Pediatrics Residents' Perspectives on Family-Centered Rounds: A Qualitative Study at 2 Children's Hospitals

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Abstract

Background Many academic hospitals have incorporated family-centered rounds, yet little is known about pediatrics residents' perspectives on the educational impact of these rounds.

Objective To identify pediatrics residents' knowledge, attitudes, and beliefs about family-centered rounds, including perceived benefits and barriers.

Methods We conducted focus groups of residents exposed to family-centered rounds at 2 university-affiliated, freestanding children's hospitals. Focus group data were analyzed using grounded theory.

Results A total of 24 residents participated in 4 focus groups. Residents reported that family-centered rounds enhance education by increasing patient encounters and improving physical exam skills, direct observation, real-time feedback, and attending role modeling; improve parent satisfaction, interpersonal and communication skills, and safety; and reduce length of stay. Physical constraints (large teams and small rooms), lack of uniform approaches to family-centered rounds, variable attending teaching styles, and specific conditions (child abuse, patients on isolation) were cited barriers.

Conclusions Pediatrics residents report that well-conducted family-centered rounds improve their education and the quality of patient care, including parent satisfaction, communication with families, and patients' length of stay. Standardizing family-centered rounds and reducing attending variability in teaching style might further enhance residents' educational experiences.

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Background

Family-centered rounds (FCRs) are multidisciplinary rounds consisting of medical teams partnering with patients and families in medical decision making.[1,2] Academic hospitals are more likely to conduct FCRs.[2] Accreditation Council for Graduate Medical Education core competencies, such as professionalism and interpersonal and communication skills, ideally are taught at the bedside; FCRs allow residents to interact with patients and families under direct faculty supervision, and are valuable in teaching residents these competencies.[3,4]

Implementing FCRs can be challenging in a busy inpatient environment. Although FCRs have been widely adopted,[2–7] the literature on their impact on patient care, discharge timeliness,[3] teamwork, and staff and parental

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satisfaction is limited,[2,5] and little is known about the educational impact of FCRs. Residents are a crucial part of FCRs; this makes it important to understand their perspectives.

The study objectives were to identify pediatrics residents' perceptions of FCRs, including benefits of and barriers to successful FCRs.

What was known

Little is known about pediatrics residents' perspectives on the educational impact of FCRs.

What is new

This is the first study, to our knowledge, to identify pediatrics residents' knowledge, attitudes, and beliefs about FCRs, including perceived benefits and barriers.

Limitations

The single specialty limits generalizability; prior exposure to FCRs in medical school may have affected resident perceptions.

Bottom line

Residents report that well-conducted FCRs improve education and quality of care, including parental satisfaction, communication, and patient length of stay.

Methods

Study Design

We conducted a collaborative qualitative study using focus groups[8] at Children's Medical Center Dallas (CMC) and Children's National Medical Center (CNMC). The study was conducted from November 2008 to February 2010. The study protocol was approved by both institutions' Institutional Review Boards.

Setting

CMC and CNMC are tertiary-care, university-affiliated, freestanding children's hospitals with more than 250 beds. More than 100 trainees rotate through each hospital annually. Both centers initiated FCRs in 2007, and they share similar FCR styles, including presenting the complete case and discussion with families present, involving families in decision making, encouraging lay language, writing orders during FCRs to facilitate workflow, identifying discharge needs early, and balancing patient care and education. Daily FCRs were conducted on weekdays, but weekend FCRs were variable and attending dependent. An attending physician from a single ward rounded during FCRs for 2 weeks, and most patients were general pediatric patients. FCRs consistently included residents, students, attendings, nurses, and case managers; interpreters, nutritionists, and social workers were variably present.

Participants and Inclusion Criteria

Residents exposed to FCRs for at least one block (4 weeks) on a general pediatric ward were recruited via e-mail. Because interns and residents might have different FCR perspectives, participants were assigned to separate intern or senior resident focus groups.

Focus Groups

At each institution, we conducted 2 separate focus groups: 1 with interns and 1 with senior residents. Participants completed an anonymous questionnaire regarding sociodemographic data and received a $100 honorarium.

Trained moderators conducted focus groups at each hospital using an identical moderator's guide (provided as online supplemental material). The 23-question moderator's guide addressed 8 domains: communication, parental satisfaction, outcomes, safety, efficiency, coordination of care for complex medical cases, implementation barriers and benefits, and teaching and learning. Moderator's guide questions were derived from the findings of a pilot study and Consumer Assessment of Healthcare Provider and Systems questions.[9]

Analysis

Thematic saturation was achieved during the fourth focus group. Focus groups were audiotaped and transcribed by a professional transcriptionist unaware of the study aims and participants' names. Prior to analyses, 4 authors (V.M., B.C.L., E.K., and T.K.) agreed on a uniform approach to transcript analysis using grounded theory.[10] Transcripts were margin coded, and common themes and subthemes were identified. Disagreements in coding were resolved by consensus.

