

**Royal Hospital for Women (RHW)**  
**NEONATAL BUSINESS RULE**  
**COVER SHEET**



**Health**  
South Eastern Sydney  
Local Health District

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<b>NAME OF DOCUMENT</b>	Transpyloric Tube – Insertion and Management (Neonate)
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<b>SUMMARY</b>	To provide guidelines on the use of transpyloric tubes including safe insertion, placement and ongoing access for neonates in NCC.
<b>Key Words</b>	nasogastric tube (NGT), orogastric tube (OGT), transpyloric tube, neonate

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**Transpyloric Tubes – Insertion and Management  
(Neonates)**

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**RHW CLIN116**

**Contents**

1 BACKGROUND .....	3
2 RESPONSIBILITIES.....	3
2.1 Staff (medical, nursing, midwifery, Allied health).....	3
3 PROCEDURE .....	3
3.1 Equipment .....	3
3.2 Clinical Practice .....	4
3.2.2 Insertion.....	4
3.3 Documentation.....	7
3.4 Education Notes .....	7
3.5 Abbreviations .....	9
3.6 Related Policies/procedures.....	9
3.7 References .....	9
4 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION .....	9
5 CULTURAL SUPPORT .....	9
6 NATIONAL STANDARDS .....	9
7 REVISION AND APPROVAL HISTORY .....	10

## Transpyloric Tubes – Insertion and Management (Neonates)

RHW CLIN116

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*Within this document we will use the term woman, this is not to exclude those who give birth and do not identify as female. It is crucial to use the preferred language and terminology as described and guided by each individual person when providing care.*

## 1 BACKGROUND

Transpyloric tube feeds are used for neonates who are unable to tolerate gastric feeds either because of poor stomach emptying or severe gastro-oesophageal reflux. The aim of this CBR is to ensure safe insertion, placement, ongoing access, feeding and administration of medications through a transpyloric tube.

## 2 RESPONSIBILITIES

### 2.1 Staff (medical, nursing, midwifery, Allied health)

- 1.1.1 Medical – identify when appropriate to insert a transpyloric tube and order and review imaging to confirm placement.
- 1.1.2 Nursing – insert and care for transpyloric tube. Provide instruction for safe feeding and administration of medications.
- 1.1.3 HITH Co-ordinator – Provide education and support to parents of neonates who require a transpyloric tube.

## 3 PROCEDURE

### 3.1 Equipment

- Enteral polyurethane (silastic) feeding tube with stylet – 6Fr 91cm (DO NOT use the PVC [short term] feeding tubes for transpyloric placement) (Picture 1)
- Enteral feeding adaptor (Picture 1)
- Feeding extension tubing (Picture 1)
- Water for Injection vial
- 10 mL enteral syringe
- Transparent hydrocolloid dressing (e.g. Comfeel®)
- Scissors
- Adhesive tape
- Water soluble lubricant
- Sucrose 24% or EHM for pain relief (if required)

