



# Stoma Management Clinical Practice Standard

## 1. Purpose

The purpose of this policy is to establish minimum practice standards for faecal and urinary stoma management throughout the WA Country Health Service (WACHS).

Removing unwanted variation in clinical practice and following best practice guidelines has been found to reduce inappropriate care (overuse, misuse and underuse) thus improving health outcomes, reducing preventable harm and decreasing wastage.

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. Scope

All medical, nursing, midwifery and allied health staff employed within the WACHS.

All health care professionals are to work within their scope of practice appropriate to their level of training and responsibility. Further information may be found via [HealthPoint](#) or the [Australian Health Practitioner Regulation Agency](#).

## 3. Procedural Information

Where care requires specific procedures that may vary in practice across sites, staff are to seek senior clinician advice.

- [Appendix 1: Stoma Appliance Change Procedure.](#)
- [Appendix 2: Guideline for High Output Stoma Management](#)

## 4. Mandatory Considerations

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 a tertiary hospital that your region is linked to.

## 5. General Information

A stoma is a surgically formed fistula. Examples of faecal and urinary stomas include:

- Colostomy: an opening into the colon
- Ileostomy: an opening into the ileum
- 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<sup>1</sup>



A healthy stoma<sup>2</sup>

## 6. Pre stoma formation management

- Inform the Stomal Therapy Nurse (where present) of all patients for potential stoma formation prior to surgery. The Stomal Therapy Nurse will:
  - Counsel the patient and significant others as appropriate
  - Provide education and support<sup>3, 4</sup>
  - Undertake pre-operative stoma siting
  - Liaise with the surgical team as indicated

### Bowel Preparation

- Administer pre-operative preparation as prescribed by surgical team
- Refer to WACHS Procedural Management - Immediate Pre and Post Care Clinical Practice Standard

## 7. Patient Monitoring

Conducting a stoma assessment will identify specific symptoms and considerations which may require specialised interventions.

An individualised management plan is to be documented in the patient's health records as soon as practicable – within 24 hours, taking into consideration the specific requirements for clinical risk mitigation, prevention and management. At a minimum, the plan must consider:

- Patient history and presence of comorbidities
- Diagnosis and treatments for clinical conditions
- Medications, psychosocial and cultural factors that could influence patient monitoring
- Frequency and type of specific observations (stoma observations) and identification / recording of any specific parameter deviations to be accepted as normal for the patient
- Site requirements, patient education and consent e.g. any restrictions to interventions associated with advance health directives (AHD) or similar

## 8. Stoma Observations

### Stoma Observation: Frequency

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



### Stoma Observations: Characteristics

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

<b>Colour</b>
<p>A stoma should appear pink/red, moist and shiny in appearance.<sup>6</sup></p> <p>Report pale, dark, dusky or black stoma's to the Shift Coordinator/Stomal Therapy Nurse/MO immediately.</p>
<b>Oedema</b>
<p>Observe and report oedema in the presence of colour changes e.g. pale, dark, dusky.</p> <p>During the initial post-operative period the stoma may appear oedematous but it will decrease in size over 6-8 weeks.<sup>6</sup></p>
<b>Bleeding</b>
<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.<sup>7, 8</sup></p> <p>Observe and report active bleeding at the stoma or the mucocutaneous junction.</p>
<b>Mucocutaneous Junction</b>
<p>The mucocutaneous junction is the border between the stoma and the abdominal skin. It should be intact and new stomas will have evenly placed intermittent sutures.<sup>8</sup></p> <p>Sutures are usually dissolvable and will fall out over time.</p> <p>Observe and report any disruption, dehiscence or extruding serosal tissue.<sup>8</sup></p>

