contacts with a focus on providers with a known interest and expertise in communication. Individuals who participated in the observation team were emailed orientation materials the day prior to the simulation. In this email, they were asked to arrive 15 minutes prior to the start of the simulation session, at which time one of the members of the study team would provide a brief verbal introduction to the project as well as an orientation to the simulation space (location of bathrooms, introduction between different observers). The email text itself (Appendix D) briefly described the two mock patient cases as well as the goals for the debriefing. The learning objectives for each of the cases (Appendix E) and as a time line for the simulation experience (Appendix F) were sent as attachments to the email. Parent advisors who role-played the family members were also provided with a character script (Appendix G), which they received via email. There were purposefully no practice sessions for the simulation to keep the simulation as authentic as possible. On the day of the encounter, each observer received a folder with the learning objectives (Appendix E), simulation time line (Appendix F), and nametag with his or her role in the simulation to wear throughout the encounter. Parent advisors also received a printed copy of the

character script (Appendix G). All faculty and nursing observers for the simulation donated their time to participate in this activity. Aside from reading through the preparatory email and materials, there was no other training or external time commitment required. Parent advisors received a \$25 gift certificate for each hour they participated in the simulation experience as well.

Next, a 1-hour simulation training was held for the intervention group of residents. In situ training occurred in unused hospital rooms to provide a more authentic environment. Residents simulated an FCR encounter using one of two mock patient cases (Appendix H). Residents were paired in rooms, and each resident not only participated as the primary resident leading the simulated rounding encounter but also observed a co-resident. Residents were given 10 minutes to role-play the scenario, followed by 15 minutes of debriefing and 5 minutes to repractice parts of the encounter. Debriefing involved 360-degree feedback including all observers and the parent advisor. Video capturing of sessions supported debriefing and program evaluation. Following the simulation, intervention residents completed a postsimulation survey (Appendix I) and received a free boxed lunch. In total, intervention residents, facilitators, and parent advisors spent approximately 1.5 hours completing Phase 2.

Phase 3

In a pre-/postintervention design, trained parent advisors used the PFCC Rounds Checklist (Appendix A) to evaluate residents from the control and intervention groups in the inpatient clinical setting after both the didactic and simulation portions of the curriculum were complete. Wilcoxon rank sum tests (nonparametric data tendencies) were used to compare the intervention group's pre/post performance ratings, as well as across control and intervention groups. Intervention group residents provided pre- and postintervention self-assessments using a 10-item survey (Appendix I) with a 5-point scale (5 being highest). Paired Student *t* tests were used to analyze pre- and postintervention self-assessments. Finally, residents in the intervention group participated in a qualitative focus group to gather feedback on the intervention. Again, parent advisors received a \$25 gift certificate for each hour they spent completing the observations. On average, each parent advisor spent 3 hours doing postintervention observations.

A master curriculum implementation resource guide (Appendix J) has been created to assist users in implementing this resource at their home institutions.

Results

Observations of Rounding Episodes

There were observations of 97 interactions with 17 residents from July 21, 2016, to February 20, 2017. Twenty-seven (27.8%) of these interactions were removed from the analyses because the patient was an infant and no parent was present. There were 24 total possible participants. Ten (42%) constituted the intervention group, and seven of the remaining 14 (50%) were the control group.

Effect of Simulation on Residents' Ability to Perform Key Elements of FCR: Intervention

Comparison of pre- ($n = 21$) and postintervention ($n = 26$) interactions for the 10 intervention group residents using Wilcoxon ranked sum tests indicated performance improvement after completing the simulation-based exercise (Table 1). Three items had statistically significant improvements in a variety of appropriate communication techniques with families during FCR (Educational Objective 1) and inclusion of family members in the rounding process (Educational Objective 2), including greeting family members by name and requesting preference for participation (item 2), family members' comfort to participate in FCR (item 10), and family members' level of engagement during FCR (item 12).

