

# GASTROSTOMY DEVICE DISPLACEMENT IN THE EMERGENCY DEPARTMENT - SCH

## PROCEDURE <sup>®</sup>

### DOCUMENT SUMMARY/KEY POINTS

- This document is to be read in conjunction with the following SCHN Policies;
  - [Hand Hygiene](#)
  - [Personal Protective Equipment for Infection Control](#)
  - [Child Life Therapy: Procedure Support](#)
  - [Procedural Sedation in the Emergency Department](#)
  - [Intranasal Fentanyl: Use in the Emergency Department for Pain Relief](#)
- Patients presenting with displaced gastrostomy devices need to be assessed and managed in a timely and appropriate manner
- Assessment and preparation is undertaken in a manner which promotes best practice and causes the least distress to the child and parents/carers
- Timely replacement or re-insertion will minimise the patient length of stay in Emergency Department
- Replacement with a functional and correctly fitting device will reduce the risk of potential complications post discharge and minimise the need for re-presentation
- Replacement of balloon style devices will be done by accredited gastrostomy nurses when appropriate. Replacement of non-balloon devices are excluded from this Practice Guideline.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

<b>Approved by:</b>	Policy, Procedure and Guideline Committee	
<b>Date Effective:</b>	1 <sup>st</sup> November 2021	<b>Review Period:</b> 3 years
<b>Team Leader:</b>	Nurse Practitioner	<b>Area/Dept:</b> Emergency Department SCH

## CHANGE SUMMARY

- Addition of a [video](#) to demonstrate replacement of a balloon gastrostomy device
- Inclusion of cross sectional diagram of device insitu
- Exclusion and Precaution criteria listed
- CNC eMR Orders notification of patient attendance to ED

## READ ACKNOWLEDGEMENT

- SCH Emergency Department clinicians should be aware of this procedure

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## Policy Statement

Paediatric patients with a displaced gastrostomy device presenting to the Emergency Department (ED) will have timely replacement with a suitable balloon gastrostomy device or a temporising tube. This will facilitate treatment and discharge from the ED with a functional device insitu.

## Purpose/Scope

- To promote appropriate timely treatment for children who present to ED with gastrostomy device displacement
- To reduce complications associated with gastrostomy device displacement. These may include:
  - pain and discomfort
  - constriction of stoma (loss of tract patency)
  - loss of gastric content from around the stoma or through the device valve
  - delay in medication administration
  - interruption of feeding regimen
- To expedite treatment of patients who present to the ED with a displaced gastrostomy device

## Responsibilities

The Clinical Initiative Nurse (CIN)/ Registered Nurse (RN) is responsible for ensuring work within scope of practice according to this policy.

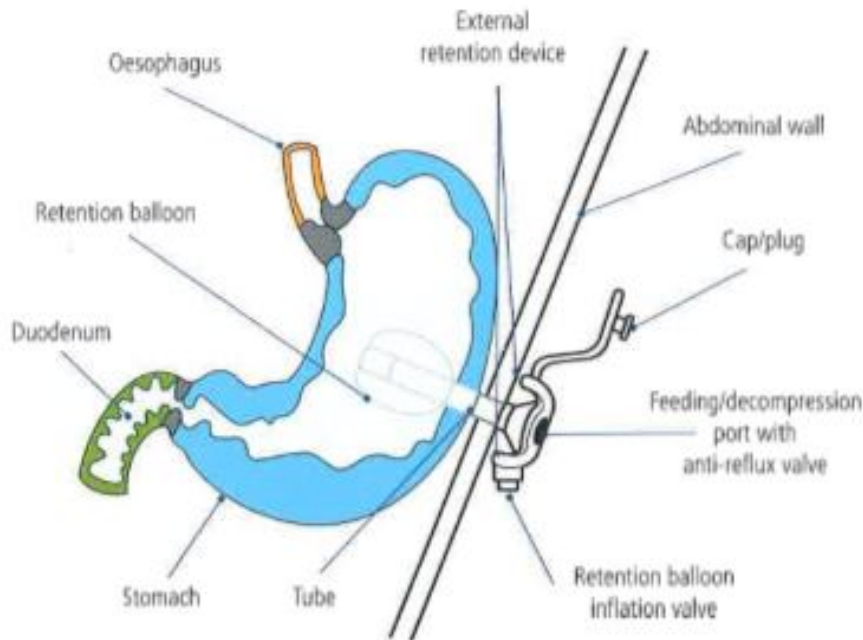
To verify competence a minimum of three supervised gastrostomy device replacements, on patients or under simulation, must be achieved using the SCH ED gastrostomy Clinical Assessment Tool. Accredited assessors include ED nursing education team, Nurse Practitioners or the stoma/surgical CNC. It is the responsibility of the RN to maintain competence and to document gastrostomy replacement interventions.

