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A Multidisciplinary Approach to Reduce Complications from Blind Small Bore Feeding Tube (SBFT) Insertion

> Teresa Jahn APRN, Jenelle Brekken BSN, Jennifer Burris APRN, Peggy Lange RRT, Mallory Mondloch BS, Liz Plante BSN, Mithun Suresh MD

> > Do



Plan

Between 2019 and 2021, six lung perforations related to blind placement of SBFTs.

A multidisciplinary team reviewed current methods of placing SBFTs and the feasibility of each:

- > Fluoroscopy
- > 2 step x-ray
- Capnography
- Electromagnetic visualization

Capnography was selected as a safe and costeffective way to attempt to identify insertion location in real time.

- Four team members were selected and trained to insert SBFT using capnography.
- Each placement attempt and outcome of placement was tracked.
 - > Outcomes were identified as successful or unsuccessful
 - > Any adverse events were to be tracked

Team Members

Teresa Jahn APRN CCNS CCRN Jenelle Brekken BSN, CNRN, CCRN Jennifer Burris APRN, CNS Peggy Lange BA, RRT Mallory Mondloch BS, PHN, CMSRN, CNN Liz Plante BSN, CNRN, SCRN, PCCN Mithun Suresh MD

Steps for Capnography Assisted Placement

- > If patient is intubated, consult RT to ensure cuff pressure is optimal
- Attach capnography tubing to the SBFT
- > Insert SBFT to 30 cm, pause for 1 minute, if no CO_2 is not detected and patient shows no other signs of intolerance, continue to pass per current practice
- Obtain abdominal x-ray to confirm placement



Normal Capnography Waveform Normal range is 35-45 mmHg Height = total CO₂

Study

Pre Data

▶ Between 2019 and 2021 six lung perforations requiring chest tube placement were reported

Post Data

- December 2021-April 2022
- > N = 35 patients
- > 1 unsuccessful and required fluoroscopy
- > 5 patients were intubated
- ZERO lung perforations



Next Steps

Act

- All SBFTs placed at bedside will utilize capnography
- > Charge nurses on units who place the most SBFTs will be educated on placement technique
- > Trained team will continue to insert SBFT on units identified with lower insertion rates
- Standardized competency will be developed
- EMR documentation enhanced to identify tube type for future report development
- > Team will continue to track placement to identify # of SBFTs being placed, complications and unsuccessful placement requiring fluoroscopy

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Length = time/rate