Verification of Gastric Tube Placement: Identifying New Practice When the Evidence is Inconclusive.

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**Verification of Gastric Tube Placement: Identifying New Practice When The Evidence is Inconclusive**

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| Gastric tubes are primarily inserted for two reasons: decompression and/or feeding and medication administration. | **X-Ray**: is considered the gold standard for initial confirmation of placement of gastric tubes. It is not, however, feasible for ongoing placement verification.  
**Auscultation of air injection**: Even though this method is still used at many institutions, it is considered unreliable and may result in patient harm  
**pH testing of aspirate**: It is considered most reliable for use with initial insertion and for patients receiving intermittent infusion of tube feeding. Results may be skewed with concurrent use of continuous tube feedings, PPI's and H20 blockers.  
**Assessment of aspirate characteristics**: Color and consistency of aspirates vary and are not considered reliable.  
**Measurement of distal length of tube**: Easy to use and may indicate if tube has shifted. It does not indicate the location of the tip of the tube and should never be used as sole means of determining placement  
**Capnometry/Capnometry**: Detection of CO2 has yielded variable results. May require additional equipment. Colorithmic capnometry will add significant cost if used for ongoing verification of tube placement.  
**Bilirubin/Enzyme Testing**: Used in combination with pH testing—a pH >5 and a bilirubin level less than 5mg/dL typically indicates pulmonary placement. Requires laboratory testing which will add to cost. | While pH testing offers a reliable alternative, the results may differ depending on certain patient conditions  
Recent publications call in to question the reliability of current pH testing products  
While x-ray is considered most reliable it is not possible to use this method each time a placement check is required |

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- Adult patients with gastric tubes  
- Most reliable method of assessing placement (audible air injection, x-ray confirmation, gastric pH, aspirate characteristics, capnography, securement method/distal length of tube)  
- Unreliable/dangerous methods  
- For the best, least harmful outcomes based on evidence  
- The purpose of this project is to identify reliable alternatives to traditional practices to verify both initial placement of a gastric tube ongoing placement verification. | 1. AACN Practice Alert: Verification of Feeding Tube Placement in Adults Critical Care Nurse VOL32 No 2 April 2016  

**Recommendations/Conclusion**

- CXR should be standard for initial verification of all blindly placed small and large bore gastric tubes  
- Ongoing verification of placement will require more than one method of verification depending on the clinical situation  
- pH testing is a POC test and will require initial and annual validation of staff.