

Quality Improvement Activity: Tube Feeding Safety Protocol

A newborn that was born at 31 weeks gestation was admitted into the NICU for being premature. The provider ordered a feeding of 18 mL q 3 hour by gavage through the patient's NG tube. On this day, the nurse had three other newborns to care for and was rushing through the care times for each baby in attempt to finish the cares in a timely manner. When caring for this patient, the nurse noticed that the newborn had pulled the NG tube out. Because she was an experienced nurse and in a hurry to get all of her cares done, the nurse quickly reinserted the feeding tube, did not check the placement, and started the gavage feeding. While providing care for another patient, the nurse heard the patient's alarms going off and looked up to find the patient was aspirating and desaturating very quickly. She then ran to discontinue the feeding and began resuscitation efforts. Luckily, the newborn became more stable but required a higher level of care for days after the incident.

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

In this scenario, the nurse was assigned more patients than she could safely provide care for. As a result of this, the nurse was not able to perform a routine procedure safely, which severely affected the patient. In the NICU, as well as every other floor in the hospital, nurses often are assigned the maximum number of patients allowed. Although the number of patients is within the guidelines, nurses are not able to provide the most effective care for each patient due to trying to get everything done in a timely manner. As a result of this, simple procedures that are performed every day become dangerous and errors become a common occurrence.

What circumstances led to the occurrence?

The main circumstance that led to this occurrence was that the nurse did not verify the placement of NG tube after reinsertion. Because she was an experienced nurse and had placed numerous NG tubes, she skipped a vital step in this procedure in order to hurry and care for her other patients. If the nurse had taken two extra minutes, she could've checked the placement of the tube by attaching a syringe and either aspirating for stomach content or inserting 3 mL of air into the newborn's stomach and listening for the air with a stethoscope. She did not take the extra two minutes to verify the placement and the patient suffered.

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

To measure the frequency of occurrences as such, examining charts and observing the nurses would be effective. When examining the charts, the examiner should check if the nurse charted the procedure and which placement verification method the nurse used. In doing so, the examiner will be able to determine if the nurse verified the placement of the feeding tube. When observing the nurses perform procedures, the observer should watch the nurses place every feeding tube to ensure that they are verifying that the tube was placed in the stomach rather than down the patient's trachea.

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

There are many evidence-based practices that can be used to verify placements of feeding tubes. Starting with the least cost-effective method, once the tube is placed into the stomach, the nurse can attach a syringe and aspirate for stomach contents. The nurse could also place a stethoscope on the patient's stomach and inject 3 mL of air into the patient's feeding tube and listen for the air in the stomach. Although these methods are efficient, an X-ray should also be ordered to ensure the tube is in the correct place. Although very costly, the golden standard for verifying placement is aspirating stomach contents and placing them on a pH strip to test for acidity.

How will you measure the efficacy of the interventions?

To measure the efficacy of these interventions, it is important to observe the patients during feedings after the feeding tubes have been placed. While observing the patients during their feedings, the nurses should monitor for any signs of aspiration or desaturation. If each intervention is being done during every procedure, the risk for aspiration for each patient is drastically decreased.