Document Title:	**PASSING A NASO/ORO-GASTRIC TUBE AND INTERMITTENT TUBE FEEDING (10 DAYS-16 YEARS)**		
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Document type: (Policy/ Guideline/ SOP)	Guideline	**To be followed by:** (Target Staff)	Nurses, Junior Doctors and Consultant Paediatricians
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Issuing Division/Directorate:	Women's and Children's		
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Professionally Approved by: (Asset Owner)	Dr Srinivasagam Muthumeenal, Consultant paediatrician	**Date:**	19th March 2019
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Consulted With:	Post/ Approval Committee/ Group:	Date:
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Deborah Lepley	Warner Library	27th March 2019

Related Trust Policies (to be read in conjunction with)	04072 Hand Hygiene 04071 Policy for Standard Infection Prevention Precautions 05102 Adult Nasogastric Feeding Tube Insertion and Management

Document Review History:			
Version No:	**Authored/Reviewer:**	**Summary of amendments/ Record documents superseded by:**	**Issue Date:**
1.0	J Freeman, Carol Newman, Dr Lipscomb		2001
2.0	J Freeman, Carol Newman, Dr Lipscomb		2003
3.0	J Freeman, Carol Newman, Dr Lipscomb		2004
4.0	C Newman, C Fox, Dr Babu		2009
4.1	C Newman, C Fox	Minor additions to update guideline paragraph 16.3	2012
6.0	Meg Taylor/Victoria Machell		3 May 2016
6.1	Su Ames	Clarification to point 7.8	26th April 2018
6.2	Lucy Bouckley	Clarification to point 7.9, 8.0 and 9.0	4th September 2018
7.0	Mary Stebbens	Full Review	5th April 2019

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1.0 Purpose

1.1 To provide guidance relating to methods of feeding and administering medication in infants and children with impaired sucking, or swallowing mechanism.

1.2 To ensure that naso/oro-gastric tubes are inserted following the correct process and that gastric pH is tested for prior to giving a naso/oro gastric feed or medication.

2.0 Equality Impact Assessment

2.1 Mid Essex Hospital Services NHS Trust is committed to the provision of a service that is fair, accessible and meets the needs of all individuals. (Refer to Appendix C)

3.0 Scope

3.1 This guideline is for all clinical staff caring for babies and children under 16 years within the Trust.

4.0 Types of Naso-gastric tubes (NGT)

4.1 **Short period Infant feeding tubes**
These are the tubes of choice and have a male luer lock for use with feeding syringes. These tubes should be changed once a week.

4.2 **Long term feeding tubes**
These tubes are used for long term feeding issues. These tubes are changed once a month. Retain the guidewire.

4.3 **Ryles**
These tubes only used for gastric aspirating and not used as feeding tubes.

5.0 Consent

5.1 Informed verbal consent must be sought from the parent/carer and the child prior to the insertion of the NGT. A clear explanation of the procedure should be given and verbal consent gained.

5.2 If the patient is unable to respond verbally, other means of communication should be sought.

6.0 Assessment

6.1 A decision to insert a NGT for the purpose of feeding must be made by the doctor and qualified nurse / caring for the patient

6.2 This decision should only be made following careful assessment of the risks and benefits.

6.3 This entry in the nursing notes must be signed, dated and timed

6.4 Prior to insertion the rationale for insertion of an NGT must be considered

- Is Nasogastric tube feeding the right decision for this patient?
- Is this the right time to place the NGT and is appropriate equipment available?
- Is there sufficient expertise available at this time to test for safe placement?

7.0 Procedure

7.1 Two people are needed when passing NG tube on infant/toddler/child, one to comfort and support the child and one to pass the tube.

7.2 Wherever possible the child and family should have had psychological preparation to reduce the distress caused by the procedure.

7.3 Equipment:

- Plastic apron;
- Gloves;
- 1 sterile gallipot;
- CE marked pH paper that is capable of indicating an acid range of pH 0-6;
- 1 enteral syringe – 20ml (or manufacturer recommendations);
- Naso-gastric tube;
- Tape to secure the tube to the child's cheek If the child has especially sensitive skin, you may need a hydrocolloid dressing such as extra-thin Granfulex to provide a protective layer between the child's skin and the adhesive tape holding the tube in place;
- Dummy if child uses one;
- Drink of water if the child is older and is able to swallow.

7.4 Wash hands and dry hands thoroughly as per infection prevention policy.

7.5 Cut a piece of adhesive tape long enough to cover two-thirds of the child's cheek and place it in easy reach.

7.6 If using hydrocolloid dressing, cut a piece and also place it within easy reach, the adhesive tape should not extend beyond the boundary of the hydrocolloid.

