

Stoma Management Guideline

1. Purpose

The purpose of this guideline is to establish minimum practice standards for faecal and urinary stoma management throughout the WA Country Health Service (WACHS). This policy does not refer to Gastrostomy (refer to WACHS [Enteral Tubes and Feeding – Adults Clinical Practice Standard](#)) or Tracheostomy management.

Further information relating to specialty areas including Child and Adolescent Health Service (CAHS), Women and Newborn Health Services (WHNS) can be found via [HealthPoint](#).

2. Guideline

Elective stoma formation procedures occur in limited WACHS hospitals, however there is potential for emergency procedures to occur in any WACHS hospital with surgical capabilities.

When caring for a patient with a stoma, seek advice from local Stomal Therapy Nurses (where present), or a Stomal Therapy Nurse from the tertiary hospital that your region is linked to.

- [Appendix A: Stoma Appliance Change Procedure](#).
- [Appendix B: Guideline for High Output Stoma Management](#)
- [Appendix C: High Output Stoma Quick Reference Guide](#)

A stoma is a surgically formed diversion using bowel brought through the abdominal wall diverting either stool or urine. Examples of faecal and urinary stomas include colostomy, ileostomy and urostomy:

- Colostomy: an opening into the colon¹
- Ileostomy: an opening into the ileum¹
- Urostomy: an opening into the urinary tract. The most common being an ileal conduit which is formed to act as a passage for the urine to exit the body¹



Figure 1: A healthy stoma¹

2.1 Pre Stoma Formation Management

Inform the Stomal Therapy Nurse (where accessible) of all patients for potential stoma formation prior to surgery. The Stomal Therapy Nurse will:

- counsel the patient and significant others as appropriate¹⁻⁴
- provide stoma education and support¹⁻⁴
- undertake pre-operative stoma siting¹⁻⁴
- liaise with the surgical team as indicated
- refer to the multidisciplinary team as indicated.

2.1 Bowel Preparation

Administer pre-operative preparation as prescribed by the surgical team. Refer to [WACHS Pre and Post Procedural Management Clinical Practice Standard](#).

2.2 Stoma Observations

Document stoma observations and appliance change in the patient's healthcare record:

- progress notes
- [MR120 WACHS Adult Nursing Care Plan](#)
- [MR144 WACHS Fluid Balance Work Sheet](#) (stoma output).

Frequency	
Immediate Post-operative Period	<ul style="list-style-type: none"> • A visual check of the stoma should be recorded at the same time and frequency as post-op observations.¹⁻⁴ • The nurse is to assess for the presence of a bridge in the initial post-operative period.⁵
Ongoing Stoma Observations	<ul style="list-style-type: none"> • Perform stoma observations a minimum of once each shift and at each appliance change.¹⁻⁴
Established Stoma Observations	<ul style="list-style-type: none"> • At patient's scheduled appliance change.

Report any concerns regarding the health of the stoma to the Shift Coordinator / Stomal Therapy Nurse (where accessible) / Medical Officer (MO).

Colour
<p>A stoma should appear pink/red, moist and shiny in appearance.¹</p> <p>Report pale, dark, dusky or black stoma to the Shift Coordinator / Stomal Therapy Nurse / MO immediately.</p>
Oedema
<p>Observe and report oedema in the presence of colour changes e.g., pale, dark, dusky.¹</p> <p>During the initial post-operative period the stoma may appear oedematous, which is normal, it will decrease in size over 6-8 weeks.¹</p>
Bleeding
<p>Minor bleeding may occur as a result of contact trauma to the stoma; however, this should spontaneously resolve through the application of light pressure.¹</p> <p>Observe and report active bleeding at the stoma or the mucocutaneous junction.¹⁻⁴</p>
Mucocutaneous junction
<p>The mucocutaneous junction is the border between the stoma and the abdominal skin. It should be intact and new stomas may have evenly placed intermittent sutures.¹</p> <p>Sutures are usually dissolvable and will fall out over time.⁵</p> <p>Observe and report any bleeding, disruption, dehiscence or extruding serosal tissue.¹⁻⁴</p>

Peristomal skin

The peristomal skin is the skin immediately surrounding the stoma and should appear similar to the skin on the other side of the abdomen. It should be intact and healthy.⁵⁻⁷

Impaired skin integrity may indicate appliance leakage and requires review by a Stomal Therapy Nurse.

