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A Quality Improvement Project to Increase Nurse Attendance on Pediatric Family Centered Rounds[1]

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Background: Family centered rounds (FCR) occur at the bedside and include the patient and their family when creating a daily medical care plan. Despite recommendations that family centered rounds (FCR) with nursing staff be standard practice, nurses were frequently absent from FCR at our institution.
Objective: To increase nurse attendance on hospitalist FCR to 80% in three months. Secondary outcomes were to investigate the relationship between nurse-to-patient ratio and nurse attendance, and to assess for change in perception toward FCR.
Methods: This resident driven interrupted time series study included a focus group to identify barriers to nurse attendance on FCR, four plan-do-study-act cycles, and surveys to assess for changes in perceptions toward FCR. Control charts, SHEWHART rules, linear regression and chi squared analysis were used for data analysis.
Results: Nurse attendance on FCR improved from 30% to 59%. There was no correlation between nurse-to-patient ratio and nurse attendance on FCR. Surveys indicated increase in the perception that it is helpful to have a nurse present at FCR.
Conclusions: A resident driven quality improvement project can increase nurse presence on FCR.

Background

PEDIATRIC HOSPITALISTS FREQUENTLY engage in family centered rounding, which has been described as "interdisciplinary work rounds at the bedside in which the patient and family share in the control and management plan" (Mittal et al., 2010; Sisterhen, Blaszak, Woods, & Smith, 2007). Benefits of family centered rounds (FCR), which have been recognized as a standard of care, include increased efficiency, timely discharges, and improved staff and family satisfaction (Kuo et al., 2012; Mittal et al., 2010; Muething, Kotagal, Schoettker, Gonzalez del Rey, & DeWitt, 2007; Rosen, Stenger, Bochkoris, Hannon, & Kwoh, 2009; Sisterhen et al., 2007; Wang-Cheng, Barnas, Sigmann, Riendl, & Young, 1989).

Interdisciplinary teamwork during rounds reduces team fragmentation and has been shown to improve outcomes and communication (Curley, McEachern, & Speroff, 1998; Vazirani, Hays, Shapiro, & Cowan, 2005). Various definitions of FCR emphasize nurse inclusion in the interdisciplinary team (Committee on hospital care and institute for patient- and family-centered-care, 2012; Sisterhen et al., 2007). Collaboration between physicians and nurses has been shown to decrease costs, length of stays, and negative outcomes (Baggs, Ryan, Phelps, Richeson, & Johnson, 1992; Curley et al., 1998; Evanoff et al., 2005; O'Leary et al., 2010). Nurses, who frequently play a role of care coordinator, also provide valuable insight into patient and family needs, making them an integral component of

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timely, effective discharge planning. In addition to improving patient care, nurse attendance on rounds contributes to a positive working team attitude which can increase satisfaction through the empowerment of team members (Rappaport, Ketterer, Nilforoshan, & Sharif, 2012; Rosen et al., 2009).

Local Problem

At our institution, nurses and residents routinely collaborated during FCR on the neonatology and oncology services, working throughout the day with a shared mental model in which all team members understood the patient's status and projected plan of care. In contrast, the work environment on the hospitalist service was less efficient; nurses reported being unaware of the daily care plan until late in the morning and residents reported having to spend time to update nurses on care plans after rounds. Care team members felt that nurse attendance on FCR was especially difficult during times of high census. Baseline nurse attendance at FCR on the hospitalist service was 30%. Discussions between major stakeholders (attendings, residents and nurses) identified the absence of nurses from hospitalist FCR as a possible contributor to poor communication, inefficient teamwork, and ultimately suboptimal patient-centered care.

Intended Improvement

In order to improve communication between caregivers and optimize safe and effective patient care, we designed a quality improvement (QI) project with a primary aim to increase nurse attendance on hospitalist FCR to 80% in three months. Secondary aims were to a) evaluate whether there was an association between nurse-to-patient ratio and nurse attendance on FCR and b) assess for a change in perception toward FCR with interventions to increase nurse attendance on FCR.

The research team felt the summer was an opportune time to address the problem because new interns exposed to multidisciplinary FCR could contribute toward sustained changes. Despite adjustments in nursing team leadership at that time, team members opted to proceed with a quality improvement (QI) initiative to improve nurse attendance on hospitalist FCR as it was in alignment with the launch of several other patient safety initiatives occurring at that time. To our knowledge, this is the first report of a resident driven QI project to increase nurse attendance on pediatric FCR.

Methods

Ethical Issues

We did not identify any ethical issues during the planning or implementation phases of this QI project.

Setting

This QI project took place on a 40 bed pediatric medical–surgical ward of a tertiary academic medical center in Boston, Massachusetts. The children's hospital has a total of 128 beds and is a component of the larger medical center.

At the time of this project, pediatric hospitalists managed all non-surgical and non-hematology/oncology patients on the pediatric ward. Rounds typically began at 8:45 am and lasted 2 hours. A pediatric hospitalist led the rounding team, and additional team members included a third year pediatric resident, two interns, and approximately three medical students. Nurses were also present at times. The ward is arranged in a 'V' shape and the hospitalist generally conducted bedside rounds in a linear fashion, proceeding from one room to the next. Nurses are typically assigned 3–5 patients daily; their patients may be from different services and are generally distributed throughout the unit (in a non-linear fashion). Multiple services round during morning hours, therefore rounds might occur simultaneously for more than one of a given nurse's patients.

Planning the Intervention

The research group was composed of representatives from major stakeholder groups and included 2 senior residents, the interim nurse manager, the chief of the hospital medicine division, and 2 senior hospitalists. After obtaining approval by the institutional review board at the institution, this interrupted time series study began in July 2011 with a focus group that engaged nurses who worked on the pediatric unit (n = 11) in a discussion to identify barriers and brainstorm solutions to improve attendance on FCR. Research team members analyzed focus group results using a Pareto chart to identify the most important barriers (Plsek & Omnias, 1989). A key driver diagram was also created to identify contributors to the low baseline of nurse attendance on FCR and proposed solutions to address these issues. The results were then used to design an intervention for the first Plan-Do-Study-Act (PDSA) cycle (Langley, 1996). Members of the research team met routinely to assess the impact of each PDSA intervention and subsequent changes were implemented using sequential PDSA cycles over three months.

Assessment and Analysis of the Intervention

The primary outcome was nursing attendance at FCR. The research team identified time spent on rounds as a balancing measure given concerns that nurse attendance might increase the length of FCR. Measurements were collected daily by a research assistant during weekday FCR using a data collection tool designed by the researchers. The tool assessed the hospitalist census, whether the nurse attended FCR for each patient, total time spent on rounds and time spent on each patient. The research assistant could also comment on any observations made during FCR.

Secondary outcomes were a) the relationship between nurse attendance on FCR and nurse-to-patient ratios and b) changes in team member perceptions toward FCR. The relationship between nurse attendance on FCR and nurse-to-patient ratio was assessed using data from the data collection tool and from daily nurse staffing grids which were provided by a charge nurse and were already being