## Abbreviations and definitions

**Accredited gastrostomy nurse** – An RN who has been trained and assessed for replacement of displaced gastrostomy devices and has been deemed competent by an accredited assessor. An accredited gastrostomy nurse can manage non-complex balloon gastrostomy replacements and the insertion of temporising tubes.

**Enteral tube feeding** – the provision of liquid nutrition via feeding tube or device into the gastrointestinal tract<sup>1</sup>.

**Gastrostomy** – establishment of an opening through the abdominal wall into the stomach<sup>2</sup>. The initial gastrostomy or tube device may be placed endoscopically, surgically or radiologically<sup>4</sup>.



**Gastrostomy feeding tube or device** – a medical tube or device inserted directly through the abdominal wall into the stomach to allow administration of nutrition, fluids and medications<sup>2</sup>.

**Internal retention device** – may also be referred to as internal bolster, balloon, bumper or flange to hold the gastrostomy tube or device against the anterior wall of the stomach which helps prevent accidental removal<sup>4</sup>.

**“Mature” gastrostomy** – a gastrostomy formation procedure was performed more than 30 days prior<sup>4</sup>. Evidence suggests that the tract will be stable and patent after 30 days post device insertion although some clinicians, including SCH surgeons, recommend a period of 6 weeks before maturity is considered<sup>5, 6, 7</sup>.

**Stoma** - an artificial opening or canal between a body organ and the external skin surface<sup>2</sup>.

**Stoma tract length** – the distance of the tract between the gastric wall and skin<sup>4</sup>. (Measure in centimetre markings)

**Temporising Tube** – either a Nelaton tube or Foley catheter which is inserted into the stoma to maintain gastrostomy tract patency<sup>3</sup>.

**Gastro-jejunal or jejunal tube** – a tube inserted through the abdominal wall into the jejunum via the stomach and pylorus or directly into the jejunum.

## Exclusions and Precautions

- Non-balloon gastrostomy devices or tubes
- Gastro-jejunal or jejunal devices
- Constricted stoma tract – see section on 'Insertion of temporising tube'

The following presentations require clinical assessment prior to replacement:-

- Traumatic dislodgement with associated bleeding and/or pain
- Site infection or significant excoriation
- Associated illness or abdominal pain/symptoms
- Extended period of missed medications or feeds
- Clinical concern regarding any related issues