When the appliance has been removed, there may be some transient erythema of the skin. However, it should not remain red or be painful.¹

Assess at every appliance change. Observe, document and report any:

- redness, erythema, rashes, irritation⁵⁻⁷
- impaired skin integrity⁵⁻⁷
- pain/ tenderness⁵⁻⁷

Stoma protrusion

An ideal stoma with liquid output (ileostomy/ileal conduit) should protrude 2–3 cm from skin level to facilitate the effluent draining into the pouch. A colostomy should protrude slightly but may also be flush with the skin as the output is of a thicker, more formed consistency.¹

The degree of stoma protrusion described as:

- Retracted (below skin level). Report any signs of retraction.¹
- Flat/flush.¹

Moderately protruding (1-3 cm).¹

Long/well spouted (>3 cm).¹

- Prolapse, a falling out or telescoping of the bowel through the stoma creates the appearance of a long stoma length.^{1,5}

Effluent produced

Observe and document the volume, colour and consistency of output from the stoma on the fluid balance chart.¹

Other Stoma Related Observations:

Bridges – post op new stoma only

- The plastic or latex bridge is used to support a loop stoma and prevent it from retracting into the abdominal cavity.^{1,5}
- Document if a bridge is present in the integrated progress notes.
- The bridge is only removed by the Stomal Therapy Nurse or clinician experienced in this procedure. It is removed 5-7 days post-surgery, or at the Surgeon's request.¹



Figure 2: Stoma Bridge⁵

Stents (Urostomy / ileal Conduit only)

- Stents extend from the renal pelvis, through the ureters and out through the stoma.^{1,5} They prevent urinary tract obstruction caused by post-operative oedema. Document the presence of stents in stoma.
- Check that stents are draining urine (at least 0.5 mL/kg/hr).
- If stents are not draining urine report to medical staff.
- The stents are only removed by the Stomal Therapy Nurse or clinician experienced in this procedure.



Figure 3: Healthy newly formed ileal conduit with stents in situ⁵

Ileostomy

- Assess for passage of flatus. Flatus is an indication the bowel function is resuming.¹
- Effluent commences as haemoserous or bile stained output.¹ Ileostomy effluent contains large amounts of digestive enzymes and salt.¹ Stool output can be up to 2000 mL in 24 hours but should reduce to 500 mL-1000 mL per 24 hours after the initial post-operative period.¹
- Post-operatively electrolytes are checked daily – or as clinically indicated. The patient with an ileostomy can rapidly become dehydrated and develop major electrolyte imbalances if output is excessive.¹ See [Appendix B: High Output Stoma Management](#).
- If an ileostomy is inactive for 4-6 hours and is accompanied by abdominal discomfort/pain, cramps, distension, nausea and/or vomiting,¹ contact the Stomal Therapy Nurse/MO for urgent review.

Ileostomy obstruction

There are occasions when the ileostomy does not function for short periods of time. This is normal. However, in the presence of other symptoms e.g., abdominal cramps and/or nausea the intestine could be blocked.¹

Ileostomy obstruction is defined as a blockage of the ileostomy, indicated by a partial or complete stoppage of ileal flow.

- Obstruction can be caused by high-residue foods such as fibrous green leafy vegetables, pineapple, nuts, coconut, corn and by internal changes e.g. adhesions.¹
- A partial blockage is characterised by cramping, with an offensive watery output.

Contact the MO/ Stomal Therapy Nurse for management advice. Observe for swelling of the stoma. Actions to resolve include:

Instructing the patient to take a warm bath or shower to relax abdominal muscles, or to change body positioning e.g., knee to chest may encourage movement of bolus of food.¹

Do NOT administer a laxative.¹

Paralytic ileus/small bowel obstruction

Symptoms are more severe and oral fluids generally cannot be tolerated; there may be an absence of flatus. Seek urgent medical attention.¹

