Organization: Saint Agnes Hospital, Baltimore, MD

Solution Title: A Multidisciplinary Approach to Code Blue and Patient Safety

Program/Project Description, including Goals:

Saint Agnes Hospital conducts a daily morning huddle to address and prevent potential or actual patient safety events. Issues were reported related to Code Blue events within the hospital. A multidisciplinary committee was established to review the Code Blue process and policy and address opportunities for improvement.

Concerns addressed centered around crowding, noise level, disorganization and possible role confusion; which could lead to significant delays during emergency situations and possibly poor patient outcomes. A review of the recent research about Code Blue responses in the acute care setting shows similar issues identified. Terms repeatedly used to describe the situations included “chaotic”, “stressful”, and “disorganized” (Hill, Dickter, and Van Daalen, 2010 and Carpico & Jenkins, 2011).

The committee members reviewed the specific concerns and identified the following needs in order to ensure code blue events are managed in an effective and controlled manner:

- Clarify roles among the Code Blue team and unit staff nurses
- Improve assertiveness and communication skills among the code blue team leaders
- Code cart reorganization and labeling
- Provide staff education on Emergency equipment that is infrequently used.

An interdisciplinary educational offering (using simulation) was developed that addressed the needs identified by the committee. The educational goals included:

1. Ensure patient safety
2. Evaluate technical competency among Code Blue team members.
3. Address opportunities to improve communication and collaboration skills
4. Educate staff on new changes (code cart reorganization, roles, etc.)

Process:

After a review of the literature to determine best practices, the multidisciplinary team revised the code blue policy, redesigned the code blue cart, and implemented various types of training (including high-fidelity simulation) for resident physicians, nurses, respiratory therapists, and patient care technicians.

Solutions Identified:

The committee sought to develop a streamlined process for Code Blue, with clarity of roles in order to ensure patient safety. The solutions included the following:

- Limiting number of responders
• Clarifying team roles
• Policy update to reflect changes based on items listed above
• Code Blue simulation exercises
• Code cart reorganization
• Emergency equipment education

**Measurable Outcomes:**

A comprehensive literature review conducted by Hill, Dickter, and Van Daalen (2010), shows a reduction in anxiety and stress, as well as improvement in confidence and skills during a real emergency situation for both nurses and physicians as a result of mock codes. Comments from evaluations from the code drills helped affirm the conclusion that these exercises are useful. Comments from participants following the simulation experience included, “[The simulation] helped me build up confidence and identify areas I can improve on,” and “With everyone getting this training, we can definitely improve our codes.” In addition to these evaluations, a Code Blue observation tool to will be developed to objectively monitor effectiveness of training in clinical areas.

**Sustainability:**

In order to assess the effectiveness of training, Code Blue committee members will continually monitor Code Blue events to evaluate the efficiency of the process. Data on Code Blue response will be continually collected to determine further needs for education.

**Role of Collaboration and Leadership:**

Administrative support is essential to facilitate multidisciplinary relationships, as effective communication between nurses and physicians is a well documented issue (Webbe-Janek, H., Lenzmeier, C., Lambden, M., Herrick, J. & Pliego, J., 2012). The multidisciplinary team included the Chief of Medicine, the Director of Critical Care, Department of Education and Research, resident physicians, nurses, and respiratory therapists. The process redesign and training were fully supported by the directors or chiefs of each department.

**Innovation:**

Multiple innovative approaches were developed during this process. Clear delineation of code team roles will alleviate confusion (Dorney, 2011). The specific role of the nurses and the team leader were defined in the policy. Infrequent use of the code cart leads to nurses running elsewhere for supplies stored in the code cart (Jankouskas, 2001). Code cart reorganization included removing extraneous equipment, and labeling the drawers in a C-B-A format.

A worksheet to help facilitate traffic control was created, and will be completed by the nursing supervisor when the code team arrives. The multidisciplinary approach is innovative and allows for nurses and physicians to practice together, and help to develop their communication skills. These innovations will hopefully improve our code blue processes.
Related Tools and Resources:
*Supervisor Attendance Worksheet*

**SUPERVISOR**

**Check List (Traffic Control)**

**CODE BLUE**

All participants identify themselves before entering room.

**Appropriate number of staff in room:**

- _____ Primary Nurse (RNI) responsible for care of patient
- _____ RNII
- _____ 2 Respiratory therapists
- _____ PCT (outside room)
- _____ Team Leader (MAO)
- _____ Intensivist
- _____ Critical Care Nurse
- _____ Security Officer (outside room)
- _____ Spiritual Care Representative (outside room)
- _____ 2 Medical Residents
- _____ 2 Medical Students
- _____ Surgical Resident
- _____ Anesthesiologist
References


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