<table>
<thead>
<tr>
<th></th>
<th>Name of Procedure/Guidelines/Protocol:</th>
<th>PROCEDURE FOR INSERTION OF NASOJEJUNAL FEEDING TUBE IN INFANTS IN NEONATAL/SCBU</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Purpose of Procedure/Guidelines/Protocol:</td>
<td>To provide guidance to neonatal nurses who care for infants who require insertion of a nasojejunal tube.</td>
</tr>
<tr>
<td>3</td>
<td>Replaces:</td>
<td>New</td>
</tr>
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<td>4</td>
<td>Applicable to which staff:</td>
<td>Neonatal nursing staff</td>
</tr>
<tr>
<td>5</td>
<td>Name &amp; title of author:</td>
<td>Una Toland Lead Nurse Neonatal Services and ANNP team SH&amp;SCT</td>
</tr>
<tr>
<td>6</td>
<td>Equality Screened by: Note any issues:</td>
<td>N/A</td>
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<td>7</td>
<td>Proposals for dissemination:</td>
<td>Una Toland via team managers to nursing staff</td>
</tr>
<tr>
<td>8</td>
<td>Proposals for implementation:</td>
<td>With immediate effect</td>
</tr>
<tr>
<td>9</td>
<td>Training Implications:</td>
<td>To be included in induction training of all new nursing staff</td>
</tr>
<tr>
<td>10</td>
<td>Date Procedure/Guideline/Protocol submitted to Procedures Committee:</td>
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<td>11</td>
<td>Outcome:</td>
<td>Approved</td>
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<td>Comment:</td>
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<td>Approved/Minor amendments</td>
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<td>12</td>
<td>Date of CYP SMT approval Comments:</td>
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<tr>
<td>13</td>
<td>Date of approval by Trust SMT (if required):</td>
<td></td>
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<tr>
<td>14</td>
<td>Clinical Guideline ID:</td>
<td>CG0094</td>
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<tr>
<td>15</td>
<td>Date for further review (3 year default):</td>
<td>15/1/2017</td>
</tr>
<tr>
<td>16</td>
<td>Date Uploaded to repository:</td>
<td>19/1/2015</td>
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PROCEDURE FOR INSERTION OF NASOJEJUNAL FEEDING TUBE IN INFANTS IN NEONATAL/ SCBU

Statement:
Nasojejunal feeding is the method of feeding directly into the small bowel. The feeding tube is passed into the stomach, then through the pylorus and into the jejunum. This type of feeding is also known as post pyloric or transpyloric feeding.

Indications for Nasojejunal Feeding
- Risks of gastro-oesophageal reflux
- Pulmonary aspiration of feeding
- Decreased gastric motility/emptying
- Vomiting
- Unable to obtain optimum nutrition via other route
- Conditions where excessive saliva is present - e.g. muscular problems

Important factors to consider
- It is a medical decision to commence nasojejunal feeding
- It is recommended that a jejunal tube is passed via the nostril as one passed via the oral route tends to loop out of the mouth and is more liable to be pulled back during suction
- ANTT is essential as the nasojejunal feeding tube bypasses the acid anti infective barrier and reservoir of the stomach
- The nasojejunal unopened package should be placed in the fridge 1 hour prior to insertion
- The nasojejunal tube may remain in situ for 1 month unless otherwise indicated on manufacturer’s instructions
- Always remeasure distance for tube placement when replacing tube
- Nasojejunal feeding tube is first inserted into stomach and then the jejunum
- The choice of infant feed is administered via the Flocare pump. See attached appendix 1 re Hang times for feeds
- Bolus feeds must NOT be administered via nasojejunal feeding tube (the jejunum cannot tolerate a bolus like the stomach as it is not a reservoir)
- When administering medication via the nasojejunal feeding tube seek guidance from pharmacist and/or compendium of data sheets and summaries of product characteristics as some medications may not be suitable for intestinal administration
- The pH may be affected by certain drugs eg Ranitidine
- Adhere to care bundle elements for enteral feeding, (see attached appendix 2)
To prevent the nasojejunal feeding tube blocking, flush with 1-2mls sterile water. (Nasojejunal feeding tube can become blocked with coagulation of milk, tube kinking and precipitation of incompatible medications)

- Nasojejunal feeding tube can migrate upwards or downwards from its original position even if the tube external measurement is unchanged
- Always ensure the infant also has an oral gastric tube in situ

