

Families' Experiences With Pediatric Family-Centered Rounds: A Systematic Review

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abstract

CONTEXT: Family-centered rounding (FCR) is of increasing importance in pediatric medicine. Although researchers have begun to understand the effect of FCR on providers and systematic health care outcomes, we provide a systematic review of the literature regarding families' experiences with FCR.

OBJECTIVE: To systematically review patient and family experiences with pediatric FCR.

DATA SOURCES: Our data sources included PubMed, Cumulative Index to Nursing and Allied Health Literature, PsycINFO, Scopus, and Embase.

STUDY SELECTION: Inclusion criteria included publication in a peer-reviewed journal between January 2007 and February 2017, written in the English language, pediatric population (patients 0–21 years), and specific measurement of a families' experience with FCR.

DATA EXTRACTION: Data extracted were sample size, participating medical unit, measures of family experience, and overall results of family experience.

RESULTS: Twenty-eight studies were included. It is unclear whether participation in FCR increases family satisfaction compared with standard rounds; however, families report a strong desire to participate in FCR. Family benefits of FCR included increased understanding of information and confidence in the medical team, as well as reduced parental anxiety.

LIMITATIONS: There were only 2 studies in which researchers examined pediatric patients' experiences with FCR, and literature on the communication needs of non-English-speaking families was also limited.

CONCLUSIONS: Overall, it is suggested that families positively perceive their experience with FCR, although more research is needed to determine if satisfaction is greater in FCR versus standard rounds as well as to better understand different perspectives of adolescent patients and non-English-speaking families.

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Ms Rea contributed to study design, screened search results, reviewed all included studies, drafted the initial manuscript, and reviewed and revised the manuscript; Dr Rao contributed to study design, reviewed all included studies, drafted the initial manuscript, and reviewed and revised the manuscript; Dr Hill contributed to study design, developed search terms, and reviewed and revised the manuscript; Ms Saylor created the search methodology strategy and helped to conduct the search of the included literature databases; Dr Cousino contributed to study design, reviewed and revised the manuscript, and provided mentorship; and all authors approved and are accountable for the final manuscript as submitted.

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Emphasis on the importance of family-centered rounding (FCR) in pediatric medicine has increased over the past several decades. FCR involves multidisciplinary rounds at bedside in which the patient and family are involved in creating the plan and evaluating the rounding process.¹ This includes a model for introducing team members as well as teaching and practicing communication with families.² Many pediatric institutions have adopted FCR as standard care, resulting in shortened stays, earlier discharges, reduced costs, and improved provider satisfaction.³⁻⁷ Researchers suggest that FCR improves the medical team's understanding of the care plan, physician comfort with clinical dilemmas, and collaboration between team members.⁸⁻¹⁴ Notably, FCR research to date is heavily focused on hospital- and provider-centered metrics, with little emphasis on patient- and family-reported experiences.

In the available literature, positive familial experiences with FCR appear to be demonstrated¹⁵⁻¹⁹; however, a systematic review is warranted to better understand these experiences. In the current systematic review, we sought to answer the following questions: (1) What are families' overall experiences with the current model of FCR? (2) How do families perceive FCR? and (3) What benefits or disadvantages do families see in FCR? In answering these questions, the literature was critically reviewed. Study strengths and weaknesses, potential biases, sample size, and time of data collection were carefully considered when interpreting results.

METHODS

Following Cochrane guidelines,²⁰ an initial PubMed search strategy was developed in collaboration with an informationist by using the following core concepts: teaching rounds and families. After selecting

TABLE 1 Search Strategy for Systematic Review by Database

Database	Search Strategy
PubMed	1. "Teaching Rounds"[Mesh] OR rounds[ti] OR rounding[ti] 2. "Parents"[Mesh] OR "Parental Consent"[Mesh] OR "Parental Notification"[Mesh] OR "Family"[Mesh] OR "Legal Guardians"[Mesh] OR "Caregivers"[Mesh] OR parent[tiab] OR parental[tiab] OR parents[tiab] OR mother[tiab] OR mothers[tiab] OR father[tiab] OR fathers[tiab] OR family[tiab] OR families[tiab] OR familial[tiab] OR maternal[tiab] OR paternal[tiab] OR caregiver[tiab] OR caregivers[tiab] OR Guardian[tiab] OR Guardians[tiab]
CINAHL	1. (MH "Patient Rounds") OR TI(rounds OR rounding) 2. MH "Family+" OR MH "Family Attitudes+" OR MH "Parental Behavior" OR (MH "Family Role+") OR MH "Parental Notification" OR MH "Guardianship, Legal+" OR MH "Caregivers" OR TI(parent OR parental OR parents OR mother OR mothers OR father OR fathers OR family OR families OR familial OR maternal OR paternal OR caregiver OR caregivers OR Guardian OR Guardians) OR AB(parent OR parental OR parents OR mother OR mothers OR father OR fathers OR family OR families OR familial OR maternal OR paternal OR caregiver OR caregivers OR Guardian OR Guardians)
PsycInfo	1. TI (rounds OR rounding) 2. DE "Family" OR DE "Biological Family" OR DE "Extended Family" OR DE "Family of Origin" OR DE "Interethnic Family" OR DE "Interracial Family" OR DE "Military Families" OR DE "Nuclear Family" OR DE "Schizophrenogenic Family" OR DE "Stepfamily" OR DE "Parental Involvement" OR DE "Parental Attitudes" OR DE "Parental Expectations" OR DE "Parental Characteristics" OR DE "Parental Role" OR DE "Parenting" OR DE "Parents" OR DE "Adoptive Parents" OR DE "Fathers" OR DE "Foster Parents" OR DE "Homosexual Parents" OR DE "Mothers" OR DE "Single Parents" OR DE "Stepparents" OR DE "Surrogate Parents (Humans)" OR DE "Guardianship" OR DE "Caregivers" OR TI(parent OR parental OR parents OR mother OR mothers OR father OR fathers OR family OR families OR familial OR maternal OR paternal OR caregiver OR caregivers OR Guardian OR Guardians) OR AB(parent OR parental OR parents OR mother OR mothers OR father OR fathers OR family OR families OR familial OR maternal OR paternal OR caregiver OR caregivers OR Guardian OR Guardians)
Scopus	(TITLE(rounds) OR {rounding}) OR TITLE(rounds) OR {rounding}) AND (TITLE-ABS-KEY(parent OR parental OR parents OR mother OR mothers OR father OR fathers OR family OR families OR familial OR maternal OR paternal OR caregiver OR caregivers OR Guardian OR Guardians) AND (LIMIT-TO (LANGUAGE, "English"))) AND PUBYEAR > 2006 AND (LIMIT-TO(SUBJAREA,"MEDI") OR LIMIT-TO(SUBJAREA,"NURS") OR LIMIT-TO(SUBJAREA,"HEAL") OR LIMIT-TO(SUBJAREA,"PSYC") OR LIMIT-TO(SUBJAREA,"PHAR") OR LIMIT-TO(SUBJAREA,"NEUR") OR LIMIT-TO(SUBJAREA,"DENT") OR LIMIT-TO(SUBJAREA,"SOC"))
Embase	1. 'teaching round'/exp OR (rounds OR rounding):ti 2. 'parent'/exp OR 'family attitude'/exp OR 'family coping'/exp OR 'family assessment'/exp OR 'family stress'/exp OR 'caregiver'/exp OR 'parental behavior'/exp OR 'parental consent'/exp OR 'parental notification'/exp OR 'parental stress'/exp OR (parent OR parental OR parents OR mother OR mothers OR father OR fathers OR family OR families OR familial OR maternal OR paternal OR caregiver OR caregivers OR Guardian OR Guardians):ab,ti

