MedicalXpress

Pilot program improves staff confidence in dealing with airway emergencies

July 23 2018

A patient safety team has restructured their protocols for treating airway failure in such a way that the change has measurably improved staff confidence to handle airway emergencies and can serve as a model for other health systems. These changes came when the team at Hackensack (N.J.) Meridian Health encountered a serious safety event last year when a breathing tube failed and a patient required an emergency operation. About 10 percent of the life-threatening events that occur in hospitals involve problems with keeping patients' breathing airway functional, the researchers explained.

The pilot program included simulation lab- and classroom-based staff training with Richard Levitan, MD, an internationally recognized critical care specialist. The institution's patient safety team also developed tools for collecting data and a protocol for treating airway problems, along with customized crash carts equipped to specifically manage airways. The findings were presented by Lisa Failace, RN, BSN, CCRN-K, performance improvement adviser at Hackensack Meridian Health, at the American College of Surgeons Quality and Safety Conference in Orlando, Fla. Hackensack Meridian Health is a 775-bed tertiary care teaching hospital with a Level II trauma center. The airway management pilot program was conducted in the 14-bed surgical intensive care unit.

"A process including expert education and the development of an airway cart ensuring all components of airway management are readily available, combined with a process where each team member is aware of their role, has significantly improved confidence in our providers and

staff to manage a patient in respiratory distress," Ms. Failace said.

To measure the impact the effort has on staff confidence, the patient safety team administered a survey after the training. Using a scale of 1 to 5, all participants said they felt more confident managing a patient in respiratory failure while 41.67 percent said they felt "very confident."

The training involved education for physicians, advanced practice providers, and residents with the world-renowned airways expert. Registered nursing staff was also given a specific course focused on recognition and management of respiratory distress, Ms. Failace said.

The data collection tools now include a way of capturing response times, the specific roles present team members performed, when the crash cart is summoned, what items in the cart were used, and a method for gathering feedback on each patient encounter. The protocol, or algorithm, went through several revisions before a final version was established. "The purpose of the algorithm was to create a process for the team to understand their role and to anticipate what would happen next, similar to the process where all team members understand their role and are able to anticipate the next step during a cardiac arrest using advanced cardiopulmonary life support," Ms. Failace explained.

The airway-specific crash cart is similar to any code blue crash cart, but has some modifications for airway treatment. Each drawer is color-coded to align with the color of distress in the algorithm. For example, green is for basic items such as nasal tubes, and progresses to red for advanced breathing emergencies with items such as breathing tubes for the esophagus and surgical repair of airways. "We made several changes along the way with adding items like the bronchoscope"—a scope with a camera on the end that's inserted into the breathing airway—"and some basic supplies the staff identified as being helpful to have in the cart," Ms. Failace said.

Provided by American College of Surgeons