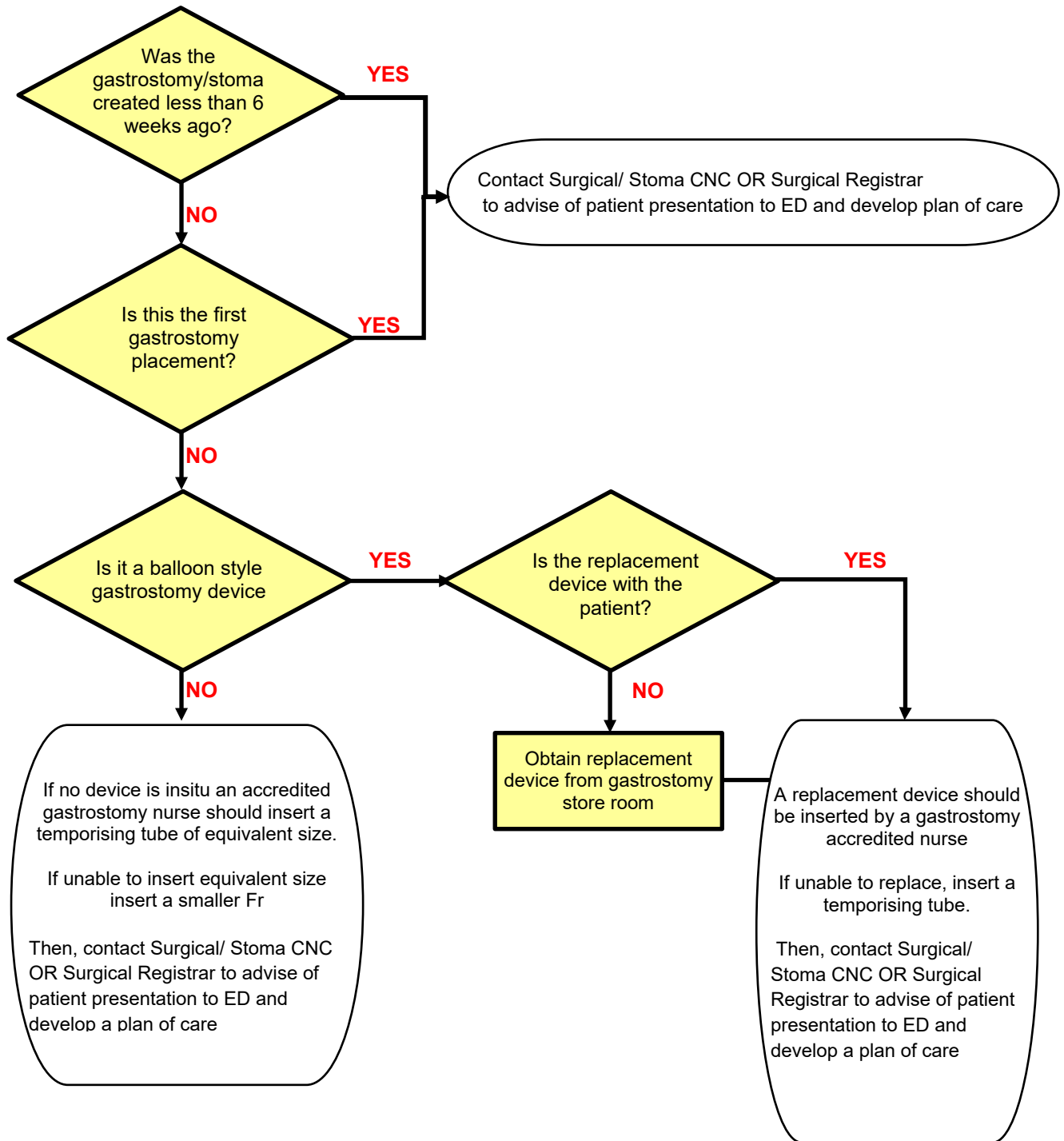
## Assessment/Documentation

The RN must undertake and document a full assessment that includes the following:

- When the initial gastrostomy was surgically formed, and the method if known
- Recognise the required gastrostomy style, size (Fr) and length (cm)
- The Surgical/ Gastroenterology team that manages the patient
- History of device failure/ displacement
- Any complications with previous re-insertions or need for sedation
- Fasting times
- Allergies
- Any significant medical history

## Care Pathway – Displacement of a Gastrostomy Device

**TRIAGE:** Assess clinical presentation. Consider physical compromise, overdue medications & hydration status in assigning triage category. Insertion date of gastrostomy



## Replacement Devices

EnableNSW is a NSW Health support service that provides limited medical equipment and supplies to eligible NSW residents. Balloon gastrostomy devices are available to approved patients on the EnableNSW HEN (Home Enteral Nutrition) program these patients are usually supplied with three replacement gastrostomy devices per calendar year. Alternatively patients may be funded for enteral equipment and supplies through the National Disability Insurance Scheme (NDIS). Therefore parents/carers are encouraged to bring their replacement device on presentation to ED.

### Special Consideration

#### ***Gastrostomy tract less than 6 weeks or first device replacement:-***

Contact Surgical/ Stoma Clinical Nurse Consultant (CNC) during office hours or Surgical Registrar after hours for advice and further instruction.

### Maintaining gastrostomy tract patency in displaced gastrostomy device

In the first instance, a temporising tube can be used to protect and maintain the gastrostomy tract. Aim to insert an equivalent size French Gauge (Fr) tube or catheter as the current/usual gastrostomy device<sup>4</sup>. If unable to easily insert without trauma or significant resistance, reduce the size of the temporising tube.

A Nelaton tube (of equivalent size where possible) can be used as a short term interim measure where definitive device replacement will be delayed by more than 20 minutes<sup>9</sup>. A dedicated gastrostomy device will be inserted prior to the patient leaving the ED.