relevant titles from the initial results, the team identified additional controlled vocabulary and keywords to further refine the search. The informationist revised the PubMed search strategy and translated it across the following databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL; EBSCO), PsycInfo (EBSCO), Scopus (Elsevier), and Embase (Elsevier). A full description of the search strategy is provided in Table 1. As outlined in

the protocol, gray literature was not included in this review, and when available, appropriate filters were applied to the searches to eliminate irrelevant articles. The informationist exported the final set of citations into an EndNote X7 library to organize citations and remove duplicates.

Inclusion criteria were as follows: being published in a peer-reviewed journal between January 2007 and February 2017, being written in the English language, having a study

TABLE 2 Risk of Bias Table

Study	Study Design	Use of Comparator	Random Assignment	Blind Outcome Assessment	Reported Attrition or Response Rate	Validated Measure	Sample Size >30
Abdel-Latif et al ²¹	RCT	+	+	—	+	+	+
Aronson et al ²²	Survey	—	—	—	+	—	+
Beck et al ²³	FGs	—	—	—	—	—	—
Benjamin et al ⁷	FCR observations	—	—	—	+	—	+
Berkwitt and Grossman ²⁴	QI	—	—	—	—	—	—
Blankenship et al ²⁵	QI	—	—	—	—	—	—
Cameron et al ²⁶	Survey	+	—	—	—	—	+
Drago et al ²⁷	Survey	—	—	—	+	—	+
Grzyb et al ¹⁸	Survey	+	—	—	+	—	+
Gustafson et al ²⁸	Quasi experimental	+	—	—	+	+	+
Knoderer ¹⁶	Survey	—	—	—	+	?	—
Kuo et al ¹⁷	Survey	+	—	—	—	+	+
Ladak et al ²⁹	Survey	+	—	—	+	+	+
Landry et al ³⁰	RCT	+	+	—	+	+	—
Latta et al ³¹	QI	—	—	—	+	—	—
Levin et al ³²	Survey, FCR observations	—	—	—	+	—	+
Lion et al ³³	QI, survey	+	—	—	+	—	+
McPherson et al ³⁴	Survey	—	—	—	+	—	+
Phipps et al ³⁵	Survey, FCR observations	—	—	+	?	—	+
Rappaport et al ¹⁵	FCR observations	+	—	—	+	—	+
Rosen et al ⁸	Quasi experimental	+	—	—	+	—	+
Seltz et al ³⁶	FGs	—	—	—	—	—	—
Stickney et al ³⁷	Survey	+	—	—	+	—	+
Subramony et al ³⁸	Survey	—	—	—	+	—	+
Subramony et al ³⁹	QI	—	—	—	—	—	—
Voos et al ¹⁰	Survey	+	—	—	+	+	—
Walker-Vischer et al ⁴⁰	Survey	—	—	—	+	—	—
Zurca et al ⁴¹	Survey	+	—	—	+	+	+

+, design element present; —, design element not present; ?, unclear if present or not present.

population including pediatric patients (0–21 years), and having measurement of a specific outcome of a family’s experience with FCR (eg, psychosocial outcomes, understanding of plan and/or medical information, relationship with medical team, involvement in decision-making, prevention of adverse outcomes, length of stay). Studies were excluded if there was no outcome measure associated with family experience or if there was an FCR intervention. One author (K.E.R.) reviewed titles and abstracts of all results, and 2 authors (K.E.R. and P.R.) independently examined the full text of remaining articles for study inclusion and data extraction. Data that were extracted included sample size, participating medical unit, measures of family experience, and overall results. Evaluation of

bias included use of a comparator, random assignment, blind outcome assessment, explanation of response rate and attrition, use of established measurements, and sample size (see Table 2). Analysis of bias revealed that most researchers used an investigator-designed parent satisfaction survey or qualitative interview rather than an established measure owing to the lack of established measurements assessing family satisfaction in FCR. A comparison group was used in a little less than half ($n = 13$) of the studies. Parent reports alone were used in most studies ($n = 22$), although adolescent perspectives ($n = 2$) or direct observations of FCR ($n = 5$) were also used in a few studies. Explicit inclusionary and exclusionary criteria were used in the majority of studies to explain

data attrition and their sample, and a sample size of >30 was included in most studies ($n = 18$). A risk of bias rating was assigned to each study on the basis of the number of items endorsed during the analysis of risk (see Table 2: low = 1–2; moderate = 3–4; high = 5–6), and this rating is included in the summary of results table (see Table 3).

