Recommended procedure for checking the position of nasogastric feeding tubes (Adapted from NPSA, 2005)

Action	Rationale
Check whether the patient is on medication that may increase the pH level of gastric contents	Medication that could elevate the pH of gastric contents are antacids, H2 receptor antagonists and proton pump inhibitors. For those patients who are regularly on antacids, the initial risk assessment needs to identify actions that staff should take in this scenario and document this in the care plan. The initial pH of the aspirate should also be documented in the medical / nursing notes.
Check for signs of tube displacement	Documenting the external / internal length of the tube initially and checking external markings prior to feeding will help determine if the tube had moved. The documentation will also assist radiographers if an x-ray is needed.
Sufficient aspirate (0.5-1ml) obtained	0.5-1ml of aspirate will cover an adequate area on the single, double or triple reagent panels of pH indicator strips. Allow ten seconds for any colour change to occur.
Aspirate is pH 5.5 or below	Commence feed. There are no known reports of pulmonary aspirates at or below this figure. The range of pH 0 to 5.5 balances the risk between increasing the potential problem for clinical staff e.g. removing tubes that are actually in the stomach, increased use of x-ray, with the as yet, unreported possibility of feeding at pH 5.5 when the tube is in the respiratory tract.
Aspirate is above pH 5.5	**DO NOT FEED.** Possible bronchial secretion; leave up to 15 min and try again. The initial risk assessment should identify actions for staff to take in this scenario for each patient. The actions should be documented in the care plan and/ or in local policy. If there is ANY doubt about the position and/ or clarity of the colour change on the pH indicator strip/ paper, particularly between the ranges pH 5 and 5.5, then feeding should NOT commence – seek advice.
Wait up to one hour before re-aspirating to check pH level	The most likely reason for failure to obtain gastric aspirate below pH of pH 5.5 is the dilution of gastric acid by enteral feed. Waiting for up to an hour will allow time for the stomach to empty and the pH to fall. The time interval will depend on the clinical need of the patient and whether or not they are on continuous or bolus feeds.
Problems obtaining aspirate?	
Turn patient onto their left side or re-position	This will allow the tip of the tube to enter the gastric fluid pool.
Insert air (2-5ml for children) using a 10 or 20ml syringe. This is NOT a testing procedure: **DO NOT** carry out auscultation of air ('whoosh' test) to confirm tube position.	Injecting air through the tube will dispel any residual fluid (feed, water or medicine) and may also dislodge the exit-port of the nasogastric tube from the gastric mucosa. Using a large syringe allows gentle pressure and suction; smaller syringes may produce too much pressure and split the tube (check manufacturers guidelines). Polyurethane syringes are preferable to other syringes. All nasogastric tubes and syringes must be Enfit compliant.
Advance Tube by 1-2cm for children	Advancing the tube may allow it to pass into the stomach if it is in the oesophagus.
Consider x-ray All radiographs should be read by appropriately trained staff	X-ray should not be used routinely. The radiographer will need to know that this advice has been followed, what the problem has been and the reason for the request. The radiographer should document this. Fully radio-opaque tubes with markings to enable measurement, identification and documentation of their external length should be used.
Additional tip	If the patient is alert, has intact swallow and is perhaps only on supplementary feeding and is thus eating and drinking during the day, ask them to sip a coloured drink and aspirate the tube. If you get the coloured fluid back then you know the tube is in the stomach.