**Equipment:**

Stainless steel trolley
Detergent wipes and hard surface alcohol wipes
Nasojejunal size 6fg
Sterile water (if desired) for lubrication
Tape measure
Ph indicator sticks (reading 1-13)
5 or 10ml enteral syringes
50 ml enteral feeding syringe and administration set or Flocare pump and flocare administration set
Milk labels
Tape to mark and secure tube
PPE

<table>
<thead>
<tr>
<th>Procedure Type</th>
<th>Procedure Risks</th>
<th>Type of ANNT</th>
<th>Environment Management</th>
<th>Decontamin ate/ Protection (PPE)</th>
<th>Aseptic Field Management</th>
<th>Non-Touch Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion of an indwelling nasojejunal feeding tube</td>
<td>Few key parts</td>
<td>Standard ANTT</td>
<td>Remove or avoid any environmental risks</td>
<td>Hand cleaning Non sterilised gloves Trolley cleaning for General aseptic field</td>
<td>Key parts protected by Micro Critical Aseptic fields Supported by a General Aseptic Field</td>
<td>Non touch technique is essential</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>PROCEDURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow the principles of ANTT as outlined in flow chart above</td>
</tr>
<tr>
<td>Decontaminate hands using 7 step technique as per local policy</td>
</tr>
<tr>
<td>Clean trolley in preparation for procedure as per unit policy</td>
</tr>
<tr>
<td>Gather equipment</td>
</tr>
<tr>
<td>Decontaminate hands and put on appropriate PPE</td>
</tr>
<tr>
<td>Prepare equipment</td>
</tr>
<tr>
<td>Apply non sterile disposable gloves</td>
</tr>
<tr>
<td>Deflate stomach using OGT</td>
</tr>
<tr>
<td><strong>Measure length for Nasojejunal tube insertion using Nasojejunal tube</strong></td>
</tr>
<tr>
<td>Measure from the tip of the ear to the bridge of the nose to the xiphisternum (measurement for gastric placement)</td>
</tr>
<tr>
<td>Then measure from the xiphisternum down to iliac crest (measurement for jejunal insertion)</td>
</tr>
</tbody>
</table>
Mark both measurements on tube with adhesive tape

Measure from tip of ear to nose

Measure from nose to

Measure from Xphisternum to

Diagram showing measurement for naso-jejunal placement

Elevate incubator/cot slightly to 15-30 degrees and turn the infant in a right lateral position (ie left side up)

Lubricate the tip of nasojejunal feeding tube with sterile water (if desired)

Insert the measured tube through the nostril advancing slowly to the pre determined length for gastric placement, remove marker and secure tube with previously cut tape.

Observe infant during procedure for any signs of distress—such as coughing, cyanosis or apnoea. If these occur the tube must be removed immediately and recommence procedure when infant has recovered
Aspirate Nasojejunal feeding tube to obtain gastric fluid, place on ph indicator stick and allow 10-15 seconds for colour change. Aspirate must be Ph 5.5 or below to confirm gastric placement

**Do not use whoosh test to confirm placement**

Flush the nasojejunal feeding tube with 1-2mls sterile water to eliminate any gastric residual

Continue to advance Nasojejunal feeding tube slowly at intervals of approximately 20 minutes until second marker has been reached and secure in place

Ensure measurement marking at nose on nasojejunal feeding tube is visible for continuous observation

Aspirate fluid and using ph indicator stick and test for Alkaline reaction obtaining Ph ≥7

If the aspirate ph < 6.0 the nasojejunal feeding tube is still in the stomach and must not be used

Discard all waste as per local policy

Decontaminate hands and trolley after use

Confirm position of nasojejunal feeding tube on abdominal Xray

Document insertion length of nasojejunal feeding tube in infant record and on feeding chart. Ensure all hourly checks carried out and recorded

<table>
<thead>
<tr>
<th>Tube secure y/n , measurement, ph, etc</th>
</tr>
</thead>
</table>

Record nasojejunal feeding tube size, insertion length, date of insertion, batch number and initial ph on feeding chart, care plan and label enclosed in the nasojejunal feeding tube package

Irrigate nasojejunal feeding tube with 1-2mls of sterile water to **prevent blockage** of tube,

- At feed changeover
- Before, between and after administration of any medication
- At least twice daily if feeds are not in progress via nasojejunal feeding tube
- Be aware infant may be fluid restricted

Commence nasojejunal feeding tube feeds and cautiously build up feeds until desired rate achieved.