Colostomy

- Assess for passage of flatus. Flatus is an indication the bowel function is resuming.¹
- Post operatively output commences as haemoserous fluid but changes to liquid stool, to semi formed and then to a formed stool.¹
- As diet intake increases the output will become thicker and more formed.
- The viscosity of the stool will be dependent on the amount of colon remaining.
- The stoma may not always be active of faecal effluent every day, but there should be signs of flatus in patients with a colostomy. An absence of flatus may indicate a bowel obstruction.¹
- If a colostomy is inactive for more than 24 hours and is accompanied by abdominal discomfort/pain, distention, nausea and/or vomiting contact a Stomal Therapy Nurse/MO for urgent review.¹
- Patients with a colostomy can become constipated and may require aperients. Refer to MO.¹

Urostomy or Ileal Conduit

- Produce urine, clear to straw colour.
- Mucous strands may be present due to the segment of bowel used to create the conduit.¹
- If urine output <0.5 mL/kg/hr over 3 hours, refer to parameters in patient health record and as per medical emergency response (MER) criteria. Contact MO for urgent review.
- The absence of urine from a urostomy/ileal conduit is deemed as an emergency and requires urgent review by the treating team.¹

2.3 Administering Suppositories / Enemas via Colostomy

Medications 'per stoma' may be prescribed on occasion. Seek guidance from a Stomal Therapy Nurse or Medical Officer.



ATTENTION

Do not administer suppositories or enemas via an ileostomy.

Do not perform this procedure on children.

Risks include perforation and bleeding.

2.4 Patient Education

Post Stoma Formation Management

For patients with a new stoma, initial education is typically commenced by a Stomal Therapy Nurse and supported by staff experienced in stoma management. If a Stomal Therapy Nurse is not available, one should be contacted at the tertiary centre that your region is linked to and be notified of the patient with a new stoma to ensure the essential education is provided.¹⁻⁴

Education is provided to the patient and/or carer and/or significant others.

Patient stoma education includes:

- new stoma appliance: preparation, removal, application and disposal
- skin care
- provide advice specific to the type of stoma (e.g., medications, stoma output type and volume)
- dietary advice in relation to type of stoma the patient has. Referral to a dietitian.

Teaching self-care to stoma patients requires a progressive teaching approach:

- Patients are more likely to establish independence with the management of their stoma and regain their confidence if they are provided with preoperative and post-operative education.¹⁻⁴
- Patients should be encouraged to participate in their own stoma care.
- Time and patience are necessary for the patient to assimilate new skills and adjust to the change in their excretory function.¹⁻⁴
- Encourage the patient to check their appliance regularly to prevent overfilling and to check for leaks, and to empty the pouch when one third to half full and/or to release excessive flatus.¹
- Procedures should be made as simple as possible to teach the patient stoma care prior to discharge from hospital.¹

2.5 Discharge Planning

All patients with a newly formed stoma are to be reviewed by a Stomal Therapy Nurse (access from a tertiary hospital that your region is linked to) and/or assisted by staff experienced in stoma management, during hospitalisation and prior to discharge, providing:

- education, training and counselling pertaining to stoma management for the patient and/or carer and/or significant others¹⁻⁴
- specific educational resources
- membership to the WA Ostomy Association and be supplied with the first month's stoma supplies
- follow-up appointments, and any referrals to multidisciplinary teams as indicated.

3. Roles and Responsibilities

Staff are to work within their scope of practice and job role and seek assistance from stomal therapy nurses or from staff experienced in stoma management.

All staff are required to work within policies and guidelines to make sure that WACHS is a safe, equitable and positive place to be.

4. Monitoring and Evaluation

Monitoring will be carried out by Clinical Managers using consumer feedback and clinical incident data. Evaluation of this guideline will be carried out by the review contact. Evaluation methods may include staff feedback / consultation, carer and consumer feedback / consultation and clinical incident reports.

