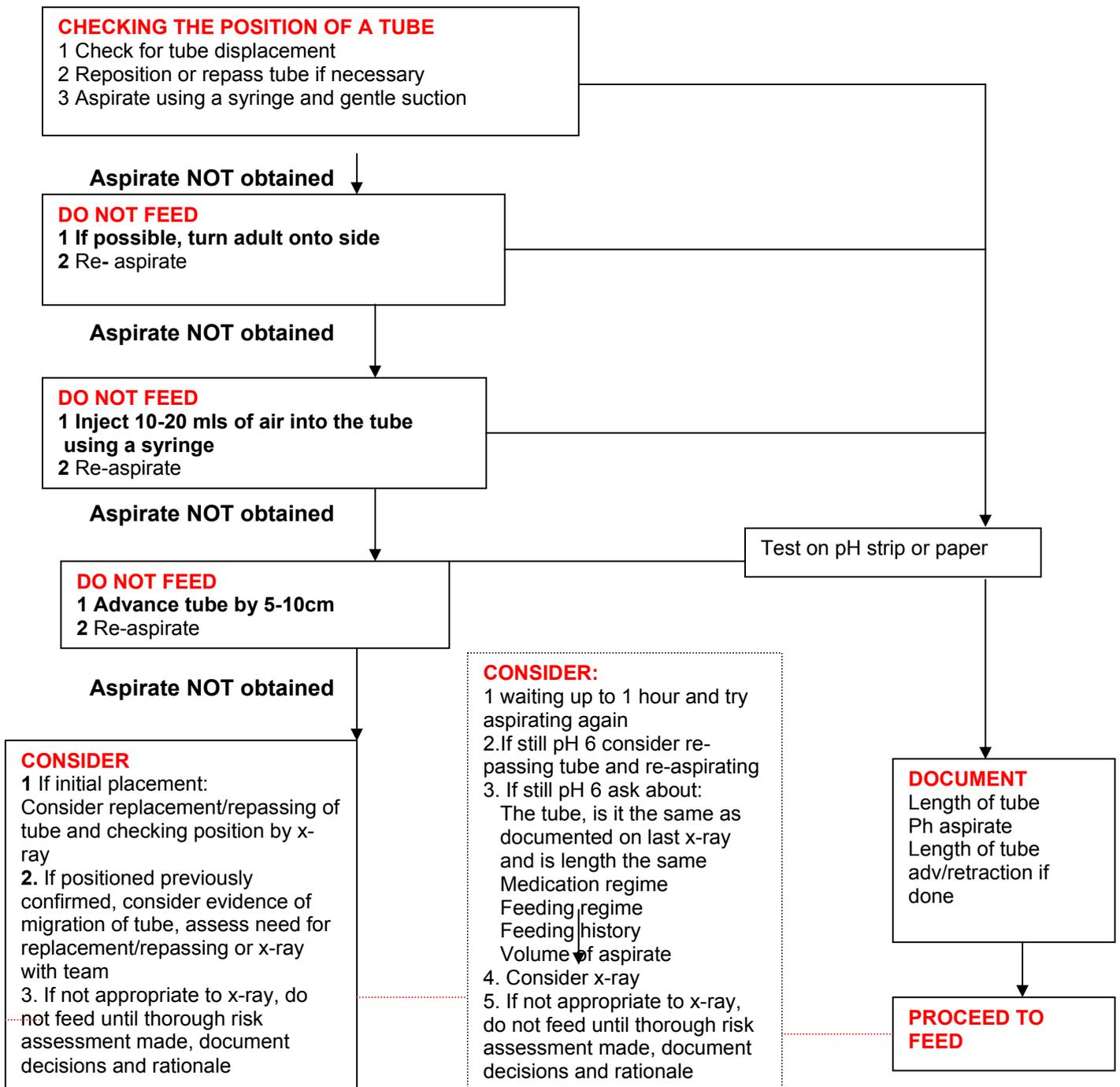




National Patient Safety Agency

Confirming the correct position of nasogastric feeding tubes in critically ill

Confirming the correct position of nasogastric feeding tubes in critically ill ADULTS on Intensive Care Units



CAUTION: If there is ANY query about position and/or the clarity of the colour change on the pH strip, particularly between ranges 5 and 6, then feeding should not commence.