Results

Participant Sociodemographics

Of the 24 participants, 14 (9 interns and 5 senior residents) were from CMC, and 10 (5 interns and 5 senior residents) were from CNMC. Three-quarters (18 of 24) were female; the mean age was 27 years, 80% (19 of 24) were non-Hispanic white, and about two-thirds (16 of 24) were exposed to FCRs during medical school

Themes

Analyses identified 54 themes in 5 categories (TABLES 1 and 2).

Improved Trainee Education Residents stated that FCRs improve learning through increased patient volume, because they see every patient on FCRs (TABLES 1 and 3). As one trainee stated, "I can get information and retain it, because I have a face, family, and situation." Residents noted seeing more physical exam findings during FCRs.

TABLE 1 **Taxonomy of Attitudes, Beliefs, and Practices of Pediatrics Residents Regarding Family-Centered Rounds (FCRs)**

Improved trainee education
Increased number of patients seen on FCRs
Visual and real-time learning: improved PE skills
Role modeling and real-time feedback by attending
Better learning about communicating with families
Enhanced learning and leadership opportunities for senior resident
Parental satisfaction
Better information sharing and involvement in care
Better understanding of medical condition
Better understanding of roles of providers
Reduced number of visits by providers
Communication
Direct communication and immediate clarification
Uniform communication/all on "same page"
Improved trainee and team communication skills
More lay language
Presence of bedside nurse facilitates communication
Outcomes
Patient safety
Provides more checks on patient history
Communication mistakes identified
Early identification of sick kids
No change in medication errors
Length of stay
Better discharge planning
Depends on attending focus
Reduced, if case manager part of FCRs
Efficiency/work flow
Depends on attending's rounding style
Location of patient beds on multiple floors
High patient census reduces efficiency
Prolonged duration of rounds
Increased parental questions reduce efficiency
Language barriers affect flow and efficiency
No change in outcomes
Coordination of care for complex cases
Number of pages/calls
Codes
Handoffs
ICU transfers

Abbreviations: ICU, intensive care unit; PE, physical exam.

Watching attendings interact and communicate with patients and families was cited as helpful. One trainee commented, "I learned that doctors talk to doctors in a way that doctors should not talk to their patients. So, even though you mess up, there is a lot to learn."

Parental Satisfaction and Communication Residents noted that FCRs improve parental satisfaction (TABLES 1 and 3). They mentioned that parents are better informed and involved in decision making on FCRs. "They don't get conflicting information; if they do, there is clarification," said one trainee.

Residents observed that FCRs provided families with an opportunity to communicate "directly with the caregivers" (TABLE 3). Having everyone on rounds got "everyone on the same page." Lay language was found to be useful in improving parental understanding.

Outcomes Trainees noted that FCRs improve several outcomes, including patient safety and length of stay (TABLE 1). FCRs were noted to improve safety by providing more checks on the history and physical exam and by identifying communication errors. Better discharge planning was seen as reducing length of stay. One trainee stated,

> With an asthma patient, we say, 'Do you have a machine or inhaler?' They say, 'we have an inhaler, but we want a machine,' and the case manager is there. As opposed to, 'I don't know what they have at home. I will call the case manager.'

Residents noted that length of stay depended on the attending's focus and the presence of case managers. FCR efficiency was principally attending dependent. Patient location, a high census, increased parental questions, and language barriers were other factors affecting efficiency, including coordination of care for complex cases, medication errors, number of pages, codes, handoffs, and intensive care unit transfers.

Barriers to FCRs Residents identified 6 categories of FCR barriers (TABLES 2 and 4). The physical environment can be an impediment. Lack of a consistent FCR approach and

TABLE 2 **Taxonomy of Themes Regarding Barriers to Family-Centered Rounds (FCRs) as Identified by Pediatrics Residents**

Physical environment
Large team size
Small room size
Geographic location of beds
Lack of uniformity of rounds
Lack of standardization of FCR process
Lack of training for trainees and of attending
Variability in attending: rounding style and FCR focus
Too many repeats at every level of medical hierarchy
Resident-related barriers
Fear of not appearing knowledgeable in front of family
Distractions and interruptions
Time/duration of FCRs
Discomfort with FCRs
Attending-specific barriers
Variability in focus and practice style
Lack of comfort with FCRs
Varying teaching styles
Family-specific barriers
Language and cultural issues
Participation issues
Too many parental questions
Medical jargon confusing
Specific and sensitive patient condition and circumstances
Patients on isolation
STDs
HIV
Child abuse