RESULTS

Study Characteristics

Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, 460 studies were identified after removing duplicates (see Fig 1). The majority of excluded studies were not related to FCR, did not examine family experiences, or were not pediatric. The remaining

TABLE 3 Summary of Results

Study	Sample	Comparators	Unit Type	Measures	Results	Risk of Bias
Abdel-Latif et al ²¹	N = 63 parents	Within-subject, crossover	NICU	(1) PSS (2) Satisfaction survey (3) Focus groups	95.2% of parents supported parental presence at bedside rounds Parents in FCR had significantly higher scores on aspects of knowledge and understanding Mean PSS scores did not differ between parents in clinical bedside rounds and those who were not	Low
Aronson et al ²²	N = 98 families	None	PICU	(1) Parent survey	98% of family members liked to be present for rounds In 46% of the rounds in which a family member was present, new information was discovered from the family 91% reported that being present gave them more confidence in the medical team	Moderate
Beck et al ²³	N = 13 family members	None	Unknown	(1) Focus groups	Family members want to understand and serve as a resource and teachers to the team Family members reported having difficulty remembering everything and feeling overloaded at times. Hard to retain information when medical jargon is used	High
Benjamin et al ⁷	N = 150 FCR encounters	None	Multiple units	(1) Video recording rounds	Thirty-eight percent of FCR encounters contained at least 1 family-initiated dialogue regarding medication Parent-initiated dialogue regarding medications resulted in a change in the medical treatment plan in 8% of instances	Moderate
Berkwitt and Grossman ²⁴	N = 22 adolescents	None	Multiple units	(1) Qualitative interview	Patients had various opinions about 5 main themes: team size, medical team interactions, content discussed on FCR, expectations for FCR, and timing and/or location of FCR Children's experiences with FCR were varied, which emphasizes the importance of tailoring FCR to the patient and family	High
Blankenship et al ²⁵	N = 5 parents	None	PICU	(1) Qualitative interview	4 out of 5 parents felt that participation during rounds was beneficial and enhanced the understanding of their child's medical condition and management plan	High
Cameron et al ²⁶	N = 52 parents	Parents who chose not to join FCR, n = 16	PICU	(1) Qualitative interviews (2) Round observations	81% of parents who participated in FCR stated that participating increased overall satisfaction with their child's care 89% reported that joining rounds improved their understanding of their child's condition and treatment 57% of rounding encounters resulted in health care professionals learning new information from the parents 31% of parents who joined rounds asked the medical team at least 1 question 48% of FCR encounters resulted in the medical team posing questions to parents	Moderate
Drago et al ²⁷	N = 96 family members	None	PICU	(1) Parent survey	The majority of family members agreed or strongly agreed that their attendance on rounds improved the care of their child	Moderate
Grzyb et al ¹⁸	N = 81 parents	Parents who did not attend rounds, n = 17	NICU	(1) Parent survey	Among parents who did not attend rounds, 75% indicated they were not aware they could attend but would have if they knew 88% of parents who attended felt it increased their confidence in the health care team, and 84% indicated it eased their anxiety 89% of parents who attended liked being present A majority of parents were neutral or in agreement that their presence on rounds improved the care of their child	Moderate

TABLE 3 Continued

Study	Sample	Comparators	Unit Type	Measures	Results	Risk of Bias
Gustafson et al ²⁸	N = 132 parents	Quasi experimental, control group, n = 46 parents	NICU	(1) PSS:NICU (2) STAI (3) WOC	Overall PSS:NICU scores decreased significantly from day 0 to day 3 for parents participating in rounds, but the change was not significant between the no-FCR group and FCR group	Low
Knoderer ¹⁶	N = 18 parents	None	Inpatient hematology-oncology	(1) Parent survey	100% of parents said parental inclusion in rounds should be continued Parents reported increased perceived consistency among their child's medical personnel Parents did not report feeling intimidated or uncomfortable about the size of the team	High
Kuo et al ¹⁷	N = 97 families	Families assigned to non-FCR team, n = 48	General inpatient	(1) Consumer Assessment of Healthcare Providers and Systems survey	All parents in the FCR group reported they were given the option of discussing the care plan, whereas only half of the parents in the non-FCR group discussed the care plan Parents in the FCR group reported more participation in the care team meeting and felt that doctors listened carefully to their concerns and showed respect FCR parents were significantly more likely to report being satisfied with their care	Low
Ladak et al ²⁹	N = 82 parents	Within-subject, before and after intervention	PICU or cardiac PICU	(1) Parent survey	There was no statistically significant difference in parental satisfaction between the FCR and traditional rounding group FCR parents reported a significantly greater sense of inclusion in discussion and greater inclusion in decision-making	Low
Landry et al ³⁰	N = 27 parents	Within-subject, bedside rounds versus conference room rounds	PICU	(1) Parent survey	Parents' satisfaction was significantly higher when conducting FCR as compared with standard rounding Parents preferred FCR as compared with standard rounding, and 81% of parents requested FCR for the next presentation	Low
Latta et al ³¹	N = 18 parents	None	Multiple units	(1) Qualitative interview	All parents described the overall experience as positive, and 17 out of 18 described themselves as "comfortable" with inclusion in rounds	High
Levin et al ³²	N = 232 FCR encounters, n = 92 parents	None	PICU	(1) Recording and coding rounds (2) Parent survey	Half of the parents reported their primary reason for attending rounds was to be informed, and 22% wanted to participate in care	Moderate
Lion et al ³³	n = 41 English-proficient families, n = 40 families with limited English proficiency	English-proficient families, n = 40	General inpatient	(1) Structured questionnaire and/or interview	No statistically significant differences between English-proficient families and those with limited English proficiency in their ability to correctly name their child's diagnosis Among families with limited English proficiency, interpreted rounds were associated with decreased odds of correctly naming diagnosis	Moderate
McPherson et al ³⁴	N = 32 parents	None	PICU	(1) Parent surveys (2) Semistructured interview, if interested	90% of parents wanted to be present during patient rounds 81% of parents believed that they had knowledge of their children that was important 87% of parents believed that their presence enhanced their ability to advocate and care for their child 23% of parents were concerned that they may not want to hear certain discussions	Moderate

