Family-Centered Rounds and Medical Student Education: A Qualitative Examination of Students’ Perceptions

abstract

BACKGROUND: Although current literature supports the benefits of family-centered rounds on medical education, few studies have explored students’ perceptions of family-centered rounds.

PURPOSE: The aim of this study was to provide a better and broader understanding of the effect of family-centered rounds on medical student education.

METHODS: During the inpatient portion of the third-year pediatric clerkship at a southeastern United States 4-year medical school, students were exposed to family-centered and conference room work rounds and completed a post-hoc reflective open-ended questionnaire. The study was conducted from July to December 2007 and the inpatient experience was at one of two large academic medical centers. Using a constant comparative approach, the qualitative content of 45 of the 63 potential students’ responses was analyzed.

RESULTS: Family-centered rounds served as an opportunity for medical students to build their practice-based knowledge through direct and simultaneous interaction with the medical team, patients, and families. Family member communication, medical team communication, and increased exposure to patients allowed for unique learning opportunities such as augmentation of communication skills, practice with use of lay terms, legitimate peripheral participation, and humanizing cognitive understanding of diseases. Areas of concern noted by the students included space limitations, length of rounds, potential anxiety provoked in the patient, and faculty and resident comfort with teaching certain topics.

CONCLUSIONS: Our qualitative analysis of medical student perceptions on family-centered rounds suggests that pediatric medical student education may benefit by improving knowledge and practice with communication and humanizing disease processes. However, perceived barriers, such as concerns about space or instructor comfort with teaching certain topics, existed. Further studies are warranted to gain a better understanding of the educational impact of conducting this type of rounds.

Introduction

According to the American Academy of Pediatrics, a family-centered approach to healthcare leads to more successful health outcomes, more efficient allocation of resources, and improved patient and family satisfaction.\(^1\) A growing body of research exists to support the positive effect of family-centered care on patients, patients’ families, physicians-in-training, and practicing
physicians.2-8 According to Wertleib,9 the positive effect of family-centered care results from the emphasis placed on the physician’s understanding of the patient within the context of the family and the community.

Family-centered rounds (FCR) is a subset of family-centered care in an inpatient setting, and is defined by Sisterhen et al10 as, “interdisciplinary work rounds at the bedside in which the patient and family share in the control of the management plan as well as in the evaluation of the process itself.” FCR constitute an opportunity for both the teaching and assessment of students and physicians.10 Regular, focused observation of actual patient encounters provides an ideal opportunity for evaluating medical students, residents, and faculty. Many of the skills required to meet the six Accreditation Council on Graduate Medical Education (ACGME) competencies can be observed and evaluated during FCR (eg, respectful behaviors).11

Family-centered rounds provide multiple potential educational benefits, but to date, there is little research evaluating its educational impact on medical students. The objective of this research study was to offer a better and broader understanding of the medical students’ perspective of FCR as it relates to their education.

Methods
This study, approved by the University of Florida Institutional Review Board, involved third-year medical students enrolled in a 4-year academic medical school at the University of Florida. This study included medical students who participated in the 8-week pediatric clerkship from July 2007 to December 2007. Four weeks of the clerkship occurred on the inpatient wards at one of two large academic medical centers. All medical students were exposed to FCR and conference room work rounds with the amount of exposure varying based on random assignment to specific medical teams and hospitals. Although FCR is not mandated for all patients at either academic medical center, it does occur at a minimum of three times a week on at least one service. Prior education and experience with FCR varied among the participating faculty.

Three authors, who are clinician educators, proposed reflective questions related to medical student education and FCR to begin developing themes. One author, with expertise in qualitative research in education, reviewed the proposed questions and noted consistent themes.12,13 Four key areas of study were identified:

1. Patient care
2. Medical knowledge
3. Medical performance
4. Future performance

Understanding FCR in relation to patient care and medical knowledge was deemed important by the clinician educators because they are ACGME competencies. Current medical performance and future performance were identified as significant areas of study because they represent outcomes of medical education. A questionnaire was developed by the qualitative expert to prompt students’ reflections on FCR in relation to these four key areas. Questions were designed to minimize bias and were created with the assumption that the students had no prior knowledge of or experience with FCR. The questionnaire consisted of four open-ended items that were incorporated into the pediatric clerkship educational curriculum for all third-year medical students; the questions were deemed important not only for the study, but also for the educational benefit of the students and clerkship directors (Table 1). Following the completion of the clerkship, the students were asked to participate in this study and provide consent to allow the researchers to evaluate their responses.