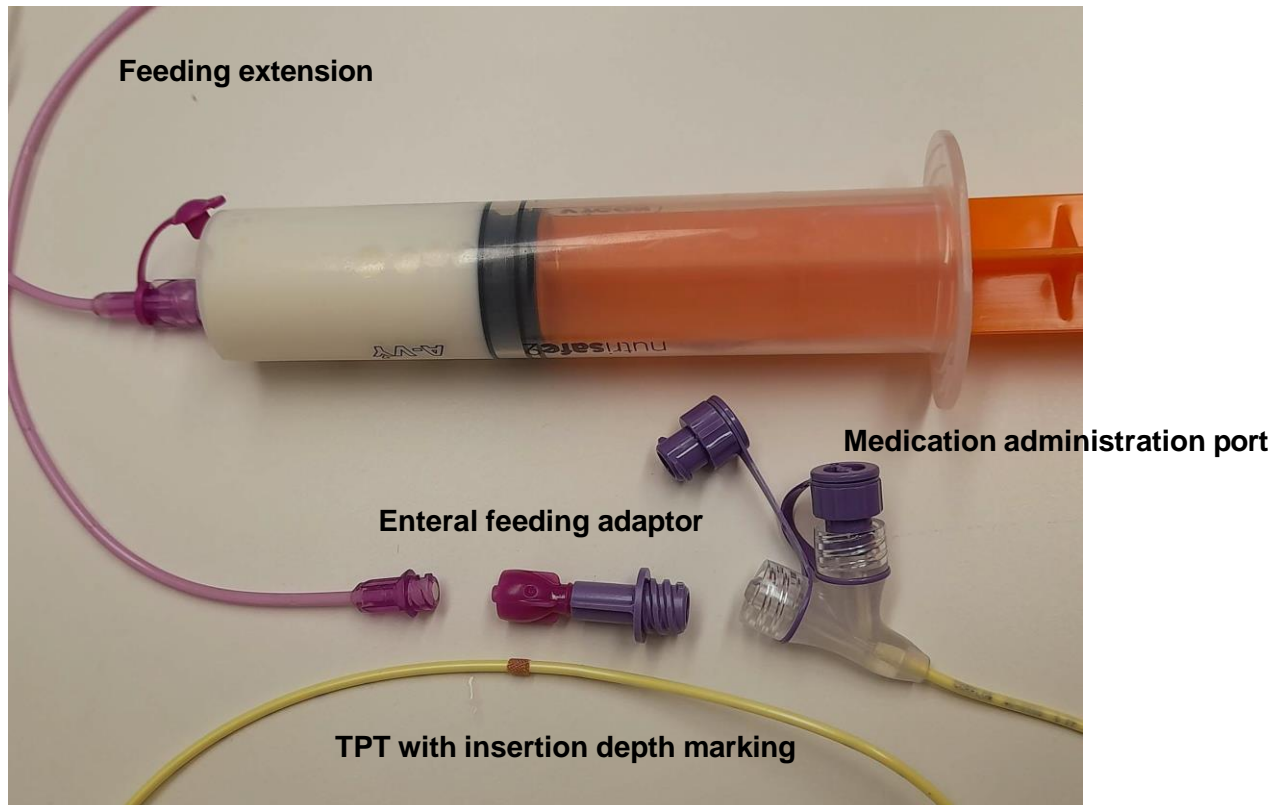
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**Transpyloric Tubes – Insertion and Management  
(Neonates)**

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**RHW CLIN116**

- Non-sterile gloves
- Barrier skin wipe (e.g. Cavilon®)



