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The Impact of Family-Centered Rounds on the Quantity and Quality of Resident Education

A. Study Purpose and Rationale

Family-centered rounds are defined 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. Family-centered rounds have become the standard of care in pediatrics (1). The American Academy of Pediatrics encourages a family-centered approach to care and recommends that attending rounds be held with family presence in patients' rooms in an effort to improve transparency of communication and information (2). Overwhelmingly, qualitative research has shown that parents prefer family centered rounds. Families perceive that they have a better chance of hearing new information about their child (3). Additionally, parents felt that being presence on rounds improved their understanding of their child's condition (4). Furthermore, family-centered rounds have demonstrated a high level of non-physician staff satisfaction (5).

Despite the clear benefit of family-centered rounds to families and non-physician staff, concerns exist on the impact of resident education. In multiple studies, residents have expressed discomfort in being asked educational questions. Similarly, residents also felt uncomfortable asking questions about patient outcomes during family-centered rounds (6-7). Surprisingly, parents report that they enjoy observing resident education on rounds. Additionally, the far majority of parents report that educational discussions on rounds do not increase anxiety (8). Although there is much qualitative evidence, about resident and attending concerns about resident education on family centered rounds, a very limited number of quantitative studies exist. A single study demonstrated that the time spent on teaching did not significantly change when parents were present on rounds (9).

Given the current gap in literature, it is the goal of this study to better document the impact of parental presence on rounds on the quantity and quality of resident education. This study will characterize 150 patient rounding encounters over the 2016-2017 academic year. Our primary aim is to assess the quantity & quality of educational questions asked by attendings and residents with parents presents compared to without parents present. We hypothesize that the number and quality of educational questions asked to residents and by the residents will be diminished in the presence of parents. Our secondary aim is to assess the percentage of time spent on education when parents are present compared to without parents present. We hypothesize that the percentage of time spent teaching will be diminished in the presence of parents.

B. Study Design and Statistical Analysis

This is a prospective observational partially-blinded study. The study will be conducted in a 14-bed PICU at Morgan Stanley's Children's Hospital of New York. The pediatric critical care rounds are conducted at the patient's bedside and occur once daily in the morning. Rounds will be observed discreetly by a member of the research team once weekly from the time of IRB approval (estimated to be October 2016) through June 2017. There will be two comparison groups: rounding events with parents present versus rounding events without parents present. A prior study in our PICU demonstrates that parents were present on rounds 30% of the time. Inclusion criteria will be rounding events that occur during the allotted study period. There are no exclusion criteria for rounding events.

The investigator will use a standardized data collection form while observing rounds. Data collected will include the presence of parents during rounding event, the total number of educational questions asked by the attending to the resident, the total number of educational questions asked by the resident to the attending, text from all educational questions asked, the total length of time of the rounding event, and the total length of time spend on education.

The text of the questions asked will then be given to a blinded PICU attending who will score each question. The question will be scaled on a 1-5 Likert scale based on the educational impact of the question.

An unpaired t-test will be used to compare the number of questions asked and the Likert rating of questions in each comparison group to assess the primary outcome. A statistical significance is defined as a p-value of <0.05.

A chi-square test will be used to compare the percentage of time spent on education in each comparison group.

A power analysis was done for the primary outcome using an unpaired t-test, using a $p < 0.05$ and a power of 80% to determine the effect size that will be determined based on our estimated number of observed rounding events. It is estimated that we will observe at least 150 rounding events. Based on previous data, approximately 45 rounding events will include parents and 105 rounding events will not include parents. Based on this information, we will be able to detect a difference of 0.5 questions and 0.5 on the Likert scale.

C. Study Procedure

No procedures will be performed for this study.

D. Study Drugs

No drugs will be given for this study.

E. Medical Device

No medical devices will be used for this study.

F. Study Questionnaires

No questionnaires will be used for this study.

G. Study Subjects

No study subjects will be enrolled in this study. It is an observational study and no patient information will be documented. Additionally, no identify information about the resident or attending physicians will be documented.

H. Recruitment of Subjects

No study subjects will be recruited for this study

I. Confidentiality of Study Data

No identifying information will be collected on patients, resident physicians, or attending physicians.

J. Potential Conflict of Interest

None to disclose.

K. Location of the Study

CHONY 9 Central PICU

L. Potential Risks

There are no potential risks to this study.

M. Potential Benefits

There are no direct benefits to the individuals participating in this study. We believe that this study will identify potential gaps in education during rounds in the PICU. Therefore, it may serve as a way to enhance to educational value of rounds in the future.

N. Alternative Therapies

Not applicable.

0. Compensation to Subjects

Not applicable.

P. Costs to Subjects

Not applicable.

Q. Minors as Research Subjects

Not applicable.

R. Radiation or Radioactive Substances

Not applicable.

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