Using a constant comparison approach, another study author with expertise in qualitative research in education began with open coding of the questionnaire and looked for themes specifically addressing the questions within the participants’ responses.14,15 The goal was to examine the ways in which participants were able to communicate the effects, influences, and implications of participating in FCR. This led to an initial set of abstract categories that included such terms as listening, addressing, observing, discussing, clarifying, realizing, witnessing, discerning, etc. These general categories were then used to help develop more specific codes that

**TABLE 1** Reflective Questionnaire from the University of Florida College of Medicine Third Year Pediatric Clerkship Syllabus 2007-2008

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<th>Question</th>
<th>Example</th>
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<td>1. Based on your experiences; how do you feel the practice of family-centered rounds affects the overall care of the patient?</td>
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<td>2. Citing specific examples, how do you believe the opportunity to participate in family-centered rounds influenced your medical knowledge?</td>
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<td>3. Describe how the experience of conducting family-centered rounds influenced your medical performance. (For example, think of your ability to be an effective communicator of medical knowledge.)</td>
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<td>4. Having had the family-centered rounds experience, discuss the implications this opportunity will have on your future performance during residency.</td>
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were in turn used to frame participants’ responses. Through this framing process, the evaluator was able to generate general theories about participants’ experiences of FCR and the effects, influences, and implications associated with these experiences. Out of the more general categories noted in participant responses, specific codes were developed which illustrated the ways in which FCR influenced participants’ thinking.

Potential for bias was considered minimal because the data were de-identified before evaluation, the evaluator did not participate in the question formation, and the evaluator was not involved with the students.

Results
Sixty-three medical students were enrolled in the pediatric clerkship from July 2007 to December 2007 and ultimately 45 medical students’ answers were available for review and analyzed (Figure 1). Of 45 medical students who consented to participate, 64% (n=29) were women and 36% (n=16) were men (class composition: 57% female and 43% male students).

Family-centered rounds served as an opportunity for participants to build knowledge about their practice by experiencing direct and simultaneous interaction with the medical team, patients, and their families. Three themes emerged during analysis: family member communication, medical team communication, and exposure to patients.

COMMUNICATION
Communication was a critical element experienced by participants. FCR was seen as an opportunity for shared communication and decision making for both the patient’s family members and the medical team. Within the context of this study, communication refers specifically to the following two conditions: family member communication and medical team communication.

Family Member Communication: Nearly all participants found communicating with the family to be an important practical learning opportunity. Participants were able to speak directly with family members, listen to their explanations of events and symptoms, ask questions of family members, and serve as an interpreter for the medical team. This was an important element for participants because it provided firsthand experience in listening, questioning, and relaying important information to and from the family. Several participants noted that this firsthand experience with family members served them better than rounds not involving direct contact because they could directly experience family members’ concerns and situations that could potentially affect patient care. One student wrote:

…we engaged them in the discussion of daily progress of the patient, of our rationale for ordering tests, and of our thought process when thinking about our treatment plan. This way families could voice their opinions, questions, and concerns to the entire team at once, it gave us the opportunity to educate the patient and their families about their disease process. This allowed for an optimal learning environment not only for the residents and students on the team but for the families as well.

In addition to these findings, responses related to medical knowledge emerged within this theme. Many participants indicated that FCR motivated them to conduct more thorough research regarding conditions and diseases presented during rounds. Respondents were critical

FIGURE 1 Flow diagram of subject recruitment and participation.
of their own deficiencies in medical knowledge; several cited presentation in front of the families as an impetus for careful research before making rounds. For example, a student wrote, “I feel encouraged to be completely prepared for rounds in order to show parents that the individuals who are taking care of their child are informed and educated. This motivated me to do as much research as possible into the disease process taking place.”

Family-centered rounds reminded participants of the importance of communication skills in general, specifically, the importance of word choice when talking to family members. One student noted, “By experiencing FCR, I learned to be a better communicator. Firstly, I had to adapt from medical jargon to truly explaining everything.”

