Multidisciplinary Airway Fire Simulation in The Perioperative Setting

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Abstract Background Information: Airway fires are a rare but possibly detrimental occurrence in the perioperative setting. In case of an airway fire, reactions need to be quick to prevent burns to the patient and protect staff as well. The simulation started in the OR and evacuated to the PACU to follow our hospital protocol. This simulation was built to allow staff to practice and improve rarely used skills making our perioperative environment a safer place. Since this is a high-risk low frequency occurrence, we practice for this scenario in hopes to never see it happen and improve our vigilance to prevent airway fires.

Objectives of Project: Practice skills and responses to a high-risk low frequency emergency with a multidisciplinary team to evaluate what went well and areas of improvement.

Process of Implementation: A pre-SIM lecture and case study was given by Dr. Rosenblatt and Tabea RN to educate on airway fires and why they can happen. Then 4 Simulations were run with Anesthesia, OR staff and PACU staff starting in the OR and evacuating the Patient to the PACU. A hospital Facilities Life Safety & Regulatory Coordinator was present to address questions in the debrief. The SIM had a pre and post questionnaire as well as a pre brief and debrief time. A high-Fidelity mannequin was used with a Simulation coordinator to make this as close to "real" as possible.

Statement of Successful Practice: Lerner's increased knowledge and skills related to teamwork, safety measures like using the fire risk assessment during sign in as well as having a plan for oxygen management for anesthesia during laser use, equipment checks, recognizing possible dangers and quick reactions in case of a fire. Fire plans for the area were reviewed for fire pulls, gas shut off and extinguishers. Closed loop communication was practiced, and workflows were improved.

Implications for Advancing the Practice of Perianesthesia Nursing: Simulations are important ways to practice skills in high-risk low volume scenarios. This multimodal airway fire teaching and simulation increases knowledge and safety in our daily workflow and environment, subsequently decreasing the risk of an airway fire and improving patient safety and outcome.