<b>Peristomal Skin</b>
<p>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.<sup>9-11</sup></p> <p>Impaired skin integrity may indicate appliance leakage and requires review.</p> <p>When the appliance has been removed, there may be some transient erythema. However it should not remain red nor be painful.<sup>5, 11</sup></p> <p>Assess at first and every subsequent appliance change. Observe, document and report any:</p> <ul style="list-style-type: none"><li>• Redness<sup>6</sup>, erythema, rashes, irritation</li><li>• Impaired skin integrity<sup>9</sup></li><li>• Pain/ tenderness<sup>10</sup></li></ul>
<b>Protrusion</b>
<p>An ideal stoma should protrude 2-2.5cm from skin level to facilitate effluent draining into the pouch.<sup>8, 12</sup> Stoma retraction is when the stoma lies beneath the level of the skin.<sup>13</sup></p> <p>The degree of stoma protrusion described as:</p> <ul style="list-style-type: none"><li>• Retracted (below skin level).<sup>8, 12</sup> Report any signs of retraction<sup>13</sup></li><li>• Flat/flush</li><li>• Moderately protruding (1-3cms)</li><li>• Long/well spouted (&gt;3cm)</li><li>• Prolapsed,<sup>13, 14</sup> a falling out or telescoping of the bowel through the stoma creates the appearance of a long stoma length<sup>6, 11</sup></li></ul>
<b>Effluent Produced</b>
<p>Observe and document the volume, colour and consistency of output from the stoma.</p>

### Specific Stoma Characteristics

Bridges – post op new stoma only	
<ul style="list-style-type: none"> <li>• The plastic or latex bridge is used to support a loop stoma and prevent it from retracting into the abdominal cavity.</li> <li>• Document if a bridge is present in the integrated progress notes.</li> <li>• The bridge is only removed by the Stomal Therapy Nurse or Clinician experienced in this procedure, after 5-7 days post-surgery, or at the Surgeon's request.</li> </ul>	
Stomal Bridge <sup>15</sup>	
Stents (Urostomy / ileal Conduit only)	
<ul style="list-style-type: none"> <li>• Stents extend from the renal pelvis, through the ureters and out through the stoma.<sup>8</sup> They prevent urinary tract obstruction caused by post-operative oedema. Document the presence of stents in stoma.</li> <li>• Check that stents are draining urine (at least 0.5ml/kg/hr).</li> <li>• If stents are not draining urine report to medical staff.</li> </ul>	
Ileostomy	
<ul style="list-style-type: none"> <li>• Assess for passage of flatus. Flatus is an indication the bowel function is resuming.<sup>16</sup></li> <li>• Effluent commences as haemoserous or bile stained output.<sup>17, 18</sup> Ileostomy effluent contains large amounts of digestive enzymes and salt.<sup>14</sup> Stool output can be up to 2000mL in 24hours but should reduce to 500mL-1000mL per 24hours after the initial post-operative period.<sup>16</sup></li> <li>• 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.<sup>14, 16</sup> See appendix 2: Guideline for High output Stoma Management.</li> <li>• If an ileostomy is inactive for 4-6 hours and is accompanied by abdominal discomfort/pain, cramps, distension, nausea and/or vomiting,<sup>19</sup> contact the Stomal Therapy Nurse/MO for urgent review.<sup>11</sup></li> </ul>	

### 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. Ileostomy obstruction is defined as a blockage of the ileostomy, indicated by a partial or complete stoppage of ileal flow.<sup>20</sup>

- 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.<sup>21</sup>
- 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.
- Do NOT administer a laxative.<sup>22</sup>

### Paralytic Ileus/Small Bowel Obstruction

- Symptoms are more severe and oral fluids generally cannot be tolerated; may be an absence of flatus. Seek urgent medical attention.<sup>11, 14, 20</sup>

### Colostomy

- Assess for passage of flatus. Flatus is an indication the bowel function is resuming.<sup>16</sup>
- Post operatively output commences as haemoserous fluid but changes to liquid stool, to semi formed and then to a formed stool.<sup>5</sup>
- 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.<sup>20</sup>
- 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.
- Patients with a colostomy can become constipated and may require aperients. Refer to MO.

### 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.<sup>5, 16</sup>
- If urine output <0.5ml/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.<sup>6</sup>

## 9. 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 notified of the patient with a new stoma to ensure the essential education is provided. Education is provided to the patient and/or carer and/or significant others.