Table 1. Residents' Performance on FCR Elements Before ($n = 21$) and After ($n = 26$) Simulation-Based Training

Performance Item ^a	M (SD)		P	Effect Size (η^2) ^b
	Pre	Post		
Greetings and introduction				
1. Greeting: Resident introduced self and the team, <i>and</i> explained the purpose of patient and FCR, if appropriate (i.e., first rounding experience for patient and family).	1.88 (0.86)	2.52 (0.82)	.11	
2. Greeting: Greeted family member(s) by name, <i>and</i> requested their preference for participation.	1.80 (0.89)	2.70 (0.56)	.01 ^c	.41
3. Greeting: Understood <i>and</i> honored patient and family's preference for inclusion in rounds.	2.83 (0.38)	2.92 (0.41)	.32	
4. Inclusion: Resident minimized distractions, made eye contact with family member(s), <i>and</i> consistently engaged with patient/family member(s) to keep them in rounding circle.	2.76 (0.44)	2.80 (0.41)	.71	
Set agenda				
5. Set agenda: With team, the resident asked family member(s) about questions/concerns, and used family member(s)' responses to set agenda or rounding session.	2.35 (0.88)	2.73 (0.67)	.24	
6. Invite family: Resident invited family member(s) to ask questions and share information. If the family member(s) asked questions or for clarification, the resident addressed family member(s)' questions or indicated a plan to address questions that could not be answered during rounds.	2.76 (0.44)	2.96 (0.20)	.18	
Involve family				
7. Involve family: Resident engaged family member(s) by asking for their input about care/discharge plan <i>and</i> considered their input fully, changing course of care to reflect family member(s)' input when appropriate.	2.85 (0.37)	3.00 (0.00)	.16	
8. Check-back/closure: Resident ensured family understood care plan and decision making, checked to see if all of questions/concerns were addressed, <i>and</i> left only when all family member(s)' questions/concerns were addressed (or made an appropriate plan to return later).	2.80 (0.52)	2.88 (0.37)	.56	
Global rating				
9. Global rating (4-point scale).	3.38 (0.50)	3.56 (0.51)	.37	
Impressions				
10. Family member(s)' comfort to participate in FCR session.	2.45 (0.60)	2.83 (0.38)	.05 ^c	.09
11. Family member(s)' amount of information shared with team during FCR.	2.55 (0.61)	2.67 (0.71)	.96	
12. Family member(s)' level of engagement during FCR.	2.47 (0.70)	2.83 (0.38)	.05 ^c	.29
13. Family member(s)' satisfaction with FCR.	2.56 (0.51)	2.80 (0.41)	.28	

Abbreviation: FCR, family-centered rounds.

^aAll items except item 9 were scored on a 1-3 scale. Item 9 used a 4-point scale.

^bEffect size was calculated only for statistically significant items.

^cStatistically significant.

Effect of Simulation on Residents' Ability to Perform Key Elements of FCR: Intervention Versus Control Comparison of FCR performance between the intervention group ($n = 26$ patient encounters for 10 residents) and control group ($n = 23$ patient encounters for seven residents) indicated higher ratings for nine out of 13 items (69.2%) among the intervention group, although statistical significance was not met (Table 2).

Residents' Self-Report Ratings and Comfort With Elements of FCR

Although not statistically significant, residents' self-efficacy for incorporating some FCR practices into patient care (Educational Objective 3) improved following simulation-based training for seven items (Table 3). For three items, self-efficacy declined slightly. These items included residents understanding their role and explaining it to patients and families, honoring patient and families' preferences for inclusion in rounds, and soliciting questions and asking for clarification from family members.

Resident Comments: Lessons From Simulation Experience

Anonymous postsurveys immediately following the simulation and voluntary focus group participation allowed for qualitative retrieval of resident experience. Survey themes included learning the importance of team introductions, understanding how to set and follow an agenda, soliciting family input early and often, the importance of decreasing medical jargon in presentations, and learning to frame questions to ensure families feel comfortable. Six of the intervention residents (60%) attended a follow-up focus group. Two broad themes emerged from this discussion. First, residents felt that they had an understanding of FCR in an ideal, comfortable situation but that making the simulated scenario more similar to the real-life challenges of FCR (i.e., time constraints, working with a disgruntled parent, etc.) would have been helpful. Second, residents felt that feedback from the multidisciplinary teaching team was the most helpful portion of this experience, including feedback given during real-time rounding observations. Residents felt having parent observers on rounds was nondisruptive and served as a helpful reminder of the purpose of FCR.