5. References

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6. Definitions

Term	Definition
Colostomy	A large bowel stoma where the colon is diverted to the abdominal surface to pass faeces. Its position along the colon will dictate the output and consistency of faeces but it is usually soft or formed ¹
Enterocutaneous fistula	An abnormal passage that develops between the intestinal tract and the skin. As a result, contents of the intestine leak through to the skin ¹²
High output stoma	High output stoma (HOS) will be defined as stoma output >1500 mL in 24 hours for 2 consecutive days ²⁰
Hypo-osmolar fluids	Fluids low in sodium and excessive consumption will lead to efflux of sodium into the bowel lumen resulting in hyponatremia. For example, water, tea and coffee ³¹
Hyper-osmolar fluids	Fluids that lead to water and sodium losses in effluent via the stoma. For example, fluids high in sugar like commercial soft drinks ¹⁴
Ileostomy	A small bowel stoma where ileum is diverted to the abdominal surface to pass faeces. Average daily output is 600 – 800 mL of loose faeces ¹
Intestinal adaptation	A natural compensatory process that occurs following intestinal resection, whereby structural and functional changes in the intestine improve nutrient and fluid absorption in the remnant bowel ¹⁷
Intestinal failure	A condition characterized by the inability to maintain a state of adequate nutrition, or fluid and electrolyte balance due to an anatomical or a physiological disorder of the gastrointestinal system ¹⁹
Peristomal skin	The skin immediately surrounding the stoma
Short bowel syndrome	Refers to a short length of bowel remaining after resection with reduction of gut function below the minimum necessary to maintain health ³⁰
Urostomy	An opening into the urinary tract. The most common being an ileal conduit which is formed to act as a passage for the urine to exit the body ¹

7. Document Summary

Coverage	WACHS wide
Audience	All clinicians caring for patients with stomas
Records Management	Health Record Management Policy
Related Legislation	Health Services Act 2016 (WA)
Related Mandatory Policies / Frameworks	<ul style="list-style-type: none"> • MP 0095/18 - Clinical Handover Policy • Clinical Governance, Safety and Quality Framework
Related WACHS Policy Documents	<ul style="list-style-type: none"> • Aseptic Technique Policy • Documentation Clinical Practice Standard • Hand Hygiene Policy • Infection Prevention and Control Policy • Personal Protective Equipment Procedure • Pre and Post Procedural Management Clinical Practice Standard
Other Related Documents	Nil
Related Forms	<ul style="list-style-type: none"> • MR120 WACHS Adult Nursing Care Plan • MR144 WACHS Fluid Balance Work Sheet
Related Training Packages	Nil
Aboriginal Health Impact Statement Declaration (ISD)	ISD Record ID: 2962
National Safety and Quality Health Service (NSQHS) Standards	1.27, 5.03
Aged Care Quality Standards	Nil
Chief Psychiatrist's Standards for Clinical Care	Nil
Other Standards	Nil

8. Document Control

Version	Published date	Current from	Summary of changes
4.00	13 January 2025	13 January 2025	<ul style="list-style-type: none"> change of title new quick reference guide links reviewed and updated

9. Approval

Policy Owner	Executive Director Nursing and Midwifery
Co-approver	Executive Director Clinical Excellence
Contact	Stomal Therapist
Business Unit	Bunbury Hospital, WACHS South West
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This document can be made available in alternative formats on request.

Appendix A: Change of Stoma Appliance

New stoma

First appliance change is usually performed 48 - 72 hours post operatively or as soon as possible if the appliance is leaking.

A clear stoma appliance without a filter is used in the post-operative period until the patient has passed flatus.

As there is no filtration system, the appliance will balloon with the presence of flatus, indicating gut motility of the patient with an ileostomy or colostomy.

Once the patient has passed flatus, they can be put in a normal stoma appliance with a filter that is suitable to stoma type. Liaise with a Stomal Therapy Nurse for advice.

For existing stomas liaise with patient to determine frequency of routine appliance changes. Arrange for the patient's own stoma supplies to be brought in from home as soon as possible. If supplies cannot be obtained from home liaise with the Stomal Therapy Nurse.

Staff should practice in alignment with the following WACHS policy documents:

- [Aseptic Technique Policy](#)
- [Hand Hygiene Policy](#)
- [Infection Prevention and Control Policy](#)
- [Personal Protective Equipment Procedure](#).

Equipment:

- An appropriately sized, transparent drainable post-operative pouch to allow for observation of the stoma and its output. For an existing stoma use patients own appliance.
- Stoma measurement guide (found in box of stoma appliances or in the patient's discharge kit)
- Clean scissors
- Warm water
- Receptacle e.g., jug, kidney dish
- Adhesive remover spray / wipes
- Rubbish bag
- Disposable gloves
- Waterproof protective sheet (bluey)
- General purpose disposable cloths
 - Soft to the skin, reduce trauma to the stoma and are easily discarded
 - Do not use pre-moistened wipes. Pre-moistened wipes or baby wipes contain cleansers and alcohol which can prevent the pouching system from adhering.¹



Figure 4: examples of stoma appliances



Figure 5: stoma measurement guide

Patient preparation:

- Explain the procedure(s) to the patient, family and/or carer and gain appropriate consent.
- Promote a positive attitude, negative reactions of staff members can cause the patient anxiety. Psychological and physical adjustment is potentially difficult in the immediate post operatively period.
- Ensure to maintain patient privacy throughout procedure. Assist the patient into a comfortable position in the bed / bathroom / chair (as clinically appropriate).