Patient stoma education includes:

- New stoma appliance: preparation, application and disposal
- Skin care
- Dietary advice. Referral to a dietitian would assist the patient in making positive food choices that would help them with managing their stoma more effectively, especially with ileostomies.<sup>17, 21</sup>

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<sup>3</sup>
- Patients should be encouraged to participate in their own stoma care
- Time and patience is necessary for the patient to assimilate new skills and adjust to the change in their excretory function<sup>9, 16</sup>
- 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
- Procedures should be made as simple as possible so as to teach the patient the minimum skills prior to discharge from hospital
- Provide advice specific to the type of stoma (e.g. regarding medications, expected output volume)

### **Stoma Counselling**

- Counselling for patients with a new stoma post procedure is usually performed by the Stomal Therapy Nurse (when available), staff experienced in stoma management or the Medical Officer
- Education and counselling may overlap however the Stomal Therapy Nurse is experienced in management of any issues relating to stoma management

### **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), 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 others
- 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

## **10. Clinical Communication**

### **Clinical Handover**

Information exchange is to adhere to the WA Health Clinical Handover Policy using the iSoBAR framework.

### **Critical Information**

Critical information, concerns or risks about a consumer are communicated in a timely manner to clinicians who can make decisions about the care.

### **Documentation**

Refer to WACHS Documentation CPS.

All stoma observations and stoma appliance changes are to be documented/ updated as appropriate in the:

- Patient integrated notes
- Patient care plan
- Fluid Balance Chart (stoma output)

### **Patient/Carer information**

Provided by the Stomal Therapy Nurse (when available), staff experienced in stoma management or Medical Officer.



## 11. Compliance Monitoring

Failure to comply with this policy document may constitute a breach of the WA Health system Code of Conduct (Code). The Code is part of the [Employment Policy Framework](#) issued pursuant to section 26 of the [Health Services Act 2016](#) (WA) and is binding on all WACHS staff which for this purpose includes trainees, students, volunteers, researchers, contractors for service (including all visiting health professionals and agency staff) and persons delivering training or education within WACHS.

WACHS staff are reminded that compliance with all policies is mandatory.

## 12. Relevant Legislation

Accessible via: Government of Western Australia ([State Law Publisher](#) or [ComLaw](#))

- *Health Practitioner Regulation National Law Act 2010* (WA)

## 13. Relevant Standards

[National Safety and Quality Health Service Standards](#)

Clinical Governance Standard: 1.27

## 14. Related WA Health Policies

OD0611/15 [Clinical Incident Management Policy](#)

MP0095/18 [Clinical Handover Policy](#)

MP0086/18 [Recognising and Responding to Acute Deterioration Policy](#)

OD0657/16 [WA Health Consent to Treatment Policy](#)

## 15. Relevant WACHS Policy Documents

[Documentation Clinical Practice Standard](#)

[Enteral Tubes and Feeding – Adults Clinical Practice Standard](#)

[Infection Prevention and Control Policy](#)

[Procedural Management - Immediate Pre and Post Care](#)

## 16. WA Health Policy Framework

[Clinical Governance, Safety and Quality](#)

## 17. Acknowledgement

Acknowledgment is made of the previous SMHS / WACHS site endorsed work used to compile this Stoma Management Clinical Practice Standard.

## 18. References

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## 19. Definitions

<b>Carer</b>	Carers provide unpaid care and support to family members and friends who have a disability, mental illness, chronic condition, terminal illness, an alcohol or other drug issue or who are frail aged (Carers Australia, 2015)
<b>Patient</b>	A person who is receiving care in a health service organisation

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<b>Contact:</b>	Clinical Nurse Specialist Stomal Therapy / Wound Management (F. Jones)		
<b>Directorate:</b>	Medical Services	<b>TRIM Record #</b>	ED-CO-15-94083
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## Appendix 1: Stoma Appliance Change Procedure

First appliance change is usually performed 48 - 72 hours post operatively or if the appliance is leaking. Liaise with a Stomal Therapy Nurse for advice.

Ensure to use a clear stoma appliance without a filter 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 select the stoma appliance best suited to clinical requirements, products available and patient preference.

