Creating Healthy Work Environments 2019

ABMC Fire Safety in the OR-2017

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Abstract

Despite staff having a general understanding of fire risk in the surgical environment, Aurora BayCare Medical Center (ABMC) experienced a fire in the OR (with injury to a patient) in 2016. Fires in the OR are considered never events, and are reportable as sentinel events by the Joint Commission and other accrediting bodies. Following this event, a gap analysis showed that further education and practice change were necessary. Using the Plan-Do-Study-Act quality improvement model, a comprehensive educational plan was developed and implemented. Education was provided using both active and passive teaching methods, to ensure that meaningful learning would take place and knowledge retention would occur (Costello, 2017). Staff education consisted of PowerPoint lecture, policy review with quiz, participation in 2 simulation scenarios and review of computer based online learning modules.

The gap analysis also identified a practice issue, as we were not assessing the fire risk associated with each individual case. Staff had the general opinion that all surgical cases were at risk for fire, but did not identify those specific cases which posed an increased risk for fire in the OR. It was identified that the Association of Perioperative Registered Nurses [AORN] (2017), recommendations the use of the Fire Risk Assessment Score (FRAS), to identify those cases that posed a greater risk for fire in the OR and required additional safety measures be taken. The AORN fire risk assessment tool was adopted and implemented for all OR cases, and required the staff to score the case based on set criteria, and communicate the score and necessary additional safety measures during the “time-out” process. Aurora BayCare Medical Center first adopted this process on paper, and then took this to the system surgical committee for implementation into the electronic health record, across all 18 system hospitals.

The first fire safety simulation that staff participated in focused on general fire safety, risk factors for fire in the OR, mitigating risks, recognizing and reacting to a fire in the OR, extinguishing the fire, gas shut off, and evacuation. Simulation was used to bridge the gap between obtaining knowledge, and implementing what was learned into practice (Wilcox, Miller-Cribbs, Kientz, Carlson, and DeShea, 2017). The second fire safety simulation focused on the components of the FRAS, calculating the score and integrating the score into the “time-out” process. Post simulation staff surveys indicated that 85.39% of staff felt that the simulations were extremely helpful, and provided them with useful information that would help to prevent future incidents of fire in the OR.

Post educational intervention audits were done to assure that staff members were calculating the FRAS, discussing the FRAS during the “time-out” process and documenting the FRAS in the electronic health record. Audits did show that the FRAS was implemented successfully.

Fire safety education is an ongoing investment that helps to keep or staff and patients safe. Recommendations were made to have staff participate in fire safety simulations and review policy and procedure annually, to prevent any further incidents of fire in the OR at ABMC.

Title:
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Education/simulation, Fire Risk Assessment Score and Fire Safety

References:

Association of Perioperative Registered Nurses. (2017). Fire safety tool kit: Instructions for use of the fire risk assessment tool. Retrieved from https://www.aorn.org/

Costello, M. (2017). The benefits of active learning: Applying Brunner's discovery theory to the classroom: Teaching clinical decision-making to senior nursing students. *Teaching and Learning in Nursing, 12*(3), 212-213. doi: 10.1016/j.teln.2017.02.005

Wilcox, J., Miller-Cribbs, J., Kientz, E., Carlson, J., & DeShea, L. (2017). Impact of simulation on student attitudes about interprofessional collaboration. *Clinical Simulation in Nursing, 13*(8). 390-397. doi: 10.1016/j.ecns.2017.04.004

Abstract Summary:
Fire in the OR is an ever present danger, in all surgical and procedural areas. After experiencing a fire in the OR in 2016 ABMC set forth on and educational journey, designed to prevent this event from repeating itself in the future.

Content Outline:
I. Introduction A. Increased incidences of fire in the OR B. Fire in the OR can result in significant injury C. Fire safety education is multifaceted II. Body A. Background 1. 2016 fire in the OR at Aurora BayCare Medical Center 2. Staff and provider education deficits B. Objectives 1. Identify and mitigate risk factors 2. General Fire Safety 3. "Fire Risk Assessment Score" 4. Identify additional knowledge deficits C. Quality Improvement Model 1. Plan, do, study, act (PDSA) D. Approach/Methods 1. Complete on-line learning module 2. Review PowerPoint presentation #1 3. Participate in "Fire Simulation #1" 4. Review PowerPoint presentation #2 5. Participate in "Fire Simulation #2" 6. Review policy and procedure and complete quiz E. Discussion 1. Fire Risk Assessment Score 2. Simulation for learning III. Conclusion A. Fire Safety B. Simulation C. Fire Risk Assessment Score D. Ongoing education IV. Outcomes A. Staff survey B. Implementation of the Fire Risk Assessment Score V. Recommendations A. Fire simulations B. Policy review C. Documentation in the electronic health record

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Professional Experience: 2013-present--Nurse Educator for Surgical Services Aurora BayCare Medical Center, Green Bay, WI Responsible for development and implementation of onboarding and ongoing education for perianesthesia, perioperative and postoperative staff. Trained simulation operator responsible for creating lesson plans, facilitating simulation labs and facilitation of debriefing sessions.
Author Summary: The presenter has over 20 years of pre-hospital and intra-hospital emergency experience, caring for critically ill and injured patients of all ages. She began her teaching career as an ACLS, PALS and BLS instructor, moving up to become the educator for surgical services at a level II trauma center. She has facilitated a center of excellence project, and has chaired the clinical education committee at her hospital. Please welcome Jennifer Lindner

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Professional Experience: Audrey has been trained as a simulation operator/facilitator and offers great insight to the staff simulation experiences. She is also fluent in debriefing for meaningful learning and facilitates the debriefing sessions.
Author Summary: Audrey graduated from the University of TN- Health Science Center in 2008 with her BSN. Audrey spent one year as a burn ICU nurse after graduating from nursing school, then in 2010 moved to cardiac services. Since 2010, Audrey has worked in various roles within cardiac services, Cath Lab RN, Cath Lab Travel RN, and Cardiology Supervisor. In 2017, Audrey started her current role as Surgical Services educator covering several specialty areas within Surgical Services.

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Professional Experience: Graduated from Bellin College of Nursing-Green Bay 1994. Neuro ICU nurse for 2 years at St. Vincent Hospital-Green Bay. Began as Surgical Circulating Nurse in 1997 and have continued ever since serving with Aurora Baycare Medical Center in various OR capacities such as Supervisor and Educator. CNOR certified since 2012
Author Summary: Greg has worked in the OR for over 21 years and brings a vast amount of knowledge to his educator role. He is a trained simulation operator and facilitates simulation and debriefing sessions