7.7 Ask the person holding the child to position her/him so that you can access their nostril. A baby is best held cuddled and wrapped in a sheet, with the neck slightly extended, positioned as if giving a bottle feed. Neonates: less than 34 weeks, less than 2kg, sick babies, lay baby in cot to carry out procedure. An older child should be encouraged to sit upright.

7.8 Prior to insertion, check the NG tube is patent with a 50 ml sterile bladder syringe/ luer lock syringe filled with air.

7.9 If NG with guidewire is used. Gently manipulate the guidewire to ensure it can move freely. Ensure it is secured back in place before insertion.

7.10 Determine the length of the naso-gastric tube to be inserted by measuring the tip of the tube from the nose to ear lobe, then to the stomach aiming for the space in the middle below the ribs (xiphoid process) note marking on the tube. Ensure the end cap is left open, to ensure accurate placement in the stomach.

7.11 Select a nostril that is clear, if replacing tube use alternative nostril from which the tube was originally placed if appropriate, to prevent long term irritation and skin damage.

7.12 Insert the tip of the naso/oro-gastric tube into the nostril, aiming the tip and keeping it parallel to the nasal septum and superior surface of the hard palate. Advanced the nasogastric tube into the nasopharynx and allow the tip to seek its own passage.

7.13 If there is an obstruction withdraw and turn the tube slightly; then try again to avoid trauma to the area.

7.14 If at any time the infant/child becomes unduly distressed or a change in their colour, stop the procedure and remove the naso/oro-gastric tube immediately as this may indicate the passage of the tube into the trachea. Try again once the patient has settled.

7.15 Only two attempts are acceptable at passing the naso/oro-gastric tube and then a more experienced member of the team should be elected to pass the tube, to minimise distress to infant/child.

7.16 If there are no adverse complications advance the tube until the measured point is reached, to ensure the correct placement of the naso/oro-gastric tube.

7.17 Ask the person holding the child, or the child herself, to place their fingers against the tube to prevent it slipping.

8.0 pH testing – Short Period

8.1 Connect an enteral syringe (20ml depending on manufactures instructions) to the end of the NGT and withdraw the plunger until fluid appears in the syringe – only a very small amount (½-1ml) of gastric aspirate is required. Disconnect the syringe and close off the end of the tube.

8.2 Using pH paper observe for an acid reaction to the aspirate

8.3 The reaction must be in the pH range 0 - less than 5.5 indicating that the fluid originates from the stomach and the tube is correctly positioned.

8.4 If still no fluid can be withdrawn and it is safe to do so and the child can swallow, give the child 5mls of water or milk orally and then aspirate tube again.

8.5 If it is still not possible to be sure that the tube is correctly placed, it may need to be withdrawn a little or passed further, in order to obtain aspirate, if none obtained repeat) and then if still no aspirate seek senior help.

8.6 If the pH is 5.5 or greater see flow chart.
(Refer to Appendix A)

9.0 pH testing – Long Period with the Use of a Guidewire

9.1 Connect an enteral syringe (20ml depending on manufactures instructions) to the end of the NGT and withdraw the plunger until fluid appears in the syringe – only a very small amount (½-1ml) of gastric aspirate is required. Disconnect the syringe and close off the end of the tube.

9.2 Using pH paper observe for an acid reaction to the aspirate

9.3 The reaction must be in the pH range 0 – less than 5.5 indicating that the fluid originates from the stomach and the tube is correctly positioned.

9.4 Once placement is confirmed. The guidewire must then be removed immediately when safe to do so.

10.0 Securing the Naso-gastric Tube

10.1 Having established that the tube is correctly placed. Disconnect and close off the end of the tube. Secure the tube to the child's cheek using the adhesive tape (and hydrocolloid if necessary).

11.0 Documentation

11.1 Document the length of NGT, size, position, date inserted in the child's nursing notes and pH reading at time of insertion.

11.2 All entries in the nursing notes must be signed, dated and timed

11.3 Prior to each naso/oro-gastric feed the gastric aspirate pH must be tested and the reading documented on the fluid chart.

11.4 Prior to discharge parent education on giving Naso-gastric feeds at home will be documented in the baby's/child's notes if feeding is to be continued in the community.

12.0 When to Check the Naso-gastric Tube

12.1 The tube position should be checked:

- Following initial insertion;
- Before administering a feed;
- Before giving medication;
- Following vomiting, retching or coughing;
- If there is evidence of tube displacement.

13.0 Intermitted Naso/oro-gastric Tube Feeding

13.1 Prior to giving a naso-gastric tube feed check the gastric aspirate by using pH paper capable of indicating an acid range of pH 0-6.