TABLE 3 Continued

Study	Sample	Comparators	Unit Type	Measures	Results	Risk of Bias
Phipps et al ³⁵	<i>N</i> = 81 family members	None	PICU	(1) Parent survey (2) Observation of rounds	67% of family members indicated they were able to ask the medical team questions (in our observation data, it was indicated that family members asked questions in 28% of rounding encounters) 49% of family members indicated that the medical team asked them questions (in our observation data, it was indicated that the medical team asked the family questions in 32% of encounters) 95% of family members believed they understood the care plan for their child 94% of family members did not find the discussion of their child upsetting	Moderate
Rappaport et al ¹⁵	<i>N</i> = 137 family members	Family members not present on rounds, <i>n</i> = 63	Multiple	(1) Parent survey (2) Observation of rounds	85% of family members were satisfied with FCR Families who participated in rounds were more likely to report knowing team members' roles Family participation in rounds was not associated with any other component of satisfaction	Moderate
Rosen et al ⁸	<i>N</i> = 36 surveys of patients and parents	Families not receiving FCR, <i>n</i> = 14 surveys	General inpatient	(1) Parent survey	There were no significant differences in satisfaction between families who experienced FCR and those who did not During FCR, family-initiated input impacted the plan-of-care discussion in 90% of encounters	Moderate
Seltz et al ³⁶	<i>N</i> = 28 family members	None	General inpatient	(1) Focus groups	Families reported positive experiences when a Spanish-speaking provider was involved, but numerous problems with communication still exist, especially when a Spanish-speaking provider was not there	High
Stickney et al ³⁷	<i>N</i> = 100 parents	Parents not attending rounds, <i>n</i> = 26	Medical and/or surgical ICU	(1) Parent survey	Parents who attended rounds were more likely to agree that families should be invited to rounds, were more likely to want to participate, and were more likely to feel welcome participating in rounds Parents who did not attend rounds were more likely to feel that it would sometimes be inappropriate to participate in rounds Feeling welcome predicted parents' attendance at rounds	Moderate
Subramony et al ³⁸	<i>N</i> = 118 families	None	General inpatient	(1) Parent survey	There was a significant difference between Spanish-speaking families and English-speaking families, such that English-speaking families were more likely to report knowing discharge goals Spanish-speaking family members were more likely to report not knowing discharge date or medications; however, there were not statistically significant differences between Spanish- and English-speaking family members in actual identification of discharge date or medications	Moderate
Subramony et al ³⁹	<i>N</i> = 6 family members	None	General inpatient	(1) Qualitative interview	Four themes emerged that suggest misalignment between FCR principle and practice: 1. Designed to provide a forum for information sharing, but medical jargon limits communication 2. Respect is intended but not always conveyed 3. Opportunity to participate in care but not guaranteed 4. Starting point for collaboration but not guaranteed	High

TABLE 3 Continued

Study	Sample	Comparators	Unit Type	Measures	Results	Risk of Bias
Voos et al ¹⁰	N = 28 parents	Pre-FCR implementation, n = 12	NICU	(1) PSS:NICU (2) Neonatal Instrument of Parent Satisfaction	Overall satisfaction was not related to FCR involvement; however, parents in the FCR group reported significantly increased levels of satisfaction with communication PSS scores of parents in the NICU were not significantly different for parents who attended FCR and those who did not	Moderate
Walker- Vischer et al ⁴⁰	N = 17 parents	None	General inpatient and PICU	(1) Parent survey	Parents felt their participation and perspective was valued and felt they were acknowledged Parents felt that their child's care was better as a result of their participation and that communication was increased between families and medical staff Explanations in Spanish were essential	High
Zurca et al ⁴¹	n = 52 families with limited English proficiency, n = 109 English- proficient families	English- proficient families, n = 109	PICU	(1) Parent survey	Families with limited English proficiency were less likely to understand the material during rounds Only 53% of physicians and 41% of nurses used an interpreter "often" After FCR, 59% of English-proficient families reported understanding the plan, whereas only 20% of families with limited English proficiency reported understanding the plan	Low

PSS: Parental Stressor Scale; STAI: State-Trait Anxiety Inventory; WOC: Ways Of Coping questionnaire.

28 studies were reviewed, and data were extracted on the basis of our questions of interest. Highlighting the growing interest in FCR, 18 studies were published within the last 5 years. Researchers conducted studies to examine FCR in PICUs ($n = 10$), general inpatient units ($n = 6$), NICUs ($n = 4$), or other inpatient units ($n = 5$). Researchers also conducted studies to examine FCR within a pediatric hematology ICU ($n = 1$) and a medical and/or surgical ICU ($n = 1$). Most studies were conducted in the United States ($n = 23$), although studies were also completed in Canada ($n = 3$), Pakistan, ($n = 1$), and New Zealand ($n = 1$).

Overall Parent Experience

Parent Satisfaction and Desire to Participate

Results are summarized in Table 3. In 5 studies, researchers examined parent satisfaction without using a comparator and found that parental desire for and satisfaction regarding FCR was high. One study revealed that 90% of parents of children in the PICU wanted to be present during rounds.³⁴ Consistent with the

previous finding, in a sample of 98 families surveyed in the PICU, 97% expressed an interest in attending rounds and 98% enjoyed rounds.²² Eighty-nine percent of parents of infants in the NICU who attended FCR liked being present during rounds.¹⁸ Similarly, 81% of parents who participated in FCR stated that their involvement led to increased overall satisfaction with their child's health care.²⁶ Using semistructured interviewing, Latta et al³¹ found that all 18 parents who participated in rounds described their experience as positive. In summary, studies that were conducted to assess parent satisfaction and desire to participate in rounds without a comparator found that parents were highly satisfied with FCR.

FCR Versus Standard Rounds

In the 6 studies that were conducted to compare parental satisfaction with FCR versus a comparator standard rounding procedure (ie, rounding conducted outside the patients' rooms and without families present), findings were mixed. In a study of 63 parents of infants in the NICU, 95.2%

supported FCR compared with their experience with standard rounds with significantly higher satisfaction scores relating to knowledge and understanding.²¹ In a sample of 97 families admitted to general pediatric inpatient services, families who experienced FCR were significantly more likely to be satisfied with their care as compared with families who received standard rounding.¹⁷ Overall satisfaction of parents of infants in the NICU was not associated with FCR participation; however, satisfaction specifically regarding communication was significantly increased in parents attending FCR.¹⁰ A study with 27 parents who completed both FCR and standard rounds revealed that parents were significantly more satisfied during FCR as compared with standard rounds and highly preferred FCR.³⁰ Other studies revealed no difference between FCR and standard rounding satisfaction. Among 82 parents of children in the PICU, no statistically significant difference was detected in overall parental satisfaction with their child's health care before or after implementation of FCR.²⁹

