

# STOP - Simulation Training for Operating room emergency Protocols

Karen Brady MSN, RN, CNOR, NPD-BC ❖ Ashley Oncay, MSN, RN, CNOR, NPD-BC  
ChristianaCare, Newark, Delaware



## BACKGROUND

Christiana Care is a system consisting of 49 operating room suites and 6 GI procedural rooms across three campuses in New Castle County, Delaware. Since 2007 on the first Wednesday in March, each department has held annual interdisciplinary mandatory fire drills coordinated with our fire safety department as a regulatory agency education requirement. Scenarios are utilized to simulate electrical burn fires, airway fires, and room evacuation.

## CLINICAL ISSUE

Upon review of literature and staff feedback, other low volume high risk patient care emergencies were identified: Code Blue, Malignant Hyperthermia, and Difficult Airway/Can't Ventilate, Can't Intubate. An interdisciplinary team met to discuss ways to implement simulation training for these additional patient care emergencies.

## OBJECTIVE

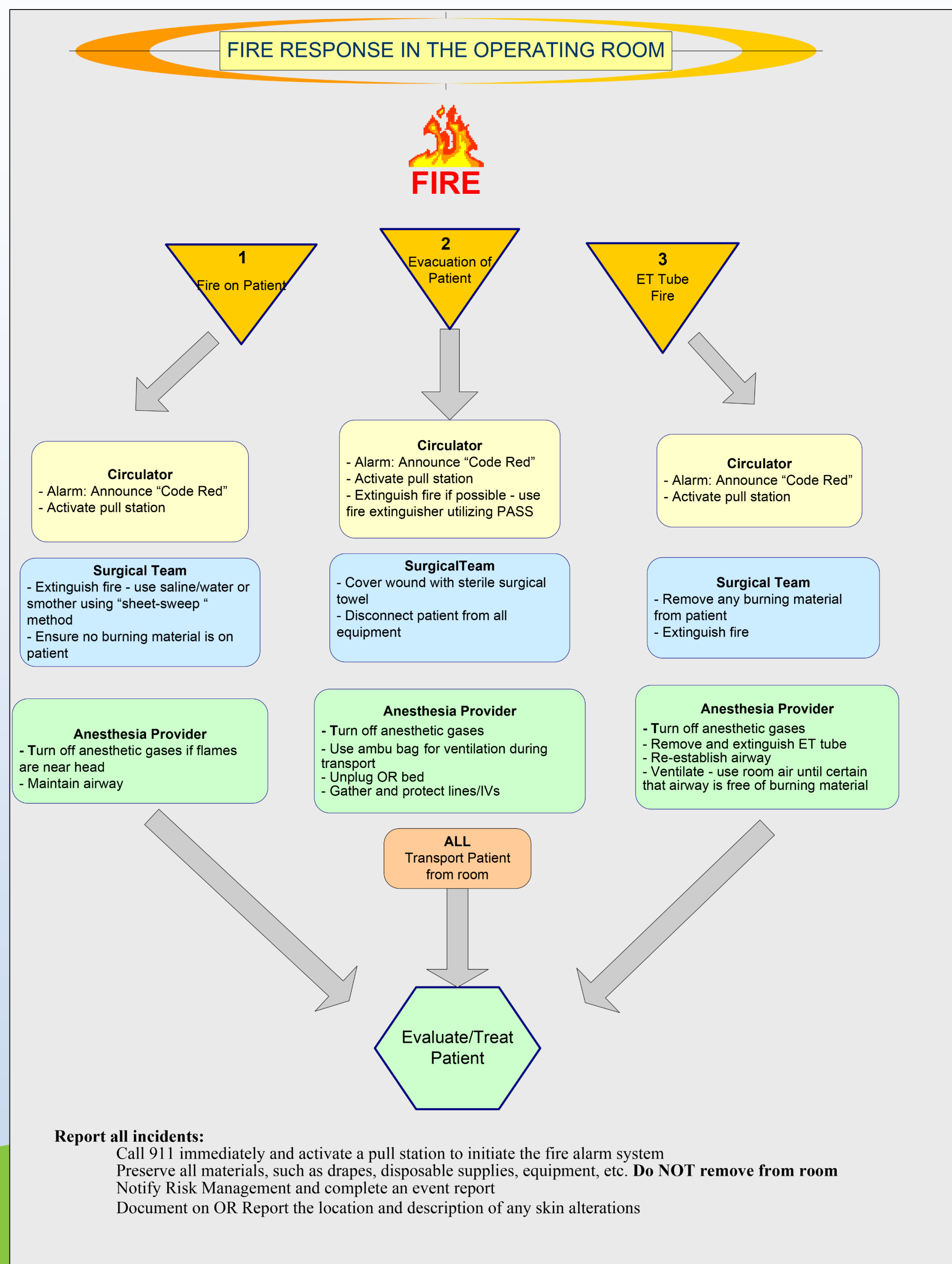
OR Team members will engage in simulation to enhance early recognition of patient emergency events, emergency activation response, team communication, and role delineations when patient emergencies occur in the OR/procedural room