Abbreviation: STD, sexually transmitted disease.

variability in attending rounding and teaching styles were consistently reported as major barriers. ''There needs to be a standard, because every attending is different,'' said one trainee. Residents added that training attendings and teams on conducting FCRs and having FCR rules enhance efficiency. One trainee said, ''We kept reiterating to present pertinent positives. No need to talk about negatives. It cuts down time and we got done.'' Residents cited attending teaching variability as a barrier and recommended that teaching during FCRs be in a nonlecture format involving clinical pearls, physical exam findings, and thought processes. ''Some attendings are very efficient. Then there are others—much less efficient—who repeat everything, examine every child on rounds. If the attending is not good, it makes it very difficult,'' said one trainee.

Increased parental questions, lack of parental participation, and limited use of lay language were other FCR barriers (TABLES 2 and 4). Residents noted that communicating with limited–English-proficient families without interpreters was culturally insensitive. Patients with specific and sensitive conditions (eg, HIV, child abuse, and patients on isolation) were additional barriers.

Discussion

The study findings suggest that, if conducted well, FCRs enhance resident education and the quality of patient care, including patient satisfaction, communication, and length of stay. Physical constraints, lack of rounding uniformity, and variability in attending rounding and teaching styles were key FCR barriers.

Implication for FCRs

Enhanced Patient Volume and Education Programs strive to balance adequate numbers of patients across the spectrum of age and medical complexity to maximize educational experiences.[11] FCRs expose residents to more patient encounters without increasing their workload. Therefore, it is not surprising that residents identified FCRs as a valuable experience, resulting in better understanding of the decision-making process, learning about communication, and opportunities to observe more physical exams.

Attending Role Modeling and Teaching Attending role modeling can improve learners' skills in medical interviewing, physical exam, communication, and professionalism.[4] Medical students report effective teaching of physical exams to be least often experienced during FCRs, and they identified FCRs as a venue to teach them.[12] In this study, residents identified attending role modeling as an effective educational tool. ''Teachable moments'' identified included enhanced physical exam skills, improved communication skills, and enhanced knowledge through case-based learning. Attending role modeling may also provide opportunities to observe and learn about compassion, respect, accountability, and sensitivity with diverse populations.

Direct Observation, Feedback, and Communication Skills Direct observation is considered the ''gold standard'' in assessing behavior,[13] but it is underused, because trainees

TABLE 3 **Representative Quotes by Pediatrics Residents on Selected Key Family-Centered Rounds (FCRs) Issues**

Improved trainee education
"I think getting the opportunity to talk to parents and update them. And, also, develop the sense of how what we are thinking medically is affecting the person, and sometimes we forget that. Sometimes we get a lot of emotional reactions from the family, and that reaction helps us be better doctors, I think."
"Better, because you are physically seeing and making treatment decisions versus getting a mini-lecture."
"As a senior, I had full leadership responsibility, of course with supervision. I really enjoyed the autonomy and them pushing me. It was pretty much me assigning things to read, teaching physical findings; I was very active too."
Parental satisfaction
"They are more satisfied because we are informing them better; labs and test results are discussed with them every day."
"They know exactly who's who and what is what. You walk in, and everyone's on the same page."
"More satisfied because they don't have to repeat same things to four or five different people."
Communication
"They provide an opportunity for parents to give their input. A lot of parents don't know how to advocate for them. When you go straight to them and ask them while the team is there, they feel comfortable voicing those things."
"With one visit, it is all said at one time - what the plan of care is - and from there on, it is 'gold inscribed in stone,' and unless there is a change to that then, it is totally clear to the family."
"We all need to learn to eliminate that medical vocabulary when we are talking to families, and I think if it is done well, you can be just as efficient in your rounds, give the medical information that is needed in a way that the families can still understand."
Outcomes
"Some attendings tend to talk more - not really explain to families - but talk more, if there is a family around, prolonging the whole rounding experience, and that diminishes work time, getting ready for sign-offs, getting things done."
"With complex medical cases, some parents are very knowledgeable and make contributions, and I have had parents that are totally oblivious and focused on other issues. So the whole team is not focused on the medical issues."

report rarely being observed, although they value the experience.[14] Residents identified directly observing attendings as an important educational experience in learning about communication in teams and with families. FCRs also allow direct trainee observation, with real-time attending feedback. Thus, direct observation and feedback may be an effective vehicle for developing interpersonal and communication skills.