Barriers to Family Member Communication: Noted barriers to communication with family members included space limitations and concerns about teaching. One student noted, “The one major drawback I have noted...is that sometimes attending physicians/residents feel uncomfortable teaching about certain things in front of families.” In a situation in which teaching occurred, another participating student noted:

[A]ttention during rounds is frequently taken away from the child and family to focus on teaching the residents and students. It was at these points the families looked confused and worried as they could not understand what was being addressed. In addition, the children have greater anxiety when many people enter the room.

Finally, this student observation helps put the space issue into clearer context, “[I]t is very invasive to have a group of unfamiliar people in white coats surrounding you in a hospital room.” Other identified barriers to family member communication involved discussing a potentially frightening diagnosis and working with potentially hostile family members.

Medical Team Communication: Participants reported the importance of communicating with the team because it provided an opportunity to share in the decision making process and gain experience listening to and asking questions of the experts. Presenting patients was a critical element of the FCR experience because it required students to think carefully about the words they chose to describe the patient and associated events, and to practice concision and thought organization with the added weight of working directly with patients and families. For example, “[H]aving to [do] a ‘formal presentation’ with a patient/family present provides for additional ‘accountability’ and ‘responsibility’. Certainly, students would not want to sound unfamiliar or unknowledgeable in front of the patient/family.”

The opportunity to observe and listen to the attending physician communicating with both the medical team and family served as a form of legitimate peripheral participation that most participants noted as having a significant effect on their knowledge of practice. For example:

[B]y being present with the family and the patient I learned from the attendings and residents excellent bedside manner. At first it was difficult discussing a disheartening prognosis in front of a family but the attending demonstrated compassion and honesty effectively and efficiently. Seeing this firsthand helped me develop improved bedside manner and taught me the art of compassion in medicine.

While we cannot completely infer that this student truly learned compassion from witnessing a skilled practitioner in action, the experience clearly made an effect that could potentially influence the way he/she will deliver treatment in the future.

Barriers to Medical Team Communication/Function: A few participants noted that FCR was more time-consuming than conference room work rounds. One particular student noted, “I do think that patient care is improved by family rounding because the family is made more involved. However, this comes at a price because of the greater time commitment required.” As such, most students saw FCR as more valuable to their understanding of patients, families, and medical conditions than not. However, it is worth noting that FCR was considered by some as involving a number of logistical and coordination factors among the medical team that could make it time-intensive.

EXPOSURE TO PATIENTS

While the questionnaire did not specifically ask the students to compare and contrast FCR and conference room rounds, many students stated that the educational experiences would not have occurred without FCR. Students described putting a face to a disease as a way of humanizing what was learned in didactic settings or in textbooks. As one student put it, “Essentially, I have been reminded that medicine is a field of people with illnesses rather than illnesses of people.”

In addition, FCR gave participating students the opportunity to learn about different disease processes by observing each others’ patients during rounds. One student noted, “When we do sitting rounds, you are only able to hear someone else talk about the patient; actually seeing them on FCR
gives you the opportunity to put a face with the disease process or a treatment plan which I think helps solidify your memory.” Participants in this study shared that engaging in FCR provided an opportunity for them to observe “very subtle details that [they] otherwise would not pay attention to [that] can often be very important in the management of a patient.” Students found the concept of using lay terms beneficial not just for their ability to communicate with families but also for their medical knowledge. This theme is demonstrated by the following quote, “Presenting to the patient and family also makes you practice how to explain medical concepts in layman’s terms; for us students, that also helps us better understand what is going on with patients we aren’t covering.”

Discussion
The literature on FCR promotes the educational value of FCR for learners in medicine.3–8,10,16 To our knowledge, this is one of a limited number of studies attempting to gain an understanding of FCR in the context of the medical student population.7 Cox et al7 examined sources of concern for students, evaluation of teaching about FCR, and changes in attitudes toward FCR. Results of our study elucidate both positive and negative themes related to participation in FCR.