Stoma appliance change

Procedure	Rationale
1. Perform hand hygiene, apply non-sterile gloves and PPE	Prevent infection
2. Place waterproof protective sheet (bluey) between patient and appliance	Prevents patient soiling during procedure
3. Empty the stoma pouch into receptacle or toilet (if the patient is wearing a drainable pouch) measure and document amount on fluid balance chart	To prevent patient soiling and minimise undue stress to the patient when changing the pouch ¹ To monitor ileostomy output and ensure <1500 mL per 24 hours
4. Remove the used stoma pouch using adhesive remover spray / wipes, starting from the top edge of the pouch, and peel off in a downward direction	Prevents waste matter being leaked unduly onto the patient To protect the peristomal skin from mechanical trauma ¹
5. Place the used stoma pouch in rubbish bag	Stoma pouches are made of plastic, are not biodegradable and should not be flushed down a toilet receptacle
6. Cleanse the stoma and surrounding peristomal skin using warm tap water and a disposable soft cloth	The stoma and peristomal skin are not sterile, tap water is adequate for cleansing ¹
7. Dry around the stoma and peristomal skin with a disposable soft cloth	The peristomal skin needs to be dry to enhance adhesion of new appliance ²
8. Measure stoma size using measuring guide	Determines correct size for cutting the hole in the base plate / stoma pouch
9. Cut the hole in the base plate / stoma pouch 1-2 mm larger than stoma is ok	<ul style="list-style-type: none"> • Base plate / pouch should fit snugly around the stoma so minimal peristomal skin is exposed to effluent • If hole is too big stoma effluent can erode the peristomal skin • If cut too small can cause stoma trauma
10. If using a drainable pouch, close and secure outlet before application	Prevents leakage of pouch content after application

Procedure	Rationale
11. Remove adhesive backing of base plate / pouch and apply the pouch starting at the base of the stoma and then fit over the stoma	Allows collection of effluent if stoma is active during application of base plate / stoma bag Avoids any breach beneath the base plate
12. Ensure the pouch adheres well using gentle pressure and conforms to the peristomal skin ²	Poor adhesion may result in leakage ¹
13. Encourage the patient to place hands over the appliance for a minute	Promotes adhesion of appliance
14. Dispose of used equipment appropriately	Appropriate clinical waste management
15. Ensure the patient is comfortable	Promotes patient wellbeing and adjustment to stoma
<p>16. Document stoma observations and appliance change in the patient's healthcare record:</p> <ul style="list-style-type: none"> • Progress notes • MR120 WACHS Adult Nursing Care Plan • MR144 WACHS Fluid Balance Work Sheet (stoma output) 	<ul style="list-style-type: none"> • Promotes accurate communication between clinicians • Enables identification of changes • Bowel function needs to be recorded

Appendix B: High Output Stoma Management

A high output stoma (HOS) is a complication of stoma formation and can lead to dehydration, electrolyte imbalances, malnutrition, acute renal failure, stoma appliance failure, peristomal skin issues and reduced quality of life for the patient.¹²⁻¹⁴ A HOS most commonly occurs in stomas of the small bowel.¹⁵

The aim is to standardise multidisciplinary team management of the adult patient with a HOS to optimise patient outcomes.



ATTENTION

For the purpose of this guideline a HOS will be defined as stoma output >1500 mL in 24 hours for 2 consecutive days.¹²

When using this definition to guide HOS management, newly formed stomas, stoma type (small or large bowel), intestinal adaptation and remaining length of functional bowel should be taken into consideration.^{14,17,18}

The guideline is also inclusive of managing high fluid losses associated with an enterocutaneous fistula as well as intestinal failure and short bowel syndrome, which can also result in a HOS.^{12,13}

A quick reference guide is available for use by staff – see [Appendix C](#).