- Is the pH below 5.5?

13.2 Check the tube position:

- Is it the correct length?
- Is the tube secure and fixed in position?

13.3 For long term tubes flush the tube following feed with 5mls of sterile water if a short term tube is in regular use or babies on restricted fluids for example babies with cardiac conditions there is no need to flush with water.

13.4 It is the responsibility of the member of staff to confirm the position of the feeding tube prior to the administration of medication or feed.

13.5 Babies receiving medication for gastric reflux or fortified feeds will have raised ph levels when fed frequently. The ph and reason for raised level must be recorded when feeding takes place and if any of 11.1 occurs.

14.0 Continuous Naso-gastric Feeding

14.1 This method of feeding is not recommended, unless a written request is received from regional centre to achieve rapid weight gain in children awaiting surgery. Saturation monitoring must be used when continuous feeds are running and the patient is not being supervised.

14.2 If a baby is on continuous feeds, tube checking should be 4-6 hourly or if any of 11.1 occurs. When continuous feeding is stopped, wait 15-30 minutes to allow the stomach to empty of milk and the pH level to fall.

15.0 Staff Training

15.1 Only staff trained and assessed as competent to insert or check the position of an NG tube should attempt these procedures.

15.2 All medical and nursing staff are to ensure that their knowledge, competencies and skills are up-to-date in order to complete their portfolio for appraisal.

15.3 Registered nurses may only insert an NG tube following completion of training and competency sign off (Appendix B).

15.4 During induction process nursing staff will receive instruction on current policy and guidelines.

15.5 Where a patient's notes have demonstrated that the appropriate action has not been taken a 'risk event form' is to be completed. This will address any further training needs for staff that require updating.

15.6 Only staff with the relevant skills and expertise should insert and confirm the placement of NG tubes.

15.7 Only staff with the relevant skills and expertise should undertake placement checks prior to commencing feeding or administration of medication.

16.0 Infection Prevention

16.1 All staff should follow Trust guidelines on infection prevention ensuring that they effectively 'decontaminate their hands' before and after each procedure.

16.2 All staff must follow the Policy for Standard Infection Prevention when inserting a naso-gastric and giving a tube feed.

17.0 Audit and Monitoring

17.1 Where a child's notes have demonstrated that the appropriate action has not been taken a 'risk event form' is to be completed. This will address any further training needs for staff that requires updating

17.2 Any incident relating to misplaced NG tubes should be reported as a serious incident in accordance with the Trust Serious Incident Policy.

17.3 The senior sister will action an annual audit to determine the compliance to this guideline.

18.0 Communication

18.1 Ratified guidelines are uploaded to the intranet and website.

18.2 Guidelines will be disseminated to appropriate staff via email after ratification.

19.0 References

Farrington M, (2009) NasogastricTubeplacement verification in pediatric and neonatal patients. Pediatric Nursing Jan/Feb 2009 35 (1): 17-24.

Durai R et al (2009) Nasogastric tubes 1: insertion technique and confirming the correct position. Nursing Times 105 (16): 12-13