**For existing stomas** liaise with patient to determine frequency of routine appliance changes.

### Equipment:

- An appropriately sized, transparent drainable post-operative pouch to allow for observation of the stoma and its output. For existing stoma use patient's 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
- Rubbish bag
- Disposable gloves
- Waterproof protective sheet (bluey)
- General purpose disposable cloths or good quality paper towel or tissues
  - 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<sup>16, 18</sup>
- Select appropriate PPE
  - Staff are to comply with the specific requirements for hand hygiene, aseptic non-touch technique and personal protective equipment, in alignment with the WACHS Infection Prevention and Control Policy.



Pre Procedure: Stoma Appliance Change Patient Preparation

- Ensure to 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 operative period<sup>22</sup>
- Ensure to maintain patient privacy throughout procedure. Assist the patient into a comfortable position in the bed or chair (as clinically appropriate).

**Procedure: Stoma Appliance Change**

Procedure	Rationale
1. Perform hand hygiene, apply non-sterile gloves and PPE as per standard precautions	Adheres to infection control requirements
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 <b>drainable</b> pouch)	To prevent patient soiling and minimise undue stress to the patient when changing the pouch <sup>11, 17</sup>
4. Remove the used stoma pouch, starting from the top edge of the pouch, and peel off in a downward direction	Prevents waste matter being leaked unduly onto the patient <sup>19</sup>
5. Press the peristomal skin away from the base plate while removing the appliance. If this is uncomfortable, use an adhesive remover wipe or spray	To protect the peristomal skin from mechanical trauma <sup>10</sup>
6. Place the used stoma pouch in rubbish bag, and discard in the general refuse bin at end of change	Stoma pouches are made of plastic, are not biodegradable and should not be flushed down a toilet receptacle
7. If gloves are soiled, remove, perform hand hygiene and reapply clean gloves	Adheres to infection control requirements



<p><b>8.</b> Cleanse the stoma and surrounding peristomal skin using warm tap water and a disposable soft cloth, paper towel or tissues (Do NOT use a face cloth or towel)</p>	<p>The stoma and peristomal skin is not sterile, tap water is adequate for cleansing<sup>2</sup></p>
<p><b>9.</b> Dry carefully around the stoma and peristomal skin with a disposable soft cloth, paper towel or tissues</p>	<p>The peristomal skin needs to be dry to enhance adhesion of new appliance<sup>2</sup></p>
<p><b>10.</b> Remove, discard PPE and perform hand hygiene. Reapply clean gloves</p>	<p>Adheres to infection control requirements</p>
<p><b>11.</b> Measure stoma size using measuring guide</p>	<p>Determines correct size for cutting the aperture / hole in the base plate / stoma bag</p>
<p><b>12.</b> Cut the aperture / hole in the base plate / stoma bag</p>	<ul style="list-style-type: none"> <li>• Base plate / bag should fit snugly around the stoma so minimal peristomal skin is exposed to effluent</li> <li>• If aperture/hole is too big stoma effluent can erode the peristomal skin</li> <li>• If cut too small can cause stoma trauma</li> </ul>
<p><b>13.</b> Run finger around inside of cut edge of base plate / stoma bag</p>	<p>Smooths sharp edges that may cause trauma to stoma</p>
<p><b>14.</b> If using a drainable pouch, close and secure outlet before application</p>	<p>Prevents leakage of pouch content after application</p>
<p><b>15.</b> Remove adhesive backing and apply the pouch starting at the base of the stoma and then fit over the stoma</p>	<ul style="list-style-type: none"> <li>• Allows collection of effluent if stoma is active during application of base plate / stoma bag</li> <li>• Avoids any breach beneath the base plate</li> </ul>
<p><b>16.</b> Ensure the pouch adheres well using gentle pressure and conforms to the peristomal skin<sup>2</sup></p>	<p>Poor adhesion may result in leakage<sup>16</sup></p>

<p><b>17.</b> Encourage the patient to place hand or a warm towel over the appliance and not to bend in the middle for 10 minutes post application<sup>2, 11</sup></p>	<p>Promotes adhesion of appliance</p>
<p><b>18.</b> Dispose of used equipment and PPE appropriately</p>	<p>Adheres to infection control requirements</p>
<p><b>19.</b> Ensure the patient is comfortable</p>	<p>Promotes patient wellbeing and adjustment to stoma</p>
<p><b>20.</b> Document <b>stoma observations</b> and <b>appliance change</b>:</p> <ul style="list-style-type: none"> <li>• Patient integrated notes</li> <li>• Patient / Nursing Care Plan (update as necessary)</li> <li>• Fluid Balance Chart (output)</li> </ul>	<ul style="list-style-type: none"> <li>• Promotes accurate communication between clinicians</li> <li>• Enables identification of changes</li> </ul>