Table 2. Comparison of Observed Performance Ratings of Intervention ($n = 26$) and Control ($n = 23$) Group Residents

Performance Item ^a	M (SD)		p
	Pre	Post	
Greetings and introduction			
1. Greeting: Resident introduced self and the team, <i>and</i> explained the purpose of patient and FCR, if appropriate (i.e., first rounding experience for patient and family).	2.52 (0.82)	2.42 (0.69)	.40
2. Greeting: Greeted family member(s) by name, <i>and</i> requested their preference for participation.	2.70 (0.56)	2.71 (0.64)	.68
3. Greeting: Understood <i>and</i> honored patient and family's preference for inclusion in rounds.	2.92 (0.41)	2.87 (0.46)	.55
4. Inclusion: Resident minimized distractions, made eye contact with family member(s), <i>and</i> consistently engaged with patient/family member(s) to keep them in rounding circle.	2.80 (0.41)	2.86 (0.47)	.34
Set agenda			
5. Set agenda: With team, the resident asked family member(s) about questions/concerns, and used family member(s)' responses to set agenda or rounding session.	2.73 (0.67)	2.81 (0.40)	.90
6. Invite family: Resident invited family member(s) to ask questions and share information. If the family member(s) asked questions or for clarification, the resident addressed family member(s)' questions or indicated a plan to address questions that could not be answered during rounds.	2.96 (0.20)	2.81 (0.51)	.23
Involve family			
7. Involve family: Resident engaged family member(s) by asking for their input about care/discharge plan <i>and</i> considered their input fully, changing course of care to reflect family member(s)' input when appropriate.	3.00 (0.00)	2.81 (0.51)	.06
8. Check-back/closure: Resident ensured family understood care plan and decision making, checked to see if all of questions/concerns were addressed, <i>and</i> left only when all family member(s)' questions/concerns were addressed (or made an appropriate plan to return later).	2.88 (0.37)	2.68 (0.75)	.56
Global rating			
9. Global rating (4-point scale).	3.56 (0.51)	3.59 (0.67)	.57
Impressions			
10. Family member(s)' comfort to participate in FCR session.	2.83 (0.38)	2.71 (0.56)	.52
11. Family member(s)' amount of information shared with team during FCR.	2.67 (0.71)	2.33 (0.80)	.09
12. Family member(s)' level of engagement during FCR.	2.83 (0.38)	2.57 (0.60)	.10
13. Family member(s)' satisfaction with FCR.	2.80 (0.41)	2.76 (0.44)	.76

Abbreviation: FCR, family-centered rounds.

^aAll items except item 9 were scored on a 1-3 scale. Item 9 used a 4-point scale.

Table 3. Comparison of Residents' Pre- ($n = 10$) and Postsimulation ($n = 10$) Self-Efficacy Using Paired Student *t* Test

