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Instructional Module 8

Quality Improvement Activity: Children's Early Warning Score (CHEWS)

A 2-year-old was transferred to the Pediatric floor from the Pediatric Intensive Care Unit with pneumonia and pleural effusion. Four days before being admitted to the PICU, the patient had a decreased appetite and an increase in cough, fussiness, and fever. The patient's max temperature spiked to 105 degrees Fahrenheit when her mother decided to bring her into the Emergency Department. A chest x-ray showed a right lung "white out" and was then taken to the Operation Room to surgically place a 10 french pigtail chest tube on the lateral side of the chest. The patient was then placed on a dry suction water seal chest drainage system. Once transferred to the pediatric floor, the nursing student noticed that the nurse didn't look concerned during the report and that the patient wasn't a priority since they had a more critical patient to care for. The nursing student took a look at the patient's drainage system and noticed a dark red drainage that was filled to the 1,850 mark in the chambers. The nurse then asked for a different registered nurse to change out the drainage system and that she would come back once she finished administering treatment to the other patients. Once the drainage system was changed, the nursing student took the patient's vitals and noticed that the patient was hot to the touch. Listening to the parent's complaints stating that "they aren't acting like they usually do" the student got a reading of 103.5 degrees Fahrenheit, respirations of 55, heart rate of 144, systolic blood pressure greater than 126, and O2 saturation of 89 on 2 liters of oxygen via NC. The nursing student knew that CHEWS documentation needed to be done every four hours after vital signs and decided to do it since they took the first set of vitals on the pediatric floor. Based on the patient's vital signs the student got a total score of 6. The nursing student then went to pass this information to the nurse and the nurse went in to do a second assessment of vital signs and determine their own score to compare to the student's. The nurse received a score of 8 and determined that the patient was beginning to deteriorate. After administering a dose of Tylenol to help control the patient's temperature, the nurse collected a STAT CBC order to determine the patient's WBC count. When the results came back the patient's WBC of 30,000/mm3 which surprised the nurse because the patient has been hospitalized for 4 days and had received numerous antibiotic medications to treat their infection. Once the results have been read the nurse passed the results onto the provider who then ordered a fluid bolus and the patient be transferred back to the PICU that way she could be cared for by a nurse that has more time to spend with that patient.

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

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In the scenario above, the patient was transferred to a step-down unit from the intensive care unit. Prior to hospitalization, the mother knew that the child was sick with some form of respiratory infection, however, she didn't expect that the patient would develop pneumonia and atelectasis. The patient was transferred and the nurse didn't seem to concern since she assumed that the patient was very stable since she came from the PICU. Though she did do her transfer documentation she believed that the student would be able to document the vital signs of the patient and be able to care for them until she finished caring for her other patients that were more "unstable". The student listened to the parent's concerns since they know the patient better than them and decided to do further investigating by first taking the patient's vital signs. Once realizing that the patient's vital signs were not in the normal range, they decided to compare their results with the system's CHEWS score which is routinely done every four hours after vital signs are taken. The score the student received was concerning for them and decided that it was important for the nurse to know this information in order to prevent the patient from further deterioration. After hearing the student nurse's concerns the registered nurse began to pay more attention to the patient's signs and symptoms and decided to recommend that the patient be transferred back to the PICU in order to receive better and more focused care on the patient. In this scenario, I believe that is a common occurrence because many times intensive care units want patients to go a step down because they aren't are critical as they once were when they initially came in. This can leave the patient in a dangerous situation because the patient is taken to a floor where nurses have 4 to 5 other patients that have many needs, procedures, and interventions that have to be divided unequally amongst all of them. This ultimately causes their signs and symptoms to be overlooked or simply ignored which causes the patient to easily slip into a deteriorating state. Though some nurses do their due diligence to care for their new transfer patients, it becomes extremely difficult when 3 other patients are receiving chemotherapy and receiving new treatments that can cause them to go into a deadly anaphylactic shock.

What circumstances led to the occurrence?

The intensive care unit wants to "push out" an unstable patient that they deem as "stable" because they're no longer sating at 83% on 4 L on a non-rebreather, and can now maintain an O2 sat of 89% on 2 L on an NC.

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

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I believe that the best way we could measure the frequency of occurrence is by examining the patient's charts and observing how nurses base their practice on the results of their vital signs and the score they get from each patient's CHEWs score. This would allow us to see how nurses will apply the nursing process based on a high score and determine whether or not the CHEWs score is helpful in allowing nurses to prioritize each patient.

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

I believe that an evidence-based idea that I have to implement to address the problem is to have nurses chart CHEWs scores every hour, especially if patients are being transferred from an intensive care unit like the patient previously described. This would allow nurses to be able to identify early warning signs faster than if they were to wait every four hours for a new set of vitals. This also means that the nurse would have to get a patient's vital signs every hour and that would require them to delegate a nurse aid or tech to do hourly vital signs. This would allow nurses to still provide care to other patients and be able to calculate a CHEWs score every hour and prevent further deterioration.

How will you measure the efficacy of the interventions?

Measuring the efficacy of the interventions can be accomplished by having charts on every floor and room that can be marked with an expo marker that can keep track of each patient's CHEWs score. This can give everyone a visual of what other floors have written down and allow for other floors that are receiving transfers to see a trend. Allowing step-down units to be able to refer back to the patient's baseline in highly acute floors and determine whether the patient needs to be sent back to be given one-on-one care. This ultimately allows for each unit to reflect on the clients progression or deterioration and work as a team to prevent pediatric patients being in a serious or deadly situation