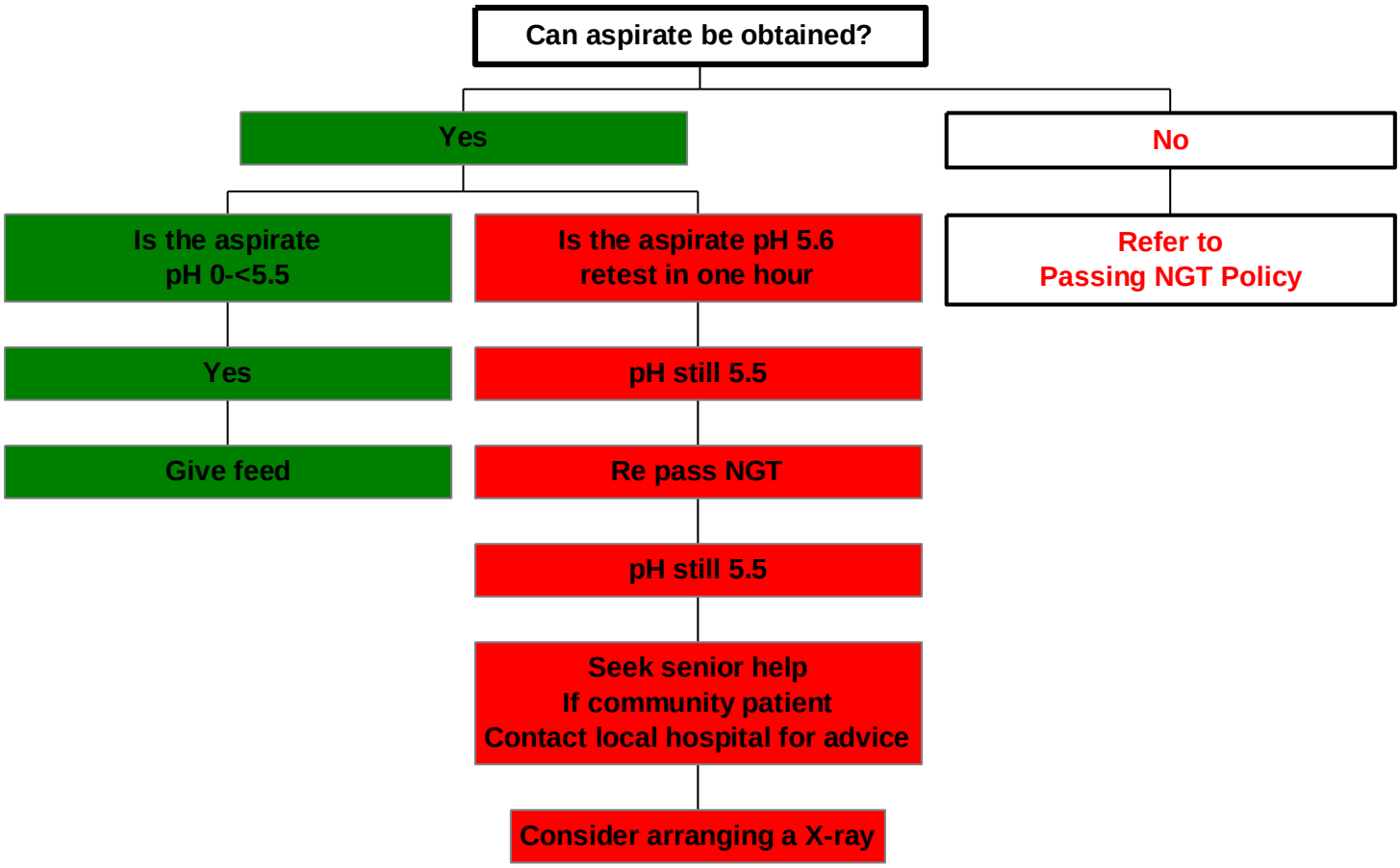
National Patient Safety Agency (2005) Reducing the harm caused by misplaced naso and orogastric feeding tubes in babies under the care of neonatal units. Patient Safety Alert. London: National Patient Safety Agency

National Patient Safety Agency (20199) Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants. Patient Safety Alert. NPSA2011/2011/PSA002. London: NPSA

Appendix A

Mid Essex Hospital Services NHS
NHS Trust

How to confirm the position of a naso-gastric tube



Appendix B

Mid Essex Hospital Services NHS
NHS Trust

Children and Young People's (CYP) Service

Nursing Competency for passing and management of a Naso-gastric tube

Name **Date** **Area**

No	Competency		Initial Self assessment		Follow up assessment	
		Date	I am competent to carry out this procedure Signature	I need further training Signature	Date	I am competent to carry out this procedure Signature
	Has read and understood the CYP guidance on NG tube placement checks					
	Can insert a nasogastric tube in accordance with Trust policy					
	Is competent checking the position of nasogastric tubes using pH testing according to Trust policy.					
	Understands Trust policy upon actions to be undertaken if unable to verify position using pH testing.					
	Understands and follows Trust policy regarding when position of nasogastric tube needs to be checked.					
	Can provide care for a patient with a nasogastric tube in situ including changing NG tapes, checking skin, providing mouth care					
	Correctly documents insertion, care of and position checks of nasogastric tubes according to Trust policy					
	Can provide enteral feeding according to prescription and correctly document the feed.					

Appendix C: Preliminary Equality Analysis

This assessment relates to: Passing a naso/oro-gastric tube and intermittent tube feeding (10days-16 years) (05006)

A change in a service to patients		A change to an existing policy	**X**	A change to the way staff work	
A new policy		Something else (please give details)			

Questions	Answers
1. What are you proposing to change?	Full Review
2. Why are you making this change? **(What will the change achieve?)**	3 year review
3. Who benefits from this change and how?	Patients & Clinicians
4. **Is anyone likely to suffer any negative impact as a result of this change?** If **no**, please record reasons here and sign and date this assessment. If **yes**, please complete a full EIA.	No
5. a) Will you be undertaking any consultation as part of this change? **b) If so, with whom?**	Yes Refer to pages 1 & 2 consultation

Preliminary analysis completed by:

Name	Mary Stebbens	**Job Title**	Clinical Facilitator for Children's Acute Care	**Date**	March 2019