A Foley catheter<sup>3,5</sup> which is adequately secured and has been confirmed as correctly placed in the stomach, can be used short term for medication or feeding. Arrangements must be made for replacement with a dedicated gastrostomy device within 72 hours of placement or as advised by Surgical Stoma CNC or Surgical Registrar.

If a replacement balloon gastrostomy device has not been provided by the parent/carer on presentation or the displaced device is a non-balloon gastrostomy then a temporising tube can be used until a suitable device can be located.

If a balloon gastrostomy replacement device is supplied by the parent/carer or has been obtained from the SCH Stoma Device Supply Room then an accredited gastrostomy nurse may proceed with re-insertion of the gastrostomy device. The replacement device should be of the same size (Fr) and length (cm).

If a patient presents with a temporising tube insitu then check that the size (Fr) correlates with the size of the usual gastrostomy device.

Consider contacting the Surgical/ Stoma CNC or Surgical Registrar if the temporising tube (Fr) is smaller than the displaced balloon gastrostomy device, as the stoma tract may require dilation.

The Surgical/ Stoma CNC or Surgical Registrar must be advised immediately if the RN is unable to pass a temporising tube through stoma tract, including occasions when smaller temporising tubes have been attempted and tract patency is not maintained.

## Equipment and supplies

- Temporising tube or replacement balloon gastrostomy device
- Non sterile gloves and appropriate Personal Protective Equipment (PPE) as required
- 5mL or 10mL luer slip syringe (to inflate/deflate the balloon port)
- Enteral syringes for balloon device (to aspirate or flush the extension tube)
- Water soluble lubricant
- Lignocaine gel 2% (prescribed)
- Sterile water
- Gauze
- pH indicator
  - Testing of aspirate with universal indicator to ensure pH is less than 5. This method can be unreliable if the patient is on gastric acid suppression medication so volume, colour and appearance of aspirate may be used to assess placement<sup>3,5,8</sup>.
  - If no aspirate is obtained, where appropriate and safe to do so the patient can have oral fluids to produce gastric aspirate return. If unable or unsafe to take oral fluids changing the patient's position i.e. sitting up, turning on side to encourage free flow of aspirate. Alternatively, wait approximately 30 minutes with tube clamped prior to trying to obtain aspirate again, as gastric fluid should have accumulated in that time.

Note: While the gold standard method to confirm the position of a replacement gastrostomy device is radiological contrast study or endoscopy<sup>3</sup>, this may not always be practical or necessary. Testing the pH of gastric content aspirate should be considered in the first instance. Contrast study may be indicated after traumatic dislodgement and/or suspected tract disruption. In these circumstances feeding should be withheld until surgical clearance.



## Procedure – insertion of a temporising tube

A calm, well-planned and sensitive approach that engages assistance from the parent/carer will maximise the chances of cooperation from the patient. Distraction and child life therapy interactions may be useful adjuncts.

- Assess patient for need for sedation / analgesia<sup>4</sup> and provide as needed
- Wash hands and don gloves
- Use appropriate PPE
- Clean around the stoma site with water and then dry
- Topical lignocaine gel 2% may be applied to the site for 1-2 minutes before commencing the procedure to reduce discomfort. It must be prescribed.
- Lubricate the temporising tube tip and/or the stoma
- Gently guide the tube vertically through the stoma, applying even pressure and rotation as the device passes into the tract
- Difficulties encountered due to resistance or inability to insert the temporising tube should have insertion of a smaller diameter (Fr) temporising tube as a first priority in order to preserve the tract patency.<sup>3,4</sup> Advise the Surgical/ Stoma CNC or Surgical Registrar for further instruction.
- Once the temporising tube is inserted, check the position. Aspirate gastric fluid to confirm correct placement in the stomach. Test aspirate with universal indicator to ensure pH is less than 5. Gastric aspirate pH less than 5 may not be achieved if the patient is on gastric acid suppression medication. Therefore volume, colour and appearance of aspirate may be used as indicators <sup>3,5,8</sup>.

When a Foley catheter is used, inflate the retention balloon with the recommended level of water in millilitres (mL). Gently withdraw the catheter until resistance is felt and tape into position (see image). The temporising tube should be secured to the skin with brown non-stretch adhesive tape using “trouser leg” method. (The same technique used in ED to secure endotracheal tubes). Do not tape the tube flat across the stoma due to risk of pressure injury.