Picture 1

## 3.2 Clinical Practice

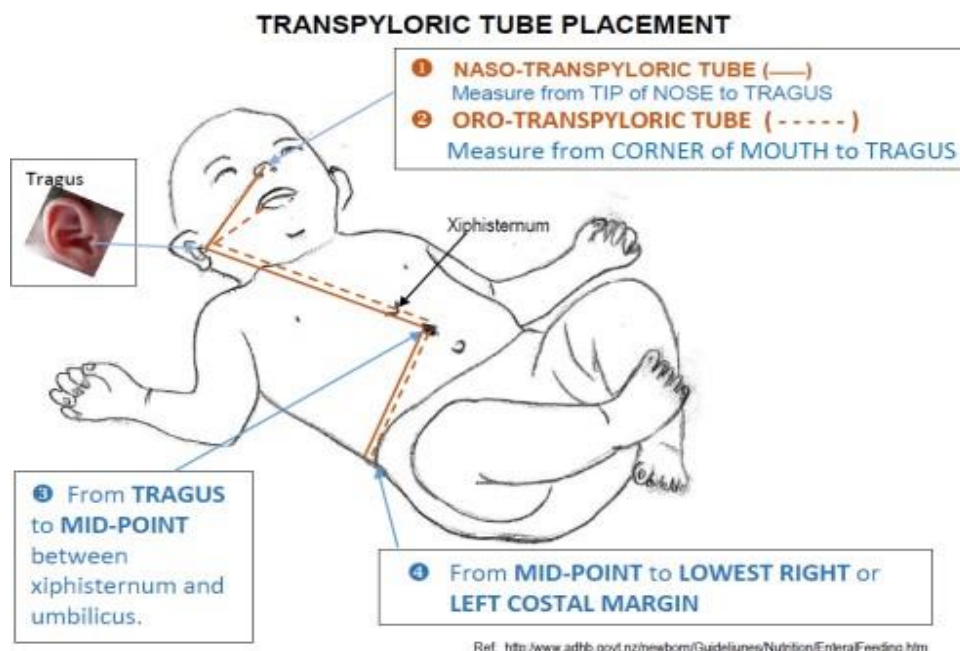
### 3.2.2 Insertion

- Confirm request for transpyloric tube (TPT) placement.
- Stop feeds at least 2 hours prior to insertion.
- Elevate the head of bed to a 30–45-degree angle.
- Collect equipment.
- Perform hand hygiene.
- Connect the feeding adaptor to the end of the feeding tube.
- Prepare the TPT by flushing tube with 2 mL of sterile water.
  - This lubricates the inside of the tube, enabling easier guide wire removal
- Determine if the TPT is to be inserted via nasal (recommended and preferred) or oral (e.g. choanal atresia, nasal CPAP) route. Measure the depth of insertion for naso or orogastric tube placement (Picture 2)

## Transpyloric Tubes – Insertion and Management (Neonates)

RHW CLIN116

- Nasogastric TPT
  - Measure the depth of insertion of tube by measuring the distance from the nare to tragus to the midpoint between xiphisternum and umbilicus. This is the gastric mark, mark it with a pen (for nasogastric tube).
  - From the gastric mark, measure the distance from gastric mark to the lowest left or right costal margin.
- Orogastric TPT
  - Measure the distance from the lower lip to the point halfway between the xiphoid process and umbilicus. This is the gastric mark, mark it with a pen (for orogastric tube)
  - From the gastric mark, measure the distance from gastric mark to the lowest left or right costal margin.



Picture 2

- Mark the TPT final insertion length (pyloric mark) with a strip of adhesive tape to provide landmark for insertion and ongoing checking. (Picture 1)
- Wrap neonate and provide comfort measures, administer 24% sucrose or expressed breast milk (EBM).
- Ensure all taping for securing tube is cut and easily accessible.
- Perform hand hygiene and don gloves.
- Ensure skin is clean and apply barrier wipe to cheek.
- Place transparent hydrocolloid dressing to area in which tube is to be secured.
- Lubricate the end of the TPT with water soluble lubricant.

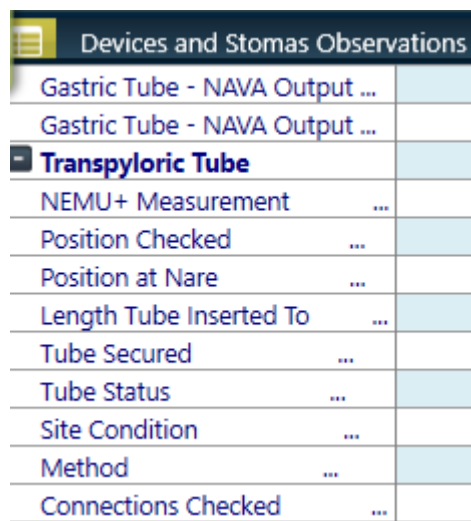
## Transpyloric Tubes – Insertion and Management (Neonates)