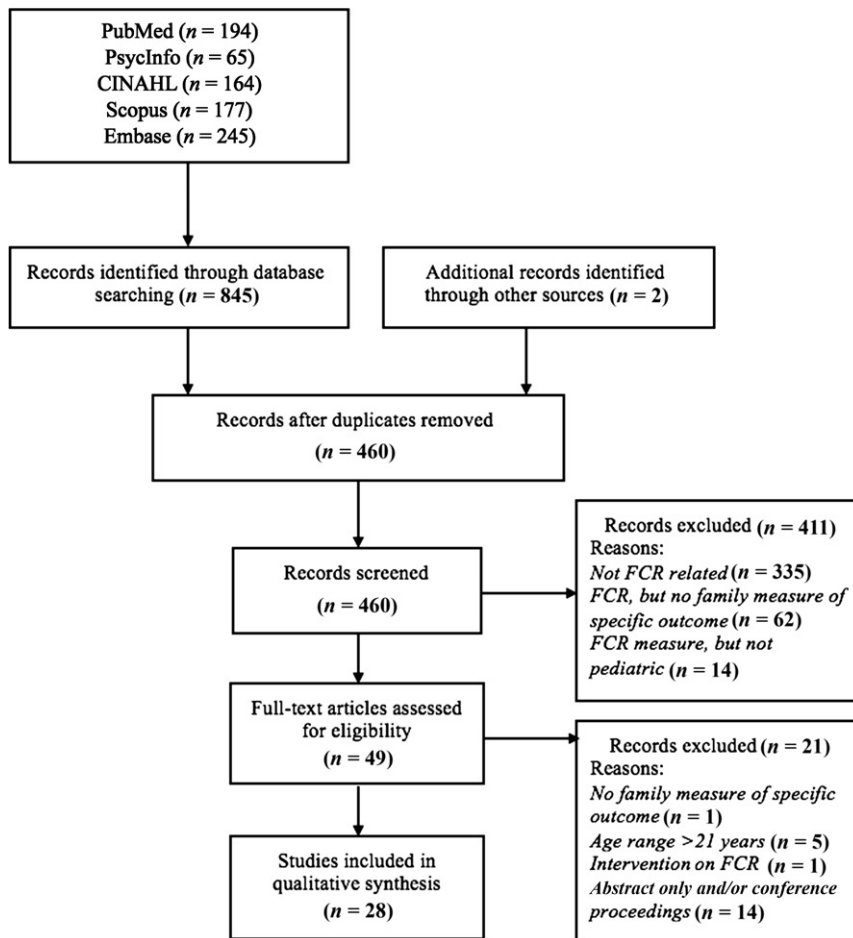


FIGURE 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines flowchart of search strategy and results.

Similarly, there were no significant differences in satisfaction between FCR and standard rounding in a sample of 36 adolescent patients and parents in a general pediatric inpatient unit.⁸ Importantly, a standard rounds comparator was used in these studies, and findings are mixed in comparison with the previous studies in which satisfaction without a comparator was examined.

Families' Perspectives on Continuing FCR

All 18 parents of children in an inpatient hematology-oncology unit said parental inclusion in rounds should continue.¹⁶ Similarly, a study of 100 parents of medical and/or surgical ICU patients revealed that parents who attended rounds

were more likely to agree that families should be invited to rounds, whereas parents who did not attend rounds felt that it would sometimes be inappropriate for parents to participate.³⁷ Parents who attended FCR stated that collaboration and respect promote continuation of FCR.³⁹

Impact of FCR on Parent and Family Outcomes

Parent-Perceived Knowledge

Of the 6 studies conducted to examine parent knowledge in FCR, a comparator was used in only 2. In the studies with a comparator, parents in the NICU who participated in FCR had significantly higher self-reported knowledge and understanding compared with parents who did

not.²¹ Likewise, parents reported bedside FCR was a greater source of information and opportunity to ask questions as compared with standard rounds.¹⁷ All parents who participated in FCR reported they were given the option to discuss the care plan, whereas only half of parents who experienced standard rounds reported discussing their child's care plan.¹⁷ In 1 of the 4 studies conducted to examine parental knowledge without a comparator, 95% of family members of PICU patients believed they understood the care plan for their child.³⁵ Similarly, 89% in a sample of 36 parents of children who participated in FCR in the PICU reported that engaging in rounds improved understanding of their child's condition and treatment.²⁶ In a study that was conducted to examine family-reported knowledge compared with actual knowledge, Subramony et al³⁸ found that families who participated in FCR had an accurate understanding of the discharge treatment plan. The majority of parents who experienced FCR in a cardiac PICU felt their participation in rounds increased their understanding.²⁵ In sum, parents who experience FCR report increased participation, resulting in greater understanding about their child's condition and treatment plan, which is consistent across studies with and without a comparator.

Parent Involvement in Medical Decision-making and Care

Involvement in FCR provides parents the opportunity to influence medical decision-making and care. Parent involvement results are reported without a comparator group in the majority of studies, with results indicating that the majority of family members agreed attending rounds improved the care of their child.^{18,27} McPherson et al³⁴ found 87% of parents believed their presence at rounds enhanced their ability to advocate and care for their child. In

an observation of 22 parents and patients, input initiated by either parents or patients impacted the plan of care in 90% of FCR encounters.⁸ Other studies have revealed that the medical team often discovers new information from family members participating in FCR.^{22,26} By involving families in FCR, families and providers serve as resources to one another, as was found in a study in which 32% of observed FCR experiences in the PICU involved the medical team asking questions directly to the family and 28% involved family members asking questions to the medical team.³⁵ Cameron et al²⁶ found similar results, such that 31% of families who joined rounds asked the medical team at least 1 question, and the medical team asked questions to parents in 48% of rounding encounters. In an examination of FCR encounters, 38% contained at least 1 family-initiated dialogue regarding their child's medication.⁷ In the only study conducted to examine parent involvement by using FCR groups versus standard rounding groups, parents experiencing FCR in the PICU reported significantly greater inclusion in discussion and decision-making.²⁹ Overall, researchers examining family involvement in medical decision-making and care found that the majority of families report positive experiences, and in observational data, it is suggested that families volunteered or medical teams solicited information in many FCR encounters.

Impact of FCR on Parent Psychosocial Functioning

Of the 7 studies conducted to examine measures of family psychosocial functioning, a comparator was used in 5. Two of these studies revealed that measures of parent stress did not differ between parents in the NICU who participated in FCR and those who did not.^{10,21} Similarly, of 132 parents of infants in the NICU,

parent stress decreased for parents participating in FCR; however, this was not statistically significant between parents engaging in FCR and parents who did not.²⁸ In studies in which researchers used Likert-scale parent surveys regarding views of FCR, 84% of parents who attended rounds felt it eased their anxiety.¹⁸ This is compared with 19% of parents participating in PICU FCR who reported participation made them feel anxious and 11% who felt it was stressful.²⁶ There were 2 studies of psychosocial functioning in which a comparator was not used for analysis. In 1 of these studies, 94% of parents of PICU patients did not find the discussion of their child upsetting.³⁵ However, 23% of parents in the PICU expressed concern that they may not want to hear certain discussions during FCR.³⁴ Overall, across studies with and without a comparator, it is suggested that FCR does not create significant additional stress for families.

