Impact of TeamSTEPPS on an Academic Medical Center PICU and SICU

RTI International – UNC Health Care System, Research Triangle Park, NC

1. Aims

TeamSTEPPS™ (Team Strategies & Tools to Enhance Performance and Patient Safety) is an evidence-based curriculum developed by the Agency for Healthcare Research and Quality (AHRQ) and the Department of Defense (DoD) that is designed to improve patient outcomes by enhancing communication and teamwork skills among health care professionals. The aims of this study are: 1) To document the implementation of TeamSTEPPS in the Pediatric ICU (PICU) and SICU at the University of North Carolina at Chapel Hill (UNC Health Care System); 2) To evaluate the effect on changing team performance; and 3) To assess the impact on patient outcomes.

2. Measures

- **Previous Objectives**: PICU—http://PICU-based staff (physicians, nurses, respiratory therapists, nurse assistants, and health unit coordinators) will receive the TeamSTEPPS medical team training within six months of the PICU Master Trainer being trained. 2) Improved team leadership during team events. 3) TeamSTEPPS tools and strategies (e.g., checklists, call-outs, mutual support, situational monitoring) improved staff attitude about working in their units.
- **Clinical Outcome Objectives**: PICU—Within 6 months of implementation, decrease the average time in average for placing a patient on ECMO time between ECMO team arrival and ECMO team departure. 2) Within 6 months of implementation, decrease in average time for BRT events (time between BRT arrival and BRT departure). 3) PICU—Within one year of implementation, decrease nosocomial infections in units.

3. Sampling Scheme

Data collection included baseline and post-implementation, were structured interviews with staff (e.g., nurses, physicians, respiratory therapists, health unit coordinators), survey instruments administered by the external, and observation of 195 teamwork events, and collection of aggregate-level, de-identified clinical outcome data.

4. Results (continued)

- **Figure 2. Responses to HSOPSC Items about Teamwork within the Unit**
- **Figure 3. Responses to HSOPSC Items about Communication Openness**
- **Figure 4. Responses to HSOPSC Patient Safety Items**
- **Figure 5. Number of Infections per Month in the PICU Post- and Pre-Implementation**
- **Figure 6. Number of Infections per Month in the SICU Post- and Pre-Implementation**

5. Summary of Interview Findings

- **Factors negatively impacting team functioning**: inexperienced staff; aversion to errors; a chaotic environment (pertaining to Rapid Response Team events)
- **Factors influencing clarity of communication**: type of event; timing of event; what and how much is communicated to team members upon arrival; familiarity of team members with each other; leadership; communication style of team leader
- **Factors influencing trust**: individual experience with trauma; familiarity with team members and their skill sets; role clarity; good team communication; open conversation with families and staff; ability of team members to feel safe speaking up; mutual respect; considering all sides of a story
- **Factors influencing morale**: stress and crisis situations; trust and mutual respect; budget cuts; good/bad teamwork; perception of new initiatives as unwarranted change; bad outcomes following intervention attempts; budgetary pressures; patient safety; team activities that lighten the mood like going out to dinner together; being well-rested; Ways to improve the team experience: greater consistency; greater role clarity; adequate staff; good leadership; more education/training to practice techniques not encountered on a regular basis;METing more during team efforts to ensure that everyone staff understands the unit’s practice; better defined communication and delegation; more encouragement to speak up; decrease the number of people during events; easier identification of team members and their roles; consistent, formal debriefings; knowledge of which nurse and resident are on duty and who on the team will respond;

Contact Information

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