RHW CLIN116

- Gently insert the TPT through the nares/mouth to gastric tube measurement whilst neonate is lying supine.
- Remove the guidewire, ensuring not to dislodge tube placement.
- Slowly advance the tube 1-2 cm every 2 minutes until you have reached the pyloric mark.
  - Pausing between advancements of tube will aid the appropriate peristalsis through the pylorus.
- Place the neonate onto right side for 30 minutes post insertion.
  - This aids the peristaltic passage of the tube tip allowing it to pass into the intestine. DO NOT reinsert the guidewire under any circumstances
- Secure TPT with adhesive tape on top of transparent hydrocolloid dressing.
- Discard equipment, remove gloves and perform hand hygiene.
- Wait for 30-60 minutes and then confirm tube position with x-ray.
- DO NOT access TPT until position has been confirmed on x-ray by medical team.
- Affix patient identification label to TPT with date and depth of insertion written on it. Confirm patient label with two staff members prior to attaching to patient.
- Document new TPT in eRIC. Schedule a task to change TPT for 4 weeks' time.

### 3.2.2. Checking Tube Positioning

- DO NOT aspirate silastic TPT.
- Confirm TPT position on x-ray before use.
- Check the depth of insertion at nare/mouth prior to administering any medication or feeds.
- Ensure TPT device and stoma observation under Input/Output tab is completed once a shift in eRIC (Picture 3)



Devices and Stomas Observations	
Gastric Tube - NAVA Output ...	
Gastric Tube - NAVA Output ...	
<b>Transpyloric Tube</b>	
NEMU+ Measurement	...
Position Checked	...
Position at Nare	...
Length Tube Inserted To	...
Tube Secured	...
Tube Status	...
Site Condition	...
Method	...
Connections Checked	...

Picture 3

- If the TPT tube is dislodged, a repeat x-ray must be performed prior to using to confirm the tube is safe to use.

### 3.2.3. Accessing and maintenance of TPT

## Transpyloric Tubes – Insertion and Management (Neonates)

RHW CLIN116

- Transpyloric feeds must always be a continuous infusion.
- Do NOT check pH or residuals for TPT feeds.
- Verify and check feeding order with second RN.
- Gather and prepare equipment.
- Perform hand hygiene.
- Ensure feeds are drawn up in 2-hour volumes only.
- Prime the feeding extension tube with the feed.
- Connect the enteral feeding adaptor to the feeding administration port of the TPT.
- When changing a feed, confirm that the TPT is positioned correct by visually verifying the mark on the TPT at the nose or mouth.
- Schedule a task for TPT flush, 6 hourly with sterile water on eRIC
  - Current weight <1000g 1 mL
  - Current weight >1000g 2 mL
- Change the feeding extension line and enteral feeding adaptors 24 hourly. Schedule task on eRIC for changes.
- Check the nares regularly to ensure skin integrity – try to alternate nares with any re-insertion of the tube

### 3.3.4 Accessing Tube for Medication Administration

- Verify with medical staff that oral medications can be administered via the TPT.
  - If the TPT cannot be used for oral medication administration, a gastric tube should be inserted and used
- Use the side port of the TPT for medication administration and flushing.
- For enteral medication administration:
  - Pause continuous feed, push medication through port and flush dead space with the same volume of sterile water for maintenance flushing.

### 3.3 Documentation

- eRIC

### 3.4 Education Notes

- Regular flushing of TPT has been reported to reduce the intraluminal build-up of product and increase the life and patency of feeding tubes.
- Stopping feeds at least 2 hours prior to TPT insertion aids stomach motility and prevents vomiting.
- Troubleshooting

Potential Problem	Possible Causes	Action
Accidental tube placement or dislodgement	<ul style="list-style-type: none"> <li>• Incorrect position of tube</li> <li>• Tube pulled out or caught</li> <li>• Excessive force</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure the tube is always secured.</li> </ul>