Parent Relationships With Medical Teams

FCR allows families to interact with the medical team; thus, in many studies researchers sought to understand families' perceptions of health care professionals. Across these studies, most researchers did not use a comparator group. In those without a comparison group, 92% of families in the PICU who engaged in FCR had confidence in the residents caring for their child, and 91% reported being present at rounds gave them more confidence in the medical team.²² Only 7% of parents in 1 study worried that attendance at rounds would undermine their confidence in the medical team.³⁴ Attendance at rounds made parents feel included, and they did not feel intimidated by team size.^{15,16} Likewise, 88% of parents in the NICU felt attending rounds increased confidence in the medical team.¹⁸ In the 1 study in which a comparator was used, parents who experienced

FCR reported feeling increased respect from the medical team.¹⁷ Overall, parents reported increased confidence in the health care team as a result of participation in FCR.

Pediatric Patients' Experiences With FCR

Of the 28 identified studies, pediatric patients' experiences were only examined in 2. Berkowitz and Grossman²⁴ found adolescent's preferences for FCR were varied, emphasizing the need to tailor FCR to the individual patient. Some patients felt a large team made them feel safe and cared for, whereas others felt a bigger team was anxiety-provoking and intrusive.²⁴ Rosen et al⁸ surveyed patient and parent perspectives on FCR ($n = 15$) compared with standard rounding ($n = 12$) and found no differences in satisfaction between the 2 rounding experiences. However, the small sample sizes and mixed sample composition of both parents and patients may limit the generalizability of this study to all pediatric patients' experiences.

Barriers to FCR

Awareness and Approachability of FCR

Although emphasis on FCR has increased over the last few decades, families still may not be aware of this practice. Parents of patients in the PICU on the first day of admission reported greater concerns and were less likely to understand the plan compared with parents who were further in their stay.²² These families may require additional care and attention during FCR. Additionally, when examining parents who did not attend rounds in the NICU, Grzyb et al¹⁸ found that 75% of parents indicated they did not know they could have attended rounds but would have if they knew. Of the parents who did not elect to participate in FCR, researchers sought to understand the barriers to their participation and found that feeling welcome

to participate predicted parents' attendance at rounds.³⁷ Additionally, in qualitative interviews of 6 family members, themes emerged that suggested FCR is not meeting its original goals. Specifically, although FCR is designed to be informative for all, medical jargon often limits communication, and parent participation and collaboration with the medical team is not guaranteed.³⁹ Importantly, parents endorsed barriers to understanding presented information. In focus groups of parents who experienced FCR, parents reported difficulty remembering and feeling overloaded, especially when health care professionals used medical jargon.²³

Families With Limited English Proficiency

FCR is centered on communication; however, language barriers may arise. Among families with limited English proficiency, using an interpreter during rounds was associated with a decreased likelihood of correctly naming a diagnosis and less likelihood of understanding the medical plan after rounds compared with English-speaking families.^{33,41} English-speaking families were more likely to report knowing discharge goals and the discharge day as compared with Spanish-speaking families.³⁸ Latino parents felt explanations in Spanish were essential for FCR⁴⁰; however, some felt disempowered to request interpreter services.^{36,41} With this research, it is suggested that families with limited English proficiency require additional support in FCR to promote participation and collaboration.

DISCUSSION

Overall, parents who attended rounds reported high satisfaction with their experience.^{15,21,26} although studies conducted to compare satisfaction in FCR to standard rounds have mixed results, with no differences in family

satisfaction between FCR and standard rounds indicated in some of these results.^{8,10,21} Despite these inconsistent results regarding family satisfaction, parents report a strong desire to participate in rounds.^{22,34} There were numerous reported benefits of family participation, including increased parental understanding of their child's medical condition and care,^{21,26} greater information exchange between the medical team and the family,^{22,26} easing of parental anxiety,¹⁸ increased parental confidence in their child's medical team,^{18,22} and heightened awareness of team member roles.^{15,22}

Notably, of the 6 studies conducted to examine parent and patient satisfaction between FCR and a comparison group, findings were inconsistent. Some studies revealed no significant differences in parent satisfaction between those participating in FCR and those experiencing standard rounds, contradicting the extremely high satisfaction found in studies without a comparator. Findings within these 6 studies vary between study settings and samples. For example, parents in the PICU showed no statistically significant differences in parent satisfaction between FCR and standard rounds²⁹; however, in a similar study of families admitted to general inpatient services, they were significantly more likely to report satisfaction with their care when receiving FCR versus standard rounding.¹⁷ Previous research has revealed that families in the PICU have greater stress than families in a general inpatient unit.⁴² Differing levels of parental stress and the severity of a patient's condition may impact satisfaction with FCR because of more complicated medical information, greater fluctuation in their child's health status, and the presence of more consulting services. Moreover, the study by Ladak et al²⁹ was conducted in Pakistan, whereas

the other studies we reviewed were conducted in the United States. Thus, cultural differences may also account for variable findings. In addition, sample composition varied across each of these studies. Rosen et al⁸ assessed both parents and adolescent patients in their study and found no significant differences in satisfaction when comparing FCR and standard rounding. Yet this was the only study in which researchers combined measures of parent and patient satisfaction, limiting the generalizability to either population. On the basis of these results, we believe it is unclear whether FCR has an impact on satisfaction compared with standard rounds. It will be essential for researchers of future studies to use the results of this review to determine the ways satisfaction may differ between samples and settings as well as further examine the effects of FCR versus standard rounds.

It is important to consider the quality of studies informing our understanding of satisfaction between FCR and standard rounding. In each study, a comparator was included as a reference but with unique methodology. Researchers evaluated periods of FCR compared with standard rounding,^{8,10,29} concurrent experiences on an FCR team versus a non-FCR team,¹⁷ or within-participant completions of both FCR and standard rounding.^{21,30} Despite inclusion of a comparator, the quality of these studies is variable. Researchers in four of the studies included thorough and explicit inclusion criteria (eg, expected length of stay, consistent medical team, and parent presence) and exclusion criteria (eg, developmental delay, readmission).^{8,17,29,30} However, Voos et al's¹⁰ inclusion criteria were only parent age (>18 years) and at least 1 week in NICU. On the basis of this review, it is recommended that future researchers use comparators and explicit inclusion and exclusion

criteria more rigorously to compare FCR to standard rounding and determine if FCR has an impact on family satisfaction.