Self-Efficacy Item ^a	M (SD)		95% CI of Difference
	Pre	Post	
Greeting and introduction			
1. Greeting: Understand my role, explain my role to patients and their families during FCR.	3.90 (1.10)	3.70 (0.82)	-0.80, 1.20
2. Greeting: Greet family member(s) by name, <i>and</i> request preferences for participating in rounds.	3.70 (0.82)	4.40 (0.97)	-1.60, 0.20
3. Greeting: Honor patient and family's preferences for inclusion in rounds.	4.33 (0.71)	4.00 (0.87)	-0.44, 1.10
4. Inclusion: Minimize distractions and engage patient and family to keep them in rounding circle.	4.00 (0.67)	3.40 (1.26)	-0.42, 1.62
Setting agenda			
5. Setting agenda: Ask family member(s) about their questions/concerns <i>prior</i> to rounding session.	3.40 (1.31)	3.90 (0.99)	-1.94, 0.94
6. Setting agenda: Use family member(s)' responses to guide agenda of rounding session.	3.50 (0.71)	3.80 (0.63)	-1.06, 0.50
7. Invite family: Solicit questions and ask for clarification from family member(s) when appropriate, suggest plan to address unanswered questions.	4.00 (0.67)	3.90 (0.88)	-0.94, 1.14
Involve family			
8. Involve family: Ask for family member(s)' input about care/discharge plan.	3.89 (0.93)	4.11 (0.93)	-1.48, 1.04
9. Involve family: When appropriate, change course of care to reflect family member(s)' input.	3.89 (0.60)	4.00 (0.87)	-1.09, 0.87
10. Check-back/closure: Check back with family member(s) to ensure they understood care plan and decision making, ensuring all questions/concerns addressed, and leaving only when all questions/concerns addressed.	3.67 (0.71)	4.00 (1.00)	-1.55, 0.88

Abbreviations: CI, confidence interval; FCR, family-centered rounds.

^aAll items were scored on a 5-point scale.

Discussion

Results of this curriculum indicate overall performance improvement by residents who completed the FCR simulation intervention, with significant improvements in residents greeting family members, as well as in impressions of family members' comfort with and level of engagement in FCR. Residents in the intervention group had higher ratings on the majority of performance items regarding best practices for FCR when compared to the control group; however, statistical significance was not achieved. Additionally, residents who completed the intervention reported improvements in self-efficacy ratings for conducting FCR.

In addition to its efficacy, strengths of this novel curriculum intervention include development of the PFCC Rounds Checklist, involvement of communication experts across disciplines, and high levels of input from parent advisors throughout the entire course of the project. Furthermore, improvements in FCR practices were obtainable via a time-limited intervention. Participation in the intervention required less than 3 hours

(i.e., 60-minute didactic, 90-minute simulation). The intervention was also inexpensive (total cost: \$1,600). All faculty members donated their time to observe and provide feedback during simulations. Parent advisors received one \$25 gift certificate per hour of observation, for a total of \$1,000 spent on gift certificates. Hospital rooms were available free of charge, and video recording equipment was borrowed from the hospital's clinical simulation center. A paid research assistant (total of 40 hours at \$15 per hour) assisted with organizational elements of the project.

It is important to note the limitations involved in the study of this intervention's effectiveness. Organization of the logistics during busy first-year residents' schedules posed a challenge to ensuring that an equal number of pre- and postsimulation observations occurred. Some residents had multiple observed encounters while others were observed less due to varying patient load, absence of parent/caregiver at bedside, days off, and unplanned schedule changes. Similarly, given scheduling limitations, it was not feasible to schedule the same parent advisors for resident pre- and postsimulation observations. Although parent advisors underwent training and used a standardized tool for observation, there was likely individual variability in ratings that may have biased the final results. Finally, although this study was conducted at a site where rounds are intended to be family centered, attending physician variability in rounding practices may have affected how residents approached FCR. This is consistent with previous findings that 90% of pediatric residents felt that the attending physician's rounding style impacted their own experience.^{7,9} With regard to data analysis, although over 90 patient observations occurred, 27% were excluded from the final analysis as they were encounters where the parents were not present at bedside. Data analysis was also limited by a small sample size as well as by the fact that some residents were observed more than once. More complex statistical analysis could be employed to adjust for repeated measures of a single resident, but this was not undertaken as part of this study. Control group residents were not observed presimulation, making it difficult to draw absolute conclusions regarding comparisons of the postsimulation intervention and control groups. Additionally, because this intervention occurred during one academic year, higher control group scores may represent natural improvement of communication skills over time. It is also possible that one of the groups may have been stronger communicators at baseline.

