Quality Improvement Activity: Error and Time Delay in Pediatric Trauma Resuscitation

A 6-year-old boy was seen in the pediatric emergency department for shortness of breath and wheezing with a known history of asthma. The emergency department nurse called to give report to the pediatric intensive care unit nurse. During report the emergency department nurse gave a full history and updated vital signs of: BP 110/64, HR 100, RR 30, O2 96%, and temperature 99.2. He was admitted to the pediatric intensive care unit for continuous albuterol treatment and observation. When the patient was transferred to the unit his nurse was in the room with another patient, so a fellow nurse helped the patient settle in. When his assigned nurse was done with her other patient, she completed an admission assessment on the patient. After completing her admission assessment, the nurse went to the nurse's station to catch up on charting. While at the nurse's station, the nurse was distracted by peers when the code blue alarm began to sound. All of the nurse's jumped up and began running toward the patient's room as another nurse ran for the crash cart. The first nurse to walk in the room began compressions as the rest of the nurses filled in where help was needed. The code leader quickly noticed the airway nurse frantically looking for the bag mask. There was not one in the room, so the code leader instructed an aid to quickly find one. Compressions where continued and the patient was being hooked up to the AED when the medication nurse realized they also did not have the necessary equipment in the crash cart. When the aid returned with the bag mask, she was sent to retrieve the rest of the equipment missing from the crash cart. After all of the equipment was located and in the patient's room, they ran a successful standard code.

Describe the scenario. In what way did the patient care or environment lack? Is this a common occurrence?

In the scenario above the patient did not receive quality resuscitation in a timely matter due to the lack of equipment available. Knowing that the patient had a history of asthma, it should be known that the priority for this patient is airway. The first mistake was the nurse not ensuring that the patient had both suction and a mask in the room. Because this was not checked, they would have to send someone to find both things. The second mistake was the charge nurse not making sure the necessary equipment was in the crash cart at the beginning of her shift. This would also cause the need to have someone leaving the room to find the necessary equipment.

What circumstances led to the occurrence?

Prior to the scenario, there are many things that should have been completed that were missed by multiple staff members. The main reason for this delay was not having access to the necessary equipment. There are many circumstances that can lead to this occurrence. One reason is the crash carts themselves are not in an easily accessible location or the location is not known by everyone. Also pertaining to the crash cart, during a code there are many different pieces of equipment needed and if those are not easily accessible or available, it causes more of a delay. During each shift, the charge nurse is responsible for making sure the crash cart is fully stocked and all of the equipment is working properly. Outside of the crash cart, there are pieces of equipment that are required at the bedside of every patient such as suction and a mask. During

each shift, the nurses are responsible for making sure these things are in every patient's room at the beginning of the shift. If these are not at the bedside and nurses are having to hunt for them, this also causes a delay in the necessary steps of a code.

In what way could you measure the frequency of the occurrence?

When it comes to resuscitation in pediatric patients, or any patients, there is no time for things to go wrong. It is imperative that the necessary equipment is prepared and ready at all times in order to protect our patients and provide quality care. When it comes to measuring the frequency of time delays in resuscitation, the best thing for hospitals to implement is debriefing and continuous education on what is needed in a patient's room at all times and why.

What evidence-based ideas do you have for implementing interventions to address the problem?

In order to prevent time delays in resuscitation, all staff needs to understand the importance of the equipment and how it is properly used. Hospitals could implement mandatory meetings for all staff regarding a code, the contents of a crash cart, and where the crash cart is located. Because every staff member should know where the crash cart is located, there can be random checks for each employee regarding if they know where the crash cart is located. Although it has already been implemented, charge nurses need to make sure they are using a checklist to verify that all equipment is available and working at the beginning of each shift. A double check by another staff member on this task should also be considered. After a code is run the charge nurse also needs to make sure all of the equipment used on the crash cart is restocked and working.

How will you measure the efficacy of the interventions?

As stated previously the main way to measure the efficacy of these interventions would be to continue debriefing after each code. Another possible solution could be to have an extra person for each code just observing and making sure all of the equipment is available and properly used, while also documenting each piece of equipment used. When it comes to the suction and masks that should be in each patient's room, there can be a daily chart filled out showing the completeness of this task for each patient room that is kept in a common area of the unit. These things combined will help pediatric units stay ahead of time delays and track their progress in preventing time delays.