In multiple studies, researchers examined psychosocial functioning among families as an outcome of FCR with mixed results. Researchers in half of the studies assessed parent stress via the validated Parental Stressor Scale: NICU (PSS: NICU) measure. Studies in which researchers used the PSS: NICU revealed that stress did not differ between those who participated in FCR and those who did not.^{10,21,28} On the contrary, an investigator-developed parent survey revealed that the majority of parents who attended rounds in the NICU felt it eased their anxieties.¹⁸ It is possible that this contrast arises from differences in measurement, as the study-developed tool highlighted multiple aspects of parents' experiences with FCR (eg, parent-perceived enjoyment, helpfulness, and preferences regarding FCR), not just perceived stress or anxiety. More research is needed to understand how FCR impacts parent psychosocial functioning. Specifically, the use of illness-specific measures and assessments of family functioning would help clarify the potential impact of FCR on psychosocial outcomes.

The modern implementation of FCR is not without flaws, and results from these studies reveal areas for improvement. It has been indicated in studies that the use of medical jargon negatively impacts families' experiences with FCR, and providers should avoid its use.^{23,39} In addition, families may not be aware of their ability to be involved in FCR. Hospitals should take steps to make certain families understand the purpose and practice of FCR. For example, parents have benefited from being given a brochure along with a verbal explanation of FCR.²⁵ Hospitals may also include a magnet outside of rooms used to indicate

family and patient preference for participating in rounds, which has been successfully implemented in other hospital interventions.⁴³

It is also important to better understand the role and preferences of pediatric patients. Previous research has revealed that adolescent patients are most dissatisfied with the lack of information provided to them and their lack of involvement in health care communication.^{44,45} In the current literature, there was a surprising dearth of research concerning pediatric patients and their experiences with FCR. Researchers in only 2 studies involved adolescent patients, and researchers in only 1 study solicited specific comments from adolescent patients exclusively. With respect to FCR, adolescent patients reported a wide variety of preferences for their care.²⁴ Some preferred a high degree of involvement in FCR, whereas others preferred that all communication occur outside their room. Implementing tools designed to assess communication preferences of pediatric patients, such as the My CHATT tool, are essential for meeting the needs of pediatric patients.⁴⁵ Future researchers should examine the efficacy of implementing patient-centered communication and rounding preferences tools.

In the results of this literature review, we also highlighted families with limited English proficiency as a population requiring special attention. These families may receive medical information through an interpreter, which can result in decreased understanding of their child's care.^{33,38} Latino families reported more positive experiences when a Spanish-speaking provider was present and explanations were given in Spanish; however, these were not always available, and families did not feel empowered to ask for interpretation services.^{36,40} Hospital systems should work to standardize identification of families

with limited English proficiency on admission.⁴¹ Improving communication between families and health care providers can only be achieved if the language barrier is minimized.

The importance of understanding families' and patients' perspectives of FCR is crucial for providing quality care. The strengths of the literature, including the variety of outcomes measured and use of objective FCR observations, must be considered in light of the weaknesses. There is not a standardized measure for assessing FCR outcomes. As a result, many researchers created their own surveys or conducted focus groups or interviews, making it difficult to compare results across studies. In addition, <50 participants were included in nearly half of the reviewed studies. Small samples limit power for detecting statistical differences. The settings of these studies were also highly variable, spanning multiple units and medical populations. This limits the generalizability of findings. Given the nature of FCR, it is unclear who was conducting rounds. Some training hospitals may have rounds conducted by trainees, whereas others include attending physicians whose years of practice, provider specialty training, and personal styles may influence rounding episodes. Finally, researchers in less than half ($n = 13$) of the included studies used a comparator group to examine the effects of FCR compared with standard rounding.

It is important to note limitations of this review. It is possible that relevant studies were not identified through our comprehensive search methodology despite using variations of terminology across multiple databases. In addition, our specific inclusion criteria may have limited the use of studies in which family outcomes regarding FCR were not specifically measured. Finally, the inherent publication bias

toward studies in which significant results were achieved may limit generalizability of findings to actual practice.

This systematic review has critical implications for hospitals and health care professionals. To better serve pediatric patients and families, we must understand the experience of families in our care. Overall, families report high satisfaction with FCR, although it is unclear whether this is greater than standard rounds.

Families report a desire to participate in FCR, citing many benefits to their involvement, including increased knowledge, involvement in medical decision-making, and increased confidence in the medical team. Authors of future studies should expand on the results of this review and address limitations of this research. An important focus should be determining whether satisfaction is improved during FCR as compared with standard rounds. Additionally, studies of pediatric patients'

experiences and communication with families with limited English proficiency will be vital to improve implementation of FCR.

ABBREVIATIONS

CINAHL: Cumulative Index to Nursing and Allied Health Literature
FCR: family-centered rounding
PSS:NICU: Parental Stressor Scale: NICU

