Quality Improvement Assignment: Error and time delay in pediatric trauma resuscitation

A two-year-old female patient was waiting to be admitted to the Pediatric Unit from the Pediatric Emergency Department due to respiratory distress. Upon report, the oncoming E.D nurse was notified that the patient had been waiting for a room for six hours and is maintaining an oxygen saturation measurement of 96% and above on 2 L nasal canula. Since the patient was stable on the monitor, the oncoming day shift nurse refused to go visit the patient with the night nurse before they left for the evening. Once the nurse set up their charting system for the day, they went to round on patients. Since the two-year-old was last known to be stable and was waiting to be admitted the assigned nurse made the decision to have them been seen last out of three patients. The assessments and time to complete needed orders for the first two patients took a total of one hour and 30 minutes. As the assigned nurse was walking out of one of the patient's room, the mother of the two-year-old was calling the nursing station requesting assistance. The nurse headed to the room immediately to check on the patient. During the assessment, the mother expressed her worries about her daughter and stated her oxygen level had been dropping into the low 80's for the past few minutes but would jump back into the low 90's. As the nurse was in the room, the patient dropped into the low 80's once again but it continued to drop into the 70's and the patient stopped breathing and went into cardiac arrest. The assigned nurse immediately took action and triggered the code blue response button. The nurse ran out of the room in a panic yelling for help and started to cry since they had never experienced a code on one of their patients before. Other nurses on the unit and the assigned nurse rushed into the room with the crash cart and began yelling at each other. One of the nurses started looking for mask to perform resuscitation breaths on the patient but was not able to locate the correct size needed on the cart and rushed to the central supply room but could not find it there either. The nurse rushed back into the room in panic yelling that the mask was not located, so another nurse decided to start compressions on the patient. After two rounds of compressions, a pulse was felt on the patient and her stats began to rise again. Once the patient was stable enough for transport, she was rushed to the PICU for observation. The patient was diagnosed with a mild hypoxic brain injury since the unorganized code caused them to go to long without oxygen. The patient was no longer at their normal baseline and lost the ability to walk, control bladder/ bowel movement, and had increased irritability.

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

The shift started with lack of patient care since the oncoming nurse refused to go see the patient and relied on technology to justify if the patient was hemodynamically stable. It was a few hours before the nurse went into the patient's room to properly assess them and that was also after the patient's mother had to call. During the code, there was a lack of organization which interfered with patient care. None of the nurses took charge and it caused a panic in the room along with the patient's mother witnessing the entire event. The crash cart also did not contain all of the needed supplies and this caused further delay in care which caused damage to the patient. I do believe it is not a common occurrence for codes to be unorganized and for the crash cart to lack equipment since those are checked every shift.

What circumstances led to the occurrence?

After further evaluation of the event, the day shift charge nurse had incoming patient cases at the start of their shift and was too busy to do the crash cart check off in time. The code on the patient happened less than two hours into the shift and was not expected. If the crash cart was check in time, the charge nurse would have seen that it was not properly stocked with masks and could have placed masks onto the cart. The nurse also did not assess the patient in a timely manner and over the amount of time not being assessed, the patient was overworking with their breathing and overexerted themselves causing them to collapse.

In what way could you measure the frequency of the occurrence? (interviewing nurses, examining charts, patient surveys, observation, etc)

Emergency resuscitation events require lots of documentation during a code such as time of event, amount of time patient was unresponsive, drugs given, amount of times compressions/ breaths given, etc. Ways to measure the frequency of events would be to examine the documentation of each code to know what interventions were not performed and most importantly how long was the patient in arrest.

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

The problems of the event are lack of patient care in a timely manner, crash cart not being appropriately stocked, and the code not being organized. Interventions for patient care would be to have in room patient hand off so the oncoming nurse with need to enter the patient's room and set eyes of each patient. Interventions for the crash cart would be to have the charge nurse not only assess the cart at the beginning of each shift but also at the end of each shift since so much can occur within a 12 hour shift. Interventions for the unorganized code would be to schedule an mandatory event at different times of the month, that provides emergency code scenarios, allowing nurses to have hands on experience with codes.

How will you measure the efficacy of the interventions?

Ideas on how measure the efficacy of each intervention would be ran through each nurse manager of each unit. The crash carts would have charts on them to have the charge nurse initial, date, time when the cart was checked twice within each shift and once each chart is complete, the nurse manager will sign off on it. Another measurement would be to provide surveys to nurses who have completely the scenario, allowing them to provide whether the scenario was helpful for possible codes. For patient improvement, patients will be provided a check list as part of the discharge paperwork and address whether the nurses giving report in the room gave them more reassurance in their care.