**Transpyloric Tubes – Insertion and Management  
(Neonates)**

**RHW CLIN116**

	<ul style="list-style-type: none"> <li>Severe vomiting or coughing</li> </ul>	<ul style="list-style-type: none"> <li>If frequent tube dislodgement, consider alternative feeding route.</li> </ul>
Tube blockage	<ul style="list-style-type: none"> <li>Infrequent flushing of tube</li> <li>Medications and feed incompatible</li> <li>Feeding tube kinked</li> </ul>	<ul style="list-style-type: none"> <li>Six hourly flushing with water</li> <li>Ensure feeds are not thickened</li> <li>Discuss medication formulations with medical team/pharmacy</li> <li>Check tube for kinks</li> <li>Replace TPT if required</li> </ul>
Vomiting (aspiration risk)	<ul style="list-style-type: none"> <li>Feed administered too quickly</li> <li>Not in correct position during/after feed</li> <li>Feed too cold</li> <li>Gastro oesophageal reflux</li> <li>Constipation</li> </ul>	<ul style="list-style-type: none"> <li>Cease administration of feed</li> <li>During feed, ensure the patient is in semi-upright position of at least 30 degrees</li> <li>Ensure this position is maintained for 30 mins post feed.</li> <li>Ensure feed is warmed in milk warmer.</li> </ul>
'Dumping syndrome'	<ul style="list-style-type: none"> <li>Rapid passage of carbohydrate into the small intestine, i.e. bolus feeding</li> </ul>	<ul style="list-style-type: none"> <li>Only give feeds continuously via TPT</li> <li>Feeds should be assessed for individual tolerance, however, feeds with an osmolality &lt;300mOsm/kg are generally better tolerated as they are iso-osmolar</li> <li>Assess neonate for diarrhoea.</li> </ul>
Diarrhoea	<ul style="list-style-type: none"> <li>Medication side effect</li> <li>Feed given too quickly/too cold</li> <li>Contaminated feed</li> </ul>	<ul style="list-style-type: none"> <li>Check with medical team/pharmacy regarding medication side effects</li> <li>Discuss feed and infusion rate with medical team/dietician</li> <li>Warm feed using milk warmer</li> <li>Ensure hygienic preparation and storage of feeding equipment</li> </ul>

## Transpyloric Tubes – Insertion and Management (Neonates)

RHW CLIN116

### 3.5 Abbreviations

TPT	Transpyloric Tube	CPAP	Continuous Positive Airway Pressure
EBM	Expressed Breast Milk		

### 3.6 Related Policies/procedures

- NCC Nursing CBR - Intragastric Tube Insertion and Maintenance
- NCC Continuous Enteral Feeding

### 3.7 References

1. The Sydney Children's Hospital Network Practice Guideline (2018) Enteral Feeding Tubes and the Administration of Enteral Nutrition.

## 4 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION

- Considerations for culturally safe and appropriate care provision have been made in the development of this Business Rule and will be accounted for in its implementation.
- When clinical risks are identified for an Aboriginal and/or Torres Strait Islander woman or family, they may require additional supports. This may include Aboriginal health professionals such as Aboriginal liaison officers, health workers or other culturally specific services

## 5 CULTURAL SUPPORT

- For a Culturally and Linguistically Diverse CALD woman, notify the nominated cross-cultural health worker during Monday to Friday business hours
- If the woman is from a non-English speaking background, call the interpreter service: NSW Ministry of Health Policy Directive PD2017 044-Interpreters Standard Procedures for Working with Health Care Interpreters.

## 6 NATIONAL STANDARDS

- Standard 2 Partnering with Consumers
- Standard 3 Preventing and Controlling Infection

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**Transpyloric Tubes – Insertion and Management  
(Neonates)**

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**RHW CLIN116**

- Standard 4 Medication Safety
- Standard 5 Comprehensive Care
- Standard 6 Communicating for Safety

## **7 REVISION AND APPROVAL HISTORY**

<b>Date</b>	<b>Revision No.</b>	<b>Author and Approval</b>
15/10/2021	Primary	C. Walter (CNE)
04/11/2024 7.11.2024 18.11.24	2	E.Deibe (CNE/CNS) Endorsed by NCC CBR Committee Endorsed by RHW BRGC