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REFERENCES

1. Sisterhen LL, Blaszak RT, Woods MB, Smith CE. Defining family-centered rounds. *Teach Learn Med*. 2007;19(3):319–322
2. Muething SE, Kotagal UR, Schoettker PJ, Gonzalez del Rey J, DeWitt TG. Family-centered bedside rounds: a new approach to patient care and teaching. *Pediatrics*. 2007;119(4):829–832
3. Committee on Hospital Care, American Academy of Pediatrics. Family-centered care and the pediatrician's role. *Pediatrics*. 2003;112(3, pt 1):691–697
4. Accreditation Council for Graduate Medical Education. ACGME program requirements for graduate medical education in pediatrics. Updated July 1, 2017. Available at: https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/320_pediatrics_2017-07-01.pdf. Accessed March 24, 2017
5. Curley C, McEachern JE, Speroff T. A firm trial of interdisciplinary rounds on the inpatient medical wards: an intervention designed using continuous quality improvement. *Med Care*. 1998;36(suppl 8):AS4–AS12
6. Oshimura JM, Downs SM, Saysana M. Family-centered rounding: can it impact the time of discharge and time of completion of studies at an academic children's hospital? *Hosp Pediatr*. 2014;4(4):228–232
7. Benjamin JM, Cox ED, Trapskin PJ, et al. Family-initiated dialogue about medications during family-centered rounds. *Pediatrics*. 2015;135(1):94–101
8. Rosen P, Stenger E, Bochkoris M, Hannon MJ, Kwok CK. Family-centered multidisciplinary rounds enhance the team approach in pediatrics. *Pediatrics*. 2009;123(4). Available at: www.pediatrics.org/cgi/content/full/123/4/e603
9. 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
10. Voos KC, Ross G, Ward MJ, Yohay AL, Osorio SN, Perlman JM. Effects of implementing family-centered rounds (FCRs) in a neonatal intensive care unit (NICU). *J Matern Fetal Neonatal Med*. 2011;24(11):1403–1406
11. 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
12. 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
13. Rappaport DI, Cellucci MF, Leffler MG. Implementing family-centered rounds: pediatric residents' perceptions. *Clin Pediatr (Phila)*. 2010;49(3):228–234
14. 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
15. 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
16. Knoderer HM. Inclusion of parents in pediatric subspecialty team rounds: attitudes of the family and medical team. *Acad Med*. 2009;84(11):1576–1581
17. 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
18. Grzyb MJ, Coe H, Rühland 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
 19. Kelly MM, Xie A, Carayon P, DuBenske LL, Ehlenbach ML, Cox ED. Strategies for improving family engagement during family-centered rounds. *J Hosp Med*. 2013;8(4):201–207
 20. Higgins JPT, Green S, eds. *Cochrane Handbook for Systematic Reviews of Interventions*. New York, NY: Wiley Online Library; 2008
 21. Abdel-Latif ME, Boswell D, Broom M, Smith J, Davis D. Parental presence on neonatal intensive care unit clinical bedside rounds: randomised trial and focus group discussion. *Arch Dis Child Fetal Neonatal Ed*. 2015;100(3):F203–F209
 22. Aronson PL, Yau J, Helfaer MA, Morrison W. Impact of family presence during pediatric intensive care unit rounds on the family and medical team. *Pediatrics*. 2009;124(4):1119–1125
 23. Beck J, Meyer R, Kind T, Bhansali P. The importance of situational awareness: a qualitative study of family members' and nurses' perspectives on teaching during family-centered rounds. *Acad Med*. 2015;90(10):1401–1407
 24. Berkwitz A, Grossman M. A qualitative analysis of pediatric patient attitudes regarding family-centered rounds. *Hosp Pediatr*. 2015;5(7):357–362
 25. Blankenship A, Harrison S, Brandt S, Joy B, Simsic JM. Increasing parental participation during rounds in a pediatric cardiac intensive care unit. *Am J Crit Care*. 2015;24(6):532–538
 26. Cameron MA, Schleien CL, Morris MC. Parental presence on pediatric intensive care unit rounds. *J Pediatr*. 2009;155(4):522–528
 27. Drago MJ, Aronson PL, Madrigal V, Yau J, Morrison W. Are family characteristics associated with attendance at family centered rounds in the PICU? *Pediatr Crit Care Med*. 2013;14(2):e93–e97
 28. Gustafson KW, LaBrecque MA, Graham DA, Tella NM, Curley MA. Effect of parent presence during multidisciplinary rounds on NICU-related parental stress. *J Obstet Gynecol Neonatal Nurs*. 2016;45(5):661–670
 29. Ladak LA, Premji SS, Amanullah MM, Haque A, Ajani K, Siddiqui FJ. Family-centered rounds in Pakistani pediatric intensive care settings: non-randomized pre- and post-study design. *Int J Nurs Stud*. 2013;50(6):717–726
 30. Landry MA, Lafrenaye S, Roy MC, Cyr C. A randomized, controlled trial of bedside versus conference-room case presentation in a pediatric intensive care unit. *Pediatrics*. 2007;120(2):275–280
 31. Latta LC, Dick R, Parry C, Tamura GS. Parental responses to involvement in rounds on a pediatric inpatient unit at a teaching hospital: a qualitative study. *Acad Med*. 2008;83(3):292–297
 32. Levin AB, Fisher KR, Cato KD, Zurca AD, October TW. An evaluation of family-centered rounds in the PICU: room for improvement suggested by families and providers. *Pediatr Crit Care Med*. 2015;16(9):801–807
 33. Lion KC, Mangione-Smith R, Martyn M, Hencz P, Fernandez J, Tamura G. Comprehension on family-centered rounds for limited English proficient families. *Acad Pediatr*. 2013;13(3):236–242
 34. McPherson G, Jefferson R, Kissoon N, Kwong L, Rasmussen K. Toward the inclusion of parents on pediatric critical care unit rounds. *Pediatr Crit Care Med*. 2011;12(6):e255–e261
 35. Phipps LM, Bartke CN, Spear DA, et al. Assessment of parental presence during bedside pediatric intensive care unit rounds: effect on duration, teaching, and privacy. *Pediatr Crit Care Med*. 2007;8(3):220–224
 36. Seltz LB, Zimmer L, Ochoa-Nunez L, Rustici M, Bryant L, Fox D. Latino families' experiences with family-centered rounds at an academic children's hospital. *Acad Pediatr*. 2011;11(5):432–438
 37. Stickney CA, Ziniel SI, Brett MS, Truog RD. Family participation during intensive care unit rounds: attitudes and experiences of parents and healthcare providers in a tertiary pediatric intensive care unit. *J Pediatr*. 2014;164(2):402–406.e1–e4
 38. Subramony A, Schwartz T, Hametz P. Family-centered rounds and communication about discharge between families and inpatient medical teams. *Clin Pediatr (Phila)*. 2012;51(8):730–738
 39. Subramony A, Hametz PA, Balmer D. Family-centered rounds in theory and practice: an ethnographic case study. *Acad Pediatr*. 2014;14(2):200–206
 40. Walker-Vischer L, Hill C, Mendez SS. The experience of Latino parents of hospitalized children during family-centered rounds. *J Nurs Adm*. 2015;45(3):152–157
 41. Zurca AD, Fisher KR, Flor RJ, et al. Communication with limited English-proficient families in the PICU. *Hosp Pediatr*. 2017;7(1):9–15
 42. Board R, Ryan-Wenger N. Long-term effects of pediatric intensive care unit hospitalization on families with young children. *Heart Lung*. 2002;31(1):53–66
 43. Merkel SI, Piazza J, Desmet C. Decreasing pain and anxiety with needlesticks and procedures: an evidence based practice change. In: *15th Annual Evidence-Based Practice Conference*; March 15, 2013; Ann Arbor, MI. Available at: <https://wiki.med.umich.edu/display/UMPOKE/Inpatient+Units?preview=/53936130/54067218/EBP%20Needlestick%2003%2015%202013%20-final.pdf>
 44. Coyne I, Kirwan L. Ascertaining children's wishes and feelings about hospital life. *J Child Health Care*. 2012;16(3):293–304
 45. Cousino MK, Rea KE, Mednick LM. Understanding the healthcare communication needs of pediatric patients through the My CHATT tool: a pilot study. *J Commun Healthc*. 2017;10(1):16–21

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