Once correct placement is confirmed, a small amount of water or formula should be given via the device to ensure that it is functioning prior to discharging the patient home.

## Procedure: re-insertion of balloon gastrostomy device

A calm, well-planned and sensitive approach that engages assistance from the parent/carer will maximise the chances of cooperation from the patient. Distraction and child life therapy interactions may be useful adjuncts. Refer to the video [Gastrostomy Replacement](#)

- Assess the patient for potential sedation / analgesia<sup>4</sup> and provide as needed
- Wash hands and don gloves
- Use appropriate PPE where required
- Clean around the stoma site with water and then dry
- Topical lignocaine gel 2% may be applied to the site for 1-2 minutes before commencing the procedure to reduce discomfort. It must be prescribed
- Test the replacement balloon gastrostomy device prior to insertion, checking that the balloon inflates evenly and deflates
- Lubricate the replacement balloon gastrostomy device tip and/or the stoma
- Ensure the retention balloon is deflated prior to removal of a malfunctioning gastrostomy device or temporising tube. Gently withdraw the device from the stoma site with slow steady upward traction
- Gently guide the replacement balloon gastrostomy device vertically through the stoma, applying steady, even pressure and rotation as the device passes into the tract. Insertion of the supplied stylet onto the feeding port may reduce the flexibility of the device and assist with insertion. This technique may need to be maintained for a minute or two, particularly if there has been time elapsed since dislodgement or if the child is distressed and has a rigid abdomen.
- If the replacement balloon gastrostomy device is successfully inserted then inflate the balloon with sterile water using a luer slip syringe through the balloon port. The balloon volume should be as printed on the device or as advised by parent/ carer
- Check the position of the balloon gastrostomy device. Connect the extension tube provided within the device kit to the feeding port. **Do not insert any type of syringe directly into the feeding port due to risk of damage to the valve.** Aspirate gastric fluid to confirm correct placement in the stomach. Test gastric aspirate with universal indicator paper to ensure pH is less than 5. Gastric aspirate less than pH 5 may not be achieved if the patient is on gastric acid suppression medication. Therefore volume, colour and appearance of aspirate may be used as indicators <sup>3,5,8</sup>.
- Once correct placement is confirmed, a small amount of water or formula should be given via the device to ensure that it is functioning prior to discharging the patient home.
- Give the parent/carer the accompanying kit for the new device
- Difficulties encountered due to resistance or inability to re-insert the replacement balloon gastrostomy device should have insertion of a smaller diameter (Fr) temporising tube in order to preserve the tract patency. Advise the Surgical/ Stoma CNC or Surgical Registrar for further instruction

Note: if there is any concern or doubt about the position of the replacement balloon gastrostomy device then an ED Medical Officer must be informed and consideration given to performing a radiological contrast study<sup>3,9</sup>.

## Documentation/ Discharge

Ensure the patient medical record progress note (eMR) is updated and includes the following:-

- Procedure details including device type, size, batch/lot number and the method used to confirm position of the gastrostomy device or temporising tube.
- Analgesia or sedation utilised during the procedure
- The child's response to interventions
- Parent/ carer involvement and/or child life therapy/distraction interventions
- Details of discussion or review by the Surgical/Stoma CNC or the Surgical Registrar or ED Medical Officer where relevant
- Discharge plan including advice/ education given to parents/ carers and follow up plan.

The Surgical/Stoma CNC must be advised of the ED presentation, the type of device inserted and procedure information so the database can be updated.

Communication can be via the eMR '**Orders**' link and Add '**Stoma/Surgical CNC**'. The relevant fields will open and details can be entered for both the device and the plan for follow up. The CNC can view in the Multi-Patient task list.

Alternatively an email can be sent directly to the CNC with the relevant patient and device details.

## Related Documents

- [Hand Hygiene](#)
- [Personal Protective Equipment for Infection Control](#)
- [Child Life Therapy: Procedure Support](#)
- [Procedural Sedation in the Emergency Department](#)
- [Intranasal Fentanyl: Use in the Emergency Department for Pain Relief](#)
- ACI Gastroenterology and Nutrition Network's [A Clinician's Guide: Caring for people with gastrostomy tubes and devices](#).

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