## DESCRIPTION OF TEAM

- Nursing Professional Development Specialist for each surgical/procedural site
- Clinical educator for the anesthesia department

## PREPARATION AND PLANNING

The team met to discuss how to incorporate Code Blue drills, Malignant Hyperthermia drills and Difficult Airway drills into the annual education plan for the Operating Rooms and procedural areas on the Newark and Wilmington campuses. From the literature review, a TeamSTEEPS® approach was identified as an effective method to be used in the operating room setting to improve quality of care and patient safety. A plan was formulated to use the same methodology of simulation as was previously used during the Fire Drills. Malignant Hyperthermia drills would be held in January, Fire Drills in March, Difficult Airway drills in September and Code Blue drills in November. Participants would include Anesthesiologists, Certified Registered Nurse Anesthetists, Anesthesia technicians, Physician Assistants, Perfusionists, Operating Room (OR) RNs, Surgical Technologists, Procedural RNs, and OR Procedural Area Technicians for the GI lab, Outpatient Surgery Center and two Main OR sites on both campuses. Scenarios were developed by the clinical educator in the anesthesia department



## IMPLEMENTATION

Groups are kept at a maximum of 10 learners to encourage active participation and take place in the actual Operating Rooms/Procedural Rooms. The sessions begin with a description of the drill, review of related policies, review of roles and responsibilities for each discipline and briefing of events that occurred within the system over the past year. There are then several scenarios that the team is to work through with supporting questions to guide the experience. At the end, the facilitator debriefs with the group.

## OUTCOME

After holding these sessions, staff have reported self-satisfaction with comfort level regarding their role during an emergency, improved recognition of occurring events, activation of an emergency response, and improved team communication. In our most recent Malignant Hyperthermia drill evaluation, when asked what would most improve their practice, learners identified reconstitution and administration of Ryanodex and familiarity with emergency equipment/supplies. Other responses to evaluation of the simulation sessions include:

- "The drills are a good refresher for those of us that have been here a while and extremely helpful for the newer people who may be unfamiliar. I thought the information was clear, concise, and relevant to my job as a circulator/scrub/charge nurse."
- "As with all information, you can easily forget if you are not refreshed, so I think it's great that we do the MH/Difficult Airway/Code Blue drills so frequently because it really does help in information retention."

Identified limitations of the simulated experiences includes:

- variances in facilitators performance
- Surgeons unable to participate due to competing scheduling conflicts

## IMPLICATIONS FOR PERIOPERATIVE NURSING

Emergency events in the operating room can have significant detrimental effects on the patient's outcome. The simulation experience provides the multidisciplinary team an opportunity to practice and increase their confidence level in a safe setting before encountering a similar situation in direct patient care.

The system has recently acquired a facility in Cecil County, MD. There is a plan in place to include incorporating this training as annual staff education across all perioperative and procedural areas in the health system.

## REFERENCES

- Crimlisk, J. T., et al. (2017). Emergency airway response team simulation training: A nursing perspective. *Dimensions of Critical Care Nursing*, 36(5), 290-297.
- Lee, C., et al. (2019). The impact of hospital-based in situ simulation on nurses' recognition and intervention of patient deterioration. *Journal of Nursing Professional Development*, 35(1), 18-24.
- Marler, G. S., et al. (2020). Implementing cardiac surgical unit—Advanced Life Support through simulation-based learning. *Dimensions of Critical Care Nursing*, 39(4), 180-193
- Mariani, B., et al. (2019). Simulation for clinical preparedness in pediatric emergencies. *Journal of Nursing Professional Development*, 35(1), 6-11.
- Schaad, S. (2017). Simulation-based training: Malignant hyperthermia. *AORN Journal*, 106(2), 158-161.
- Zell, L., et al. (2019). Simulation prepares an interprofessional team to evacuate a 60-bed level 4 neonatal intensive care unit. *Journal of Perinatal & Neonatal Nursing*, 33(3), 253-259

