

## The correct method of testing the position of nasogastric tubes in hospital: is the awareness any better?

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Auditing the knowledge and nurse’s practices, in relation to the care of nasogastric tubes (NGT) and enteral feeding in adult patients was carried out within current National Health Service National Patient Safety Agency (NPSA) guidelines<sup>(1)</sup>. This audit took place at Northwick Park and St Marks’ Hospitals and was carried out on adult acute medical and surgical wards.

Due to the misplacement of NGT, several deaths and cases of serious harm had been reported across the country. Following this occurrence, the NPSA highlighted the need for adequate training and awareness for accurately testing the position of NGT<sup>(1)</sup>. The NPSA guidance<sup>(1)</sup> suggested measuring the pH of gastric aspirate using pH indicator strips (safety levels between pH0 and 5.5). They also recommended radiography, although this method should not be routinely used.

A questionnaire modified from the NPSA audit tool guidelines on ‘tests for correct placement of NG tube’ was then performed on adult acute wards. This questionnaire had eleven separate components. In addition, the audit also investigated the usage of litmus paper and confirmed the availability of an Enteral Feeding Policy or NPSA guideline. Nursing staff were then asked to either answer ‘yes’, ‘no’ or ‘don’t know’ to the eleven questions. This questionnaire included three separate open-ended questions: (1) methods of correct positioning of the NGT; (2) indications for checking and (3); name of the policy used on the ward for NGT insertion and usage. A pilot study was first performed on an elderly care ward, where the questionnaire’s practicality was tested. The audit was then randomly selected to be performed on a single day in order to avoid bias. Answers to the questions were then collated onto an excel spreadsheet and the percentages from the overall totals were then calculated. Following completion of this questionnaire, staff were immediately given a copy of the NPSA guideline<sup>(1)</sup> for their information.

A total of fifty-two nurses (bands 5–7) were audited from nineteen separate wards (one ward refused to participate), of whom 44% (n 23) reported that they had not received any training on how to check the position of the NGT.

**Table.** Percentage of nurses that provided the correct methods for confirming the position of NGT

Methods . . . . .	Check pH paper (1)	X-ray (2)	Identified 1 and 2	Neither 1 nor 2 identified
Percentage (n 52)	58 (n 30)	64 (n 33)	37 (n 19)	5.7 (n 3)

The Table illustrates the low levels of knowledge uncovered by this audit when identifying both methods used to confirm the correct NGT position<sup>(1)</sup>. Auscultation was the preferred method of checking the position of an NGT in 13% (n 7) and 27% (n 14) interchanged litmus with pH paper. None of the nursing staff were able to identify any more than four of the indications when checking the NGT position as listed in the NPSA guidelines<sup>(1)</sup>. Only 29% (n 15) were able to identify the Trust Enteral Feeding Policy on the wards. It was also noted that staff then referred to other nutritional policies, none of which was ratified by the Trust Nutrition Steering Committee.

In conclusion, the audit highlighted the severe lack of policy knowledge of nursing staff when treating patients with an NGT *in situ*. It also showed clear inconsistencies in the uses of litmus paper v. pH paper and of the indications of when to correctly check the placement of the NGT. These results have clearly demonstrated the need for further training and education for nursing staff on NPSA guidelines. The impact of intensive training needs to be re-evaluated after 1 year in order to monitor its function on nursing and clinical practice.

1. National Patient Safety Agency (2005) Reducing the harm caused by misplaced nasogastric feeding tubes. Interim advice for healthcare staff, February 2005. [www.npsa.nhs.uk/advice](http://www.npsa.nhs.uk/advice)