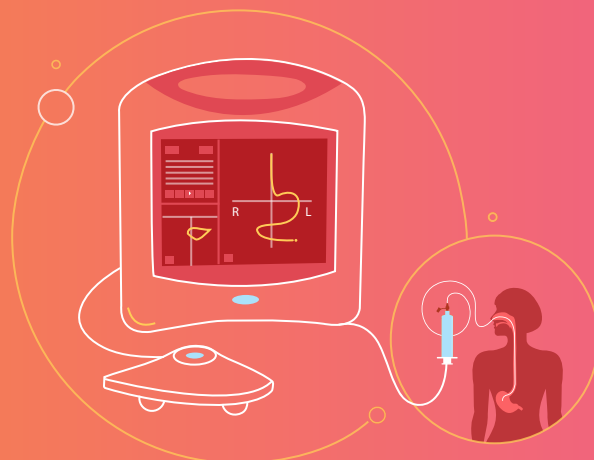


SPECIFIC CHALLENGES OF TUBE PLACEMENT CONFIRMATION TECHNIQUES: X-RAY



Misplacement of nasoenteric tubes is relatively common and can result in significant complications.¹

- Several studies prove that such misplacements are underreported¹

Pulmonary complications of nasoenteric tube insertion and misplacement

<ul style="list-style-type: none"> • Pneumothorax¹ • Hydrothorax¹ • Pleural effusions¹ 	<ul style="list-style-type: none"> • Aspiration pneumonia¹ • Atelectasis¹ 	<ul style="list-style-type: none"> • Bronchopleural fistula¹ • Trachea or pleural parenchyma perforation¹ • Mediastinitis¹ 	<ul style="list-style-type: none"> • Vocal cord injury¹
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Did you know ?

In the 1930s, placement of the nasogastric tube into the airway was considered rare, as severe respiratory distress would make incorrect positioning obvious.² However, now we know that asphyxiating reaction during misplacement is a myth, and a patient can be asymptomatic for several hours or even after multiple feedings.²

Such misplacements can be recognized and avoided using tube placement confirmation techniques.³

The use of radiographs (X-ray) is the current gold standard for the verification of nasoenteric tube placement. However, this technique comes with its own disadvantages.³

Challenges of using x-ray confirmation for feeding tube placement

- Uncertainty over accurate and consistent interpretation and reporting of tube location by radiologists and non-radiologists.³
- Delay in feeding due to time taken for patient migration to the radiology department, x-ray production, interpretation, and reporting.^{1,3}
- Radiographs are only accurate at the time they are taken. Coughing, retching, or vomiting may move tube from initial placement.¹
- Repeated exposure to x-ray carries a small, but inherent carcinogenic risk.¹
- Radiological confirmation is expensive, time-consuming, and inconvenient for patients.⁴

Placement and verification of feeding tube tip position should be developed as a clinical standard of care.³

Electromagnetic technology allows for timely identification of potential malposition in 'real time' instead of X-ray use. Real-time identification of tube misplacement shall help minimize morbidity and even mortality related to feeding tube placement.³

Benefits of using electromagnetic (EM)-guided placement technique for feeding tube placement

<ul style="list-style-type: none"> • Visual tracking of the tube pathway³ • Helps avoid lung placement and complications³ 	<ul style="list-style-type: none"> • Placement at bedside enabling expedited placement³ • Nurses or dietitians can be trained to use the technique³
<ul style="list-style-type: none"> • Better accuracy compared to X-ray³ 	<ul style="list-style-type: none"> • Decreased radiation exposure³
<ul style="list-style-type: none"> • Cost savings associated with reduced X-ray usage^{3,5,6} 	

Reduced time to feed⁶

Feeding tube insertion using EM-guided placement technique requires focused training until confirmation of necessary skills.⁶

Our Solution

Feed patients faster, so they recover faster.⁷

An electromagnetic stylet provides real-time location information on the tube tip placement within a patient's anatomy.⁷

On-screen visualization provides immediate feedback on tube placement.⁷



Efficient placement⁷

- Visualization at bedside
- Direct tubes to desired feeding placement with real-time feedback
- Immediately identify misplaced tubes
- Minimize complications, such as lung placements

Timely feeding⁷

- Can significantly reduce time-to-feed
- More efficient than blind placements with X-ray confirmation

Reduced burden⁷

- Address feeding needs more quickly
- Can improve patient outcomes
- Save time and resources

Allows clinicians to confidently place tubes in an optimal feeding position, quickly confirm location, and reduce the time to nutrition delivery.⁷

Institution protocols must always supersede the use of the CORTRAK*2. Clinical judgment must always take precedence.⁸

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