Aspirate oral gastric tube 4 hourly to observe for presence of milk in the stomach as this may indicate that the nasojejunal feeding tube has migrated back into the stomach.
References:
11. Identification and Labelling of invasive tubing and lines Ref SGO14/08 BHSCT Standards committee (June 2008)
12. National Patient Safety Agency (2005)’The recommended procedure for the checking of the naso and orogastric feeding tube in babies under the care of neonatal units.’ *NPSA: UK
15. Southern Health and Social care Trust ANTT framework August 2014
16. High Impact Intervention Enteral feeding care bundle
# Appendix 1 SUMMARY : GUIDANCE ON THE HANG TIMES OF ENTERAL FEEDS AND PLASTICS FOR INFANTS IN NEONATAL/SCBU

Feeds and plastics should always be handled and administered aseptically

<table>
<thead>
<tr>
<th>System</th>
<th>Max hang time of giving set and Pack reservoir</th>
<th>Max hang time of feed</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packed feeds or closed systems (eg Infatrini)</td>
<td>24 hours</td>
<td>24 hours</td>
<td>Pack feeds and closed systems Pack feeds may be hung for a maximum period of 24 hours if child being fed continuously (Aspen 2009) For bolus feeds using the pack system</td>
</tr>
</tbody>
</table>
|                                                  |                                               |                       | • Always leave the giving set connected to the pack between bolus feeds  
• Packs can be left hanging between feeds  
• Use a new giving set every time the pack is changed  
• Always use the infinity pack giving set with the drip chamber  
• Try to minimise the number of disconnections  
• When disconnecting the giving set from the feeding tube use aseptic technique  
• Replace clear cap on the end of the giving set between feeds  
• Before reconnecting the giving set to the NG tube for the next bolus feed, press the fill set button on the infinity pump to flush out the 10-15 mls of feed in the tube and refill with new feed from the infatrini pack. This will flush out any contamination in the distal end of the giving set |
| Powdered Feeds reconstituted in formula room      | 4 hours                                       | 4 hours               | PIF is non sterile The feeding set is sterile at the start of the feed but after 2 hours fat and protein deposits will build up on the feeding equipment. Bacteria that may be present in the feed could adhere to these deposits and grow forming a sticky layer (biofilm) |
| Read to feed formula (eg SMA)                     | 4 hours                                       | 4 hours               | When these feeds are decanted their sterility is decreased and therefore they become non sterile |
| Expressed breast milk                             | 4 hours                                       | 4 hours               | Breast milk left at room temperature increases risk of bacterial growth |
| Bolus syringe feeds                               | Change with every feed                        | Gravity infusion      |                                                                                                                                      |
Appendix 2  ENTERAL FEEDING CARE BUNDLE ELEMENTS

1. Hand hygiene and PPE
   • Disposable apron worn.
   • Hands are decontaminated immediately before and after each episode of patient contact using the correct hand hygiene technique. Use of the WHO ‘5 moments of hand hygiene’.

2. Selection of enteral feeding systems
   • Pre-packaged, ready to use feeds are where possible used in preference to feeds requiring decanting, reconstitution or dilution

3. Preparation and storage of feeds
   • Feeds are stored according to manufactures instructions and where applicable food hygiene legislation.
   • A clean working area is prepared and only equipment dedicated for enteral feed are used when decanting, reconstituting or diluting feeds
   • Additions to sterile feeding containers are made only when there is no alternative and following an initial risk assessment.

4. Set up of the enteral feeding system
   • Aseptic technique is used when connecting and flushing enteral feeding tubes.
   • Gloves and apron are worn and disposed of in line with local policy immediately after use.
   • Line should be labelled and dated and signed and documented in patient records and changed as per guidelines.

5. Hang time
   • The ‘hang time’ for closed enteral feeding systems does not exceed 24 hours /non-sterile feeding systems does not exceed 4 hours

6. Single patient use equipment
   • Single patient use equipment is stored clean in a lidded container marked with the patients name.
   • Single use equipment is immediately discarded after use.

7. Water flushes
   • Sterile water is used to flush enteral feeding tubes in hospitalised patients, all patients fed via the jejunum or immuno-compromised patients
   • Single –use syringes
   • Where used, sterile water bottles are dated when opened and discarded in line with manufacturer’s instructions.

8. Daily Mouth care is provided.

9. Tube Position checked • pH indicator, xray, length of tube pre feed in NNU.

10. Stoma site
    • Sterile stoma dressing techniques are carried out for the first 3 days after initial placement.
    • After 3 days (if the site is uncomplicated) the stoma site is washed daily with sterile water and dried thoroughly.
    • Dressings are used if the gastrostomy site is discharging or the patient chooses to have them

11. Documentation
    • who inserted, size, route of insertion, pH, aspirate, time volume and type.(NGT position check chart completed)