This curriculum was undertaken in an attempt to improve family-centered communication on rounds in a pediatric residency program at a single, tertiary care children's hospital. Given the noted improvements and positive feedback, efforts to improve resident FCR practices will continue at this institution. Training will be expanded to all first-year pediatric residents, with a focus on observations of real patient encounters with real-time feedback. Other physician-directed communication-based training programs have touted the benefits of booster sessions for retaining communication skills.²¹ Therefore, residents will be observed multiple times throughout the year, as opposed to a single episode. Other residency programs may benefit from incorporating family-centered communication training into their curriculum (refer to Appendix J's curriculum implementation resource guide). This training and curriculum could also be expanded to include other health care providers, particularly nurses, who are often at the forefront of providing PFCC. There is a critical need for standardized, comprehensive FCR training that will allow learners at all levels to be consistent, comfortable, and confident in performing FCR.

Priyanka Rao, MD: Clinical Instructor, Department of Pediatrics, Michigan Medicine

Elizabeth Hill, MD: Clinical Instructor, Department of Pediatrics, Michigan Medicine

Courtney Palka, MD: Pediatric Resident, Department of Pediatrics, Michigan Medicine

Kelly Rea: Research Assistant, Department of Psychology, University of Georgia

Kori Jones, MEd: Program Director, Patient and Family Centered Care, Beaumont Health, Royal Oak

Kate Balzer, MSW: Project Coordinator, Patient and Family Centered Care, Michigan Medicine

Timothy Cornell, MD: Associate Professor, Department of Pediatrics, Michigan Medicine

Deborah Rooney, PhD: Assistant Professor, Department of Learning Health Sciences, University of Michigan

Melissa Cousino, PhD: Assistant Professor, Department of Pediatrics, Michigan Medicine

Acknowledgments

The authors would like to thank Dr. Rohit Madani and Dr. Patricia Keefer for assistance with project design and implementation and the numerous nurses, physician and psychology faculty, and parent advisors who provided feedback to residents throughout the simulated rounding encounters.

Disclosures

None to report.

Funding/Support

This project was funded by a grant from the University of Michigan Clinical Simulation Center.

Informed Consent

All identifiable persons in this resource have granted their permission.

Prior Presentations

Palka C, Rao P, Hill E, et al. Improving resident communication during family centered rounds using a novel simulation-based curriculum. Presented at: Pediatric Academic Societies Meeting; May 2017; San Francisco, CA.

Ethical Approval

The Institutional Review Board of the University of Michigan approved this study.