The recommended procedure for checking the position of nasogastric feeding tubes in

critically ill adults on Adult intensive care units

Action	Rationale
Obtain radiographic confirmation of initial tube placement	Mark and document the tubes length from the nose or mouth immediately after radiographic confirmation. Radiographer should be informed that the x-ray is for checking of position of nasogastric tube, this should be recorded on request slip. Confirmation of the tube should be done by appropriately trained clinician and documented in the notes prior to commencement of feed.
Check for signs of tube displacement	Documenting the external length of the tube initially and checking external markings prior to feeding will help to determine if the tube has moved. The tube should be marked initially with permanent marker pen. A change in the marked tube position suggests that the tube may have migrated. Also check that mouth is free of coiled tube.
Aspirate	Injecting air down the tube prior to aspiration should clear the tube of debris and or feed. Aspirates from small bowel feeding tubes are usually less than 10ml, an increase up to 50 ml or higher suggest the tube is in the stomach. CAUTION there have been reports of large volumes of aspirate from tubes that have been located in the lungs (Kauffman et al 2001).
Record pH levels	Apply aspirate to an area on the single, double or triple reagent panels of pH testing strips/paper. Allow ten seconds for any colour change to occur. Ensure you use colour chart on the box supplied. Record pH level.
Aspirate is pH 5.5 or below	Commence feed
Aspirate pH 6 or above	The other most likely reason for the pH to be 6 or above is dilution of the gastric acid by the enteral feed. Waiting for up to 1 hour following the last feed will allow time for the gastric pH to fall. Check whether on medication that may increase the pH level of gastric contents e.g. antacids. If the patient is likely to have a consistent pH above 6, then plan of care should be discussed initially. If the patient has only a one-off reading of a pH of 6 or is giving consistently high pH readings then consider why. Is the patient on continuous feeding regime? Check, have you waited 1 hour prior to testing and is the tube clear of enteral feed, is the tube the same as documented on initial check x-ray and is length the same? Has the patient tolerated feeds so far? Consider options : consider replacement or repassing tube or x-ray confirmation or continue to feed or not . Do not feed before thorough risk assessment and team discussion, document decision and rationale.
Problems obtaining aspirate?	Use the largest size tubes (e.g. size 10 or 12) Have the tubes got multiple ports? If the tube only has one port then the side of the tube with the exit port can get lodged on the side of the gastric mucosa. Using a tube with multiple ports will limit this problem.
Turn adult onto their side	This will allow the tip of the nasogastric tube to enter the gastric fluid pool.
Inject 10-20ml of air using a syringe. This is NOT a testing procedure: DO NOT carry out auscultation of air('whoosh' test) to test tube position	Injecting air through the tube may dislodge the exit-port of the nasogastric feeding tube from the gastric mucosa. It is safe practice to use nasogastric tubes and enteral syringes that have non luer connectors (<i>Building a Safer NHS for Patients: Improving Medication Safety published 22/01/2004 available at www.dh.gov.uk</i>)
Advancing the tube	Is the tube length long enough to reach the gastric body? It is important therefore to try advancing the tube 5-10cms. If the tube is in the oesophagus, advancing it may allow it to pass into the stomach. If the tube has been inserted too far , it may be in the duodenum (pH 7-8). Consider withdrawing a few cms and re-aspirating. Document the length of tube if moved.
If still no aspirate	If initial placement: consider replacement/repassing of tube and checking position by x-ray. If position previously confirmed, consider evidence of migration of tube, assess need for replacement/repassing or x-ray. Document decisions and rationale.