



Healthcare Organization Commitment

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Position

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Commitment Details

Commitment Name

APSS #15: NG Tube Placement and Verification

What Patient Safety Challenge does your Commitment address?

Challenge 15 - Nasogastric tube (NGT) placement and verification

Commitment Start Date

01/07/2017

How Many Hospitals Will This Commitment Represent

Commitment Summary

A nasogastric or NG tube is a plastic tubing device that allows delivery of nutrition directly into the stomach (feeding), or removal of stomach contents (drainage). It is typically passed via the nose and oropharynx into the upper gastrointestinal (GI) tract. Occasionally, these tubes can be malpositioned, leading to significant harm and even death. The most common serious misposition is into the lungs. The National Health Service Improvement (NHSI) in the United Kingdom has placed this type of incident on their "Never Events" list; Never Events are "errors in medical care that are identifiable, preventable, and serious in their consequences for patients, and that indicate a real problem in the safety and credibility of a health care facility" (National Quality Forum).

Commitment Description & Detail

Nasogastric tubes (NGTs) are a commonly used intervention in clinical practice for GI tract decompression or for administration of enteral nutrition, fluids and medications. Misplacement of NGTs can lead to significant morbidity and even death. CHOC Children's, as a tertiary-quaternary regional children's referral center, supports the care of thousands of fragile children with both acute and chronic, often complex conditions. In many cases, such children are unable to feed orally on their own, yet their gastrointestinal systems are otherwise functional and can receive the optimal form of nutrition. An NGT is thus a frequent adjunct to the acute and occasionally sub-acute care of such children, and when correctly used, can be of great benefit to recovery, growth and outcome. Because of frequent small size, cardiopulmonary, and/or gastrointestinal diseases or conditions, auscultation alone cannot reliably be utilized to confirm NGT placement in these patients. CHOC has a policy in place to ensure all patients requiring a nasogastric tube are safe throughout the organization. This includes radiographic evidence of NGT location at the time of placement.

Action Plan

- Use only NGTs that are radio-opaque throughout their length with external centimeter length markings to be used to detect post-insertion tube movement.
- Ensure that all staff who place NGTs are specifically trained in this procedure
- Accurately measure the length of the NGT prior to insertion using the NEMU method (Nose-Earlobe-Mid-Umbilicus)
- Confirm NG tube placement with a radiograph per our policy.
- Ensure all staff who read radiographs are specifically trained in reading the radiograph using the following four criteria:
 - Does the tube path follow the esophagus and avoid contours of the bronchi?
 - Does the tube clearly bisect the carina or the bronchi?
 - Does the tube cross the diaphragm in the midline?
 - Is the tip clearly visible below the left hemi-diaphragm?
- Document the confirmation of NG tube in the EMR as well as the method of confirmation .
- Secure tubes to the patient after confirmation in such a way that the depth mark is visible at the naris.
- Document this mark in the medical record and used as a point of reference for other caregivers to gauge movement of the tube.
- Observe for signs of respiratory distress or

gagging/vomiting and remove tube if these signs are present as NG tube may have been dislodged into the airway or lungs. • Develop a mandatory reporting system to track nasogastric feeding tube misplacements as a percentage of all tubes placed.

Commitment Timeline

At CHOC Children's, these checklists items are currently in place. Our commitment to perfect safety in this area is ongoing, and updates to this PSMF APSS will be made annually.