References

1. Committee on Hospital Care. Family-centered care and the pediatrician's role. *Pediatrics*. 2003;112(3):691-696. <https://doi.org/10.1542/peds.112.3.691>
2. Accreditation Council for Graduate Medical Education. ACGME program requirements for resident graduate medical education in pediatrics. Accreditation Council for Graduate Medical Education website. https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/320_pediatrics_2017-07-01.pdf. Accessed March 24, 2017.
3. Knoderer HM. Inclusion of parents in pediatric subspecialty team rounds: attitudes of the family and medical team. *Acad Med*. 2009;84(11):1576-1581. <https://doi.org/10.1097/acm.0b013e3181bb2bed>
4. Kuo DZ, Sisterhen LL, Sigrest TE, Biazio JM, Aitken ME, Smith CE. Family experiences and pediatric health services use associated with family-centered rounds. *Pediatrics*. 2012;130(2):299-305. <https://doi.org/10.1542/peds.2011-2623>
5. Grzyb MJ, Coo H, Rühlend L, Dow K. Views of parents and health-care providers regarding parental presence at bedside rounds in a neonatal intensive care unit. *J Perinatol*. 2014;34(2):143-148. <https://doi.org/10.1038/jp.2013.144>
6. Ingram TC, Kamat P, Coopersmith CM, Vats A. Intensivist perceptions of family-centered rounds and its impact on physician comfort, staff involvement, teaching, and efficiency. *J Crit Care*. 2014;29(6):915-918. <https://doi.org/10.1016/j.jcrc.2014.07.015>
7. Mittal V, Krieger E, Lee BC, et al. Pediatrics residents' perspectives on family-centered rounds: a qualitative study at 2 children's hospitals. *J Grad Med Educ*. 2013;5(1):81-87. <https://doi.org/10.4300/jgme-d-11-00314.1>
8. Paradise Black NM, Kelly MN, Black EW, Sessums CD, DiPietro MK, Novak MA. Family-centered rounds and medical student education: a qualitative examination of students' perceptions. *Hosp Pediatr*. 2011;1(1):24-29. <https://doi.org/10.1542/hpeds.2011-0004>
9. Pinto JM, Chu D, Petrova A. Pediatric residents' perceptions of family-centered rounds as part of postgraduate training. *Clin Pediatr (Phila)*. 2014;53(1):66-70. <https://doi.org/10.1177/0009922813501377>
10. Rappaport DI, Ketterer TA, Nilforoshan V, Sharif I. Family-centered rounds: views of families, nurses, trainees, and attending physicians. *Clin Pediatr (Phila)*. 2012;51(3):260-266. <https://doi.org/10.1177/0009922811421002>
11. Cox ED, Schumacher JB, Young HN, Evans MD, Moreno MA, Sigrest TD. Medical student outcomes after family-centered bedside rounds. *Acad Pediatr*. 2011;1(5):403-408. <https://doi.org/10.1016/j.acap.2011.01.001>
12. Rubin A, Nowicki MJ, Surber K, et al. Family centered rounding: a look into the room a decade later [abstract 63]. *J Hosp Med*. 2015;10(suppl 2). <https://www.shmabstracts.com/abstract/family-centered-rounding-a-look-into-the-room-a-decade-later/>
13. Okuda Y, Bryson EO, DeMaria S Jr, et al. The utility of simulation in medical education: what is the evidence? *Mt Sinai J Med*. 2009;76(4):330-343. <https://doi.org/10.1002/msj.20127>
14. Young HN, Schumacher JB, Moreno MA, et al. Medical student self-efficacy with family-centered care during bedside rounds. *Acad Med*. 2012;87(6):767-775. <https://doi.org/10.1097/acm.0b013e318253dcdcb>
15. Nichols K, Crow K, Balakas K. Beyond implementation: sustaining family-centered rounds. *MCN Am J Matern Child Nurs*. 2015;40(3):145-152. <https://doi.org/10.1097/nmc.0000000000000123>
16. Zak S, Alcamo A, Herrmann L, et al. Medical student presentations on family-centered rounds: a workshop to teach an art form. *MedEdPORTAL*. 2016;12:10394. https://doi.org/10.15766/mep_2374-8265.10394

17. Bhansali P, Moss K, Kavanagh R, Corriveau C, Simmons J, Singhal G. Challenging situations in family centered rounds: making the best out of worst case scenarios. *MedEdPORTAL*. 2014;10:9728. https://doi.org/10.15766/mep_2374-8265.9728
 18. Weisgerber M, Toth H, Brewer C, et al. The instructor's guide for the SOS-REACH (Suspected Observable Senior Resident Empowerment Action Checklist) and SREA-21: tools for evaluating senior resident empowerment during family-centered rounds. *MedEdPORTAL*. 2011;7:8547. https://doi.org/10.15766/mep_2374-8265.8547
 19. Vepraskas S, Weisgerber M, Toth H, Bragg D. The instructor's guide for promoting presenter empowerment actions and evaluating presenters during patient- and family-centered rounds. *MedEdPORTAL*. 2015;11:10160. https://doi.org/10.15766/mep_2374-8265.10160
 20. Moore WJ, O'Meara C, Buckley PF, Sodomka P, Engels N, Roberson B. *Navigating Patient- and Family-Centered Care Rounds: A Guide to Achieving Success*. Augusta, GA: Medical College of Georgia; 2010.
 21. Cousino M, Hazen R, Yamokoski A, et al. Parent participation and physician-parent communication during informed consent in child leukemia. *Pediatrics*. 2011;128(6):e1544-e1551. <https://doi.org/10.1542/peds.2010-3542>
-

Received: February 19, 2018 | **Accepted:** June 14, 2018 | **Published:** July 27, 2018