FCRs, Patient Satisfaction, and Communication

Effective communication between clinicians and parents is crucial to parental satisfaction.[15] FCRs improve parental satisfaction, communication, and collaboration between fellows and nurse practitioners in the neonatal intensive care unit.[16] Consistent with these findings, residents in our study reported improved parental satisfaction secondary to enhanced communication and information sharing, resulting in improved parental understanding of their child's condition and better comprehension of providers' roles. Patient satisfaction is a critical outcome measure, and FCRs may be a powerful venue for future physicians to learn effective communication and information sharing.

FCRs, Quality, and Outcomes

FCRs improve discharge timeliness[3] and parental understanding of discharge goals.[2] Trainees in this study reported that FCRs reduce the length of stay because FCRs "put everyone on the same page" and often include case managers who help with discharge planning. Discharge planning during FCRs may allow residents to learn about indications for hospitalization, discharge criteria, and systems-based practices to coordinate care.

What Can Residents Teach Us About How FCRs Can Be More Efficient?

Lack of a consistent FCR approach and variability in attending rounding and teaching styles were key FCR barriers. On a busy general pediatric floor, conducting efficient and educational FCRs can be challenging. Thus, addressing factors identified by residents that led to inconsistent rounds may be useful. Key issues include prolonged rounding duration; variability in attending FCR practice and training about conducting FCRs; and the need for developing rounding strategies for patients with language barriers and sensitive patient conditions.

TABLE 4 **Focus Group Quotes by Pediatrics Residents on Family-Centered Rounds (FCRs) Barriers**

Barriers posed by physical environment
"I am just not convinced that family-centered rounds are most efficient way to round on 35 kids, especially if they are dispersed all over the floors of the hospital."
"It is physically exhausting if you are rounding for 4 – 4 1/2 hours"
Lack of uniformity of rounds
"We don't have it standardized here. There are no rules. I think it needs to have standard rules for everyone."
"I have a strong feeling that attending aren't trained in family-centered rounds. We certainly aren't trained as seniors, and interns aren't trained, either"
Resident-related barriers
"When our pages and phones are constantly ringing and we are interrupted dozens of times on rounds, it is so disruptive"
"The most difficult aspect is learning what is appropriate to bring up during family-centered rounds and what should wait for later"
Attending-specific barriers
"Attendings should keep it concise and not go off on a half-hour lecture."
"I think another barrier as a senior is not having an attending that lets you lead the team"
"Yes, there is always a fear that the attending or senior would ask something and we would just not know. And, it is fine in sit-down rounds, because I don't mind looking dumb in front of other interns, but, in front of parents, they are like, 'hmm, my doctor really doesn't know enough'"
"On rounds, I like to hear little tidbits, not a whole lot of information or lecture, not 80 minutes, just bam, bam, bam, this, this, and this. Physical findings or little tips, clinical hints. Things that you wouldn't know and things that you would only see if you were in the room with the patient"
Family-specific barriers
"Talking in front of a parent that doesn't understand the language, because you don't have time to get an interpreter."
"A lot of times parents wouldn't be there, they would be asleep or they wouldn't wake up."
Specific and sensitive patient condition and circumstances
"We had that non-accidental trauma or a CPS [Child Protective Services] case. It is really hard to talk candidly, if at all, in the room."

Suboptimal attending behaviors causing inefficient FCRs were identified by residents. Residents acknowledged that focused and timely FCRs were most efficient. Efficient teaching strategies identified by residents included: (1) demonstrating focused physical exams; (2) modeling communication skills; (3) providing clinical pearls; and (4) avoiding repetition. These findings are consistent with a recent study that showed that the most important factor associated with resident satisfaction with FCRs was the attending physician.[17] Faculty training programs to conduct effective and efficient FCRs and avoiding the aforementioned suboptimal behaviors might reduce attending variability and improve attending FCR teaching.

We are currently analyzing the results of family focus groups for both limited–English-proficient and English-proficient families to examine family perceptions of FCRs.

Limitations

Certain study limitations should be noted, including the possibility of selection bias (because not all residents in both programs participated) and the inability to compare the perspectives of participating and nonparticipating residents. A different moderator conducted the focus groups at each center, and a comparison of resident perceptions of FCRs versus other rounding modalities was not possible. Finally, it is possible that prior exposure to FCRs in medical school may have primed pediatrics residents to accept FCRs.

Conclusions

Our findings indicate that, if conducted well, residents perceive that FCRs improve education, quality of care, and outcomes, including parental satisfaction, communication, and length of stay. Educational benefits of FCRs include

learning through increased patient encounters, attending role modeling, and direct observation and feedback. Physical constraints, lack of uniformity of rounds, and variability in attending rounding and teaching styles were reported as FCR barriers.

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