## Appendix 2: Guideline for 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.<sup>23-25</sup> A HOS most commonly occurs in stomas of the small bowel.<sup>26</sup>

The aim of the guideline is to standardise multidisciplinary team management of the adult patient with a HOS to optimise patient outcomes.<sup>27, 28</sup>

For the purpose of this clinical practice guideline a HOS will be defined as stoma output >1500ml in 24 hours for 2 consecutive days.<sup>29</sup>

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.<sup>25, 30, 31</sup>

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.<sup>23, 24</sup>

**If a patient is identified as having a high output stoma:  
Stoma output >1500ml 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 medical governance management decisions<sup>4, 32, 33</sup>

## 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<sup>24, 34, 35</sup>

## 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<sup>23, 25, 36, 37</sup>

## 4. Diagnostic Investigations

Medical 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<sup>23, 24</sup>

## 1. Initial Management

### Fluid

- Restrict hypo-osmolar and hyper-osmolar oral fluid intake to 500 - 1000ml daily
  - Provide patient education to ensure the patient understands why a fluid restriction is necessary to assist with compliance and that hypo-osmolar fluids like tea, coffee, fruit juice and alcohol will increase stoma output
- Intravenous therapy (IVT) to rehydrate<sup>23, 29, 31, 36</sup>

### 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<sup>4, 24, 36</sup>

### 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) or total parenteral nutrition (TPN) under guidance of dietitian (patients with <100cm small bowel will require referral to home parenteral nutrition team at a tertiary centre)<sup>38-41</sup>

### Medications

- Commence opioid antidiarrhoeal - loperamide 2mg QID 30 minutes before meals, 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<sup>29, 35, 42</sup>

### Monitor

- Commence daily strict fluid balance chart
- Daily mane weight
- FBC / urea & electrolytes (U&E) / magnesium (Mg<sup>+</sup>)
- 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 <1500ml increase hypo-osmolar and hyper-osmolar oral fluid intake and monitor<sup>23, 26, 29</sup>

## 2. Management Interventions if Stoma Output Remains >1500ml in 24hrs

### Fluid

- Reduce hypo-osmolar and hyper-osmolar oral fluid intake to 500ml daily
- Commence oral glucose / electrolyte solution containing > 90 mmol/L sodium
  - Double strength oral rehydration salts (ORS) 4.9g sachet - 10 sachets in 1L water or 15 sachets in 1.5L, sip over 24hours
  - Do not add ice but keep chilled for palatability and patient compliance
  - ORS needs to be charted on the patient's medication chart
- Continue IV fluids as required
- If HOS persists:
  - Review compliance to oral fluid restriction<sup>23, 25, 29, 31, 36</sup>

### Nutrition

- Reassessment of nutritional status
- Oral diet: high energy / high protein / low fibre
- Consider need for oral nutritional supplements, enteral nutrition (EN) or total parenteral nutrition (TPN) under guidance of dietitian<sup>38-41</sup>

### Medications

- Increase loperamide to 4mg QID and increase as required up to 16mg QID
- 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:
  - Maintain loperamide if at maximum dose or increase gradually to maximum dose
  - Add codeine 30mg three times daily (TDS) before meals, increase up to 60mg as required and ensure there are no contraindications to use<sup>26, 35, 42</sup>

### Monitor

- Continue daily strict fluid balance chart
- Daily mane weight
- FBC / U&E / Mg<sup>+</sup>
- 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 <1500ml 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<sup>23, 26, 29</sup>

Ileostomy	A small bowel stoma where ileum is diverted to the abdominal surface to pass faeces. Average daily output is 600 – 800ml of loose faeces <sup>43</sup>
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 <sup>43</sup>
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 <sup>23</sup>
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” <sup>32</sup>
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 <sup>44</sup>
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 <sup>30</sup>
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 <sup>45</sup>
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 <sup>25</sup>