If a patient is identified as having a high output stoma (stoma output >1500 mL in 24 hours for 2 consecutive days) implement the following management strategies.

1. Multidisciplinary team referrals

Initial management requires referral to:

- Dietitian – nutrition assessment and, review and manage nutritional requirements, patient education
- Pharmacist - to review and guide medication management
- Stomal therapy nurse - to direct clinical management of the HOS, patient rehabilitation for self-care and stoma, peristomal skin and stoma appliance management
- Medical / surgical team - to determine diagnostic interventions and provide management decisions^{19,20}

2. Determine a definitive diagnosis

Identify and exclude / treat underlying aetiologies, such as:

- intraabdominal sepsis / abscess
- bowel obstruction
- Crohn's disease
- enteritis (e.g., *Clostridium difficile*)
- short bowel syndrome
- ileus
- malabsorption disorders

- chemotherapy treatment with known risk of diarrhoea and intestinal mucositis
- bacterial overgrowth

Exclude potential medication causes such as withdrawal of steroids and opiates, prokinetics, metformin, antibiotics, aperients, high dose magnesium^{11,13,21,22}

3. Record a focused history and examination

- Signs and symptoms of dehydration including thirst / lethargy / muscle weakness and cramps / dry mucous membranes / hypotension / increased heart rate / weight loss / decreased urine output / nausea
- Comorbidities and their management
- Medications
- Fluid balance
- Surgical interventions - consider remaining length of functional bowel^{12,14,23,24}

4. Diagnostic investigations

Medical / Surgical team governance to consider the following when investigating cause and severity of complications experienced by the patient:

- Blood analysis:
 - full blood count (FBC)
 - Serum electrolytes and elements (sodium, potassium, urea, creatinine, calcium, magnesium, phosphate)
 - C-reactive protein
 - Serum albumin
 - Liver function test
- Urine osmolality - urine sodium < 20 mmol/L is a sign of sodium depletion
- Stool analysis – exclude *Clostridium difficile*
- Radiological - consider abdominal x-ray / CT / MRI / bowel contrast fluoroscopy^{12,13}

Initial management

Fluid

- Restrict hypo-osmolar and hyper-osmolar oral fluid intake to 500 – 1000 mL daily
 - provide patient education to ensure the patient understands why a fluid restriction is necessary to assist with adherence and that hypo-osmolar fluids like tea, coffee, fruit juice and alcohol will increase stoma output
- Intravenous therapy to rehydrate^{11,12,16,18,23}

Stoma Management

- Appliance management – high output stoma bag + / - straight drainage
- Observation and protection of peristomal skin
- Wound management if applicable
- Patient education
- Psychological support and refer accordingly, for example social work or psychologist^{13,23}

Nutrition

- Assess nutritional status
- Oral diet: high energy / high protein / low fibre

- Dietitian to provide patient education on frequency of meals and specific foods and fluids to reduce stoma output
- Consider need for oral nutritional supplements, enteral nutrition (EN), peripheral parenteral nutrition (PPN), total parenteral nutrition (TPN) under guidance of dietitian (patients with <100 cm small bowel will require referral to home parenteral nutrition team at a tertiary centre)²⁵

Medications

- Commence opioid antidiarrhoeal - loperamide 2 mg four times a day 30 minutes before meals and before bedtime; open capsule and mix content with small amount of water or food and take orally (do not use antidiarrhoeals if patient has *Clostridium difficile*)
- Monitor and review medications and formulations, to ensure absorption and efficacy^{16,22,26,27,28}

Monitor

- Commence daily strict fluid balance chart
- Daily mane weight
- FBC / urea & electrolytes (U&E) / magnesium
- Supplement electrolytes if required as per blood analysis, medical governance to determine appropriate route of administration
- Review stoma output in 48-72 hours
- If 24-hour output is <1500 mL increase hypo-osmolar and hyper-osmolar oral fluid intake and monitor^{12,16}

Management interventions if stoma output remains >1500 mL in 24hrs

Fluid

- Reduce hypo-osmolar and hyper-osmolar oral fluid intake to 500 mL daily
- Commence oral glucose / electrolyte solution containing > 90 mmol/L sodium
 - oral rehydration salts (e.g. ORS® brand) 4.9 g sachet – make a double strength solution by adding 10 sachets into 1000 mL water or 15 sachets into 1500 mL water, sip over 24 hours (if ORS® brand not available contact pharmacy for suitable alternative)
 - do not add ice but keep chilled for palatability and patient adherence
 - oral rehydration salts need to be charted on the patient’s medication chart
- Continue IV fluids as required
- If HOS persists - review adherence to oral fluid restriction^{12,14,16,18,23}

