NG Tube Placement Methods: An EBP Review

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Research has shown confirmation of nasogastric (NG) tube by pH is the most reliable method to use at the bedside. X-ray verification is the “gold standard” if pH method alone is insufficient (e.g., pH > 5.5). The auscultatory method was found to be unreliable and outdated practice.

**Background**
- Placement of NG tubes is a common nursing responsibility
- There are currently 3 common methods for verification of correct NG tube placement: pH testing of aspirate, X-ray, auscultatory.

**Purpose & Aims**
- Current research on this topic aims to determine which method of verification is superior and should be implemented into nursing practice.
- As healthcare providers, our patients’ health and best interests are always the top priority. Therefore, determining the most accurate method to verify placement is a matter of great importance to the nursing profession.

**Sample**
- Study 1: 44 adult (18+) patients with NG tubes
- Study 2: 276 children (24 weeks gestation-17 years of age) with NG tubes
- Study 3: 178 adult (18+) patients with NG tubes
- Study 4: Nurses in 935 bed acute care tertiary hospital caring for patients with NG tubes

**Methods**

**Results**
- There is no evidence to support using auscultation to listen for “whooshing” sound as placement verification.
- pH of aspirate is an accurate method of confirmation to be used at the bedside.
- pH must be < 5.5 to be considered accurate with no further confirmation (X-ray).

**Discussion**
- Based on the review of literature, it can be concluded that confirmation by pH is the most accurate method for placement verification
- The following conclusions can be drawn: implementing verification by pH is the most accurate method and implementing this change in practice will take time.

**Recommendations**
- In one study incorporating the use of pH confirmation as the standard protocol initially yielded high compliance rates. After the policy change was in place for several months, compliance rates decreased.
- Further research should focus on how to effectively implement a practice change, ensuring compliance will remain high.

**Limitations**
- This literature review only focused on four research studies, only a small portion of the research conducted in this area.

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