Family-centered rounds provided participants with an opportunity to practice speaking in lay terms to meaningfully communicate the situation or diagnoses to the family and patient. Equally as important, FCR provided students with an opportunity to collaborate with an interdisciplinary team, clarify and reinforce their understanding of practice-related issues, and practice decision making, planning, and organization of knowledge with the added weight of family presence. This level of accountability and responsibility adds an important and real-life dimension to participants’ experience that make it clearly more meaningful.

By observing a variety and increased number of patients and disease processes directly, FCR provided an opportunity for students to learn from firsthand experience, get to know diseases personally, and acquire new knowledge. This up-close and personal approach to medical education can subsequently provide students memorable experiences that humanize their cognitive understanding and complement their didactic understanding of patients and diseases. FCR regularly reminded students to keep their “attention and focus” on meeting the needs of patients and family members rather than solely on their need to simply learn and gather knowledge for its own sake.

While FCR are designed to focus overall on the patient, sometimes the context in which they take place can be overly taxing on some participants and ultimately seem to detract from patient care. Parental perceptions are reported in the literature, but to our knowledge, no study has directly investigated pediatric patients’ perceptions of FCR especially in relation to number of participants in the room.2 Anxiety in patients is an important area of investigation for future studies. These situations, while uncomfortable, clearly provided participants with situations that they may encounter later in practice. As such, while some participants reflected negatively on these particular situations, their reality cannot be undervalued as an important learning opportunity. Finally, length of time to make rounds remains controversial, with some studies reporting no difference and others estimating up to a 20% increase in length of time with FCR.3,8

In the context of this study, FCR was perceived by some students as taking longer than conference room rounds. From this study the following implications for FCR can be inferred:

1. FCR is a form of legitimate peripheral participation.
2. FCR requires standardization and buy-in from the medical team.
3. FCR does not work for all participants in all circumstances.

Legitimate Peripheral Participation (LPP): FCR is a form of LPP. This notion of learning by observing more experienced medical professionals is echoed throughout the participants’ responses. Educational theorists label this social form of knowledge building as LPP and define it as an analytical description of how trainees become experienced members of a practice community.17 According to LPP theory, trainees become members of a community by participating in simple, low-risk tasks that are nonetheless productive, necessary, and further the goals of the practice community. Through peripheral activities, trainees become acquainted with the tasks, vocabulary, and organizing principles of the practice community and gain the necessary experiences leading to expertise in the community. Based on the self reports of participating students in this study, FCR provides an opportunity for students to practice and build knowledge in their respective field by interacting with patients, their family members, and an experienced team of medical professionals.

Standardization and Buy-in From the Medical Team: Standardization and faculty development of FCR are essential.
The educational experience provided by faculty on FCR was notably varied and, even more striking, three students stated they did not experience FCR or may not have recognized it as such. FCR take time and require a commitment from all team members if it is to be an effective teaching strategy.

**FCR Does Not Work for all Participants in all Circumstances:** FCR did not feel right or as effective for a handful of participants. Many factors may have contributed to their negative responses, including poor leadership and organization skills by the attending physician and team, and/or the hands-on, direct nature of FCR did not suit the participant’s learning preference or personality.

This study has certain limitations. First, the study was performed at a single medical school and the results may not necessarily reflect the experience at other academic medical programs and other medical disciplines. However, the goal of this exploratory study was to provide insight. Second, the survey questions could be perceived as having a bias toward positive responses. However, some of this bias was clearly mitigated as demonstrated by medical students including both positive and negative themes in their responses. Third, there was no formal faculty development program for FCR and the procedure for conducting FCR varied. Finally, this study can only provide limited insight into the effects of FCR because the participants’ experiences are self-reported.

This study provides an initial staging ground for further research which will be helpful in better understanding the settings and conditions that can positively and/or negatively affect the use of FCR in medical teaching environments.

**Conclusion**

Our qualitative analysis of perceptions on FCR suggests that pediatric medical student education may benefit from this process. This analysis provides residents an opportunity to engage trainees directly with patients, families, and medical professionals simultaneously. Through this unique interaction, participants noted that FCR helped deepen their knowledge and experience associated with their practice. Perceived barriers, such as concerns about space or instructor comfort with teaching certain topics, were also noted. Given the increasing emphasis on family-centered care, the findings from this study can serve to guide future research and practice as FCR is used more extensively in pediatrics.

**References**