Nutrition

- Reassessment of nutritional status
- Oral diet: high energy / high protein / low fibre
- Consider need for oral nutritional supplements, EN, PPN or TPN under guidance of dietitian²⁵

Medications

- Increase loperamide to 4 mg four times a day and increase as required up to 16 mg four times a day. Consult with a specialist for doses above 16 mg/day. Recommend baseline ECG with QT interval for doses greater than 16 mg/day
- Commence proton pump inhibitor such as pantoprazole 40 mg daily (intravenous initially then administer orally) to reduce gastric secretions and increase as required.

- If HOS persists:
 - increase loperamide gradually to maximum dose then maintain at maximum dose
 - add codeine 30 mg three times a day before meals, increase up to 60 mg three times a day as required. Check precautions prior to use.^{11,22,26,27}

Monitor

- Continue daily strict fluid balance chart
- Daily mane weight
- FBC / U&E / magnesium
- Supplement electrolytes if required as per blood analysis, medical / surgical team to determine appropriate route of administration
- Review stoma output in 48-72 hours
 - if 24-hour output is <1500 mL increase hypo-osmolar and hyper-osmolar oral fluid intake and monitor

If HOS persists:

Consider referral / consultation to tertiary centre specialist team for ongoing management and additional treatment^{12,15,16}

Appendix C: High Output Stoma Management Quick Reference Guide

High output stoma: Stoma output >1500ml in 24 hours for 2 consecutive days

- Multidisciplinary team referrals
- Determine a definitive diagnosis
- Record a focused history and examination
- Diagnostic investigations^{19,20}

Initial Management

- **Fluid** Restrict hypo-osmolar and hyper-osmolar oral fluid intake to 500 – 1000 mL daily. IV therapy / Pt education.^{11,12,16,18,23}
- **Stoma management** Stomal Therapy Nurse.
- **Nutrition** Oral diet: high energy / high protein / low fibre. Consider need for oral nutritional supplements, enteral nutrition (EN), peripheral parenteral nutrition (PPN) or total parenteral nutrition (TPN).²⁵
- **Medications** Commence opioid antidiarrhoeal - **loperamide 2 mg four times a day** 30 minutes before meals/snacks, open capsule and mix content with small amount of water or food and take orally (do not use antidiarrhoeals if patient has *Clostridium difficile*).^{16,22,27}
- **Monitor** If 24 hour output is <1500 mL increase hypo-osmolar and hyper-osmolar oral fluid intake and monitor.^{12,16}

Stoma output remains >1500ml in 24hrs

- **Fluid** Reduce hypo-osmolar and hyper-osmolar oral fluid intake to 500 mL daily. Commence oral glucose / electrolyte solution containing > 90 mmol/L sodium. Oral rehydration salts (e.g. ORS® brand) 4.9 g sachet – make a double strength solution by adding 10 sachets into 1000 mL water or 15 sachets into 1500 mL water, sip over 24 hours^{12,14,16,18,23}
- **Nutrition** Reassessment of nutritional status.
- **Medications** Increase **loperamide to 4 mg four times a day and increase as required up to 16 mg four times a day**. Consult with a specialist for doses above 16 mg/day. Recommend baseline ECG with QT interval for doses greater than 16 mg/day
- Commence proton pump inhibitor such as **pantoprazole 40 mg daily** (intravenous initially then administer orally) to reduce gastric secretions, increase as required.^{15,22,26,27}
- **If HOS persists** increase loperamide gradually to maximum dose then maintain at maximum dose. Add **codeine 30 mg three times a day** before meals, increase up to 60 mg three times a day as required. Check precautions prior to use.^{11,22,26,27}
- **Monitor** Review stoma output in 48-72 hours
If 24 hour output is <1500 mL increase hypo-osmolar and hyper-osmolar oral fluid intake and monitor.
- **If HOS persists consider referral / consultation to tertiary centre specialist team for ongoing management and additional treatment**^{12,15,16}