

## Statement:

Patient has a stoma output of >1500mls/24hours (Oke et al 2018).  
 Patient is experiencing increased frequency in emptying appliance.  
 Stoma output is a watery consistency.

## Structure:

- The symptoms of high output stoma (HOS) are recognised and appropriate action is taken within 24 hours
- Patients with a high intestinal fluid loss either following surgery or periodically in the long term are managed effectively to:
  - Reduce intestinal loss
  - Manage any electrolyte imbalance and dehydration secondary to the high output
  - Prevent poor skin integrity due to appliance leakage
  - Re-establish effective bowel function and prevent further complication
  - Ensure that advice and treatment offered is consistent and research-based.
- Prioritise actions appropriately:
  - Actions within 12 hours
  - Actions within 24 hours
  - Actions after the first 24 hours.

## Process:

- Assess the patient for signs of dehydration

Does the patient feel:	Does the patient have:
Thirsty	Postural systolic hypotension
Dry (mucous membranes, skin turgor)	Low volume of concentrated urine
Lethargic	Dry mucous membranes
Faint	Reduced skin turgor
Muscle weakness/cramps	Rapid reduction in body weight
Headache	Serum electrolytes of Low Sodium (Na), Low potassium (K), Low Magnesium (Mg)
	High creatinine/urea

## Actions within 12 hours:

- Assess for potential causes of high-output stoma such as sepsis, obstruction (including partial or intermittent), inflammatory bowel disease flare, physical short small bowel length, malabsorption disorders (Abada et al 2017, Stankiewicz et al 2019, Villafranca et al 2015)
- Assess for medication related causes such as prokinetics (i.e. metoclopramide, laxatives, erythromycin), metformin, abrupt withdrawal of corticosteroids or opiates (Abada et al 2017, Stankiewicz et al 2019, Villafranca et al 2015) Perform a Urine Sodium test
- Check blood biochemistry (Na/K/Mg/Creatinine)
- Ask the patient/carer to monitor oral input/ fluid output
- Consider stopping NSAIDs
- Stop laxatives
- Start lopermide 2-4mg 4x daily (Villafranca et al 2015) - 45 mins before meals and at night (Gabe and Slater 2013)
- Omeprazole 40mg twice daily NOTE long-term use may not provide benefit and may deplete magnesium level (Appleton et al 2014)
- Hypotonic oral fluid restriction such as water, tea, coffee, juice, carbonated drinks, restriction (500-1000mls/24hrs), (Adaba et al 2017, Nightingale and Woodward 2006, Stankiewicz et al 2019)

*Continued on next page*



## High Output Stoma management - Community setting (*continued*)

- Low fibre meals
- Avoid drinking at the same time as eating
- Consider increasing salt intake while high-output continues (Stankiewicz et al 2019, Villafranca et al 2015)
- Send stool specimen for microscopy, culture and sensitivity (MC&S) (Only test for C Difficile toxin if increased output cannot be attributed to any other cause, or is suspected)
- Inform GP
- Ensure the patient is wearing an appropriate appliance to reduce the risk of leakage
- Apply a high output stoma bag (available via local stoma care department) for continuous drainage and check peristomal skin for signs of breakdown.

### Actions within 24 hours:

- Daily reassessment of stoma output
- Recheck blood biochemistry
- Review medication
- The dose of Loperamide can be increased on medical advice; until output is 1200mls/24hrs (Nightingale 2001) Loperamide in tablet form is preferable
- Consider use of codeine phosphate 30mg tds/120-480mg day (Forbes, 2007)
- Consider review by medical staff for octreotide
- Review stool specimen result
- Introduction of isotonic fluids such as electrolyte mix with dietetic guidance  
20g (six level 5ml spoonful) of Glucose  
2.5g (one heaped 2.5ml spoonful) of Sodium Bicarbonate (baking soda)  
3.5g (one level 5 ml spoonful) of Sodium Chloride (salt) in 1litre of tap water  
OR Double Strength Dioralyte – 2 sachets in 200-300mls water. (Caution is needed due to the potassium in the dioralyte. For people with an ileostomy and a normal renal function bloods should be tested after 2 weeks to check potassium and magnesium level. For people with a high output colostomy or renal impairments need greater caution).
- Explain rationale of isotonic fluid to patient to encourage compliance. To improve the taste, keep solution cold, sip through a straw and/or add a small amount of squash such as lime cordial.
- Check adhesion of stoma appliance
- Refer to gastroenterology team if cause of HOS is not apparent.

### Actions after the first 24 hours:

- Weigh patient daily (weight reduction can indicate dehydration).

### Outcome:

The patient states they feel comfortable and well hydrated.

The stoma output is contained effectively and skin integrity is maintained.

The cause of the high output stoma is established.



## References for high-output Stoma

Adaba, F., Vaizey, C.J. and Warusavitarne, J. (2017) Management of Intestinal Failure: The High-Output Enterostomy and Enterocutaneous Fistula. *Clinics in Colon and Rectal Surgery*. 30:215–222.

Appleton, N.D., Neithercut, W.D., Edwards, C., Duncan, M., Walsh, C.J. (2014) Management of patients with high output stomas and enterocutaneous fistulae: Do proton pump inhibitors really help? *European Society for Clinical Nutrition and Metabolism*. 9: e136-140. Available at: <http://dx.doi.org/10.1016/j.clnme.2014.04.002>.

Forbes, A. (2001) *Inflammatory Bowel Disease: a Clinician's Guide*. 2nd edn. Arnold. London.

Gabe, S., and Slater, R. (2013) Managing high-output stomas: module 1 of 3. *British Journal of Nursing*. 22(5): S26-S30.

Nightingale, J., Woodward, J.M. (2006) Guidelines for management of patients with a short bowel. *Gut*. 55 (Suppl IV): iv1-iv12. Available at: <https://doi:10.1136/gut.2006.091108>.

Nightingale, J. (2001) (Ed) *Intestinal Failure management of a high output stoma*. Greenwich Medical Media. pp.375 -392.

Oke, S.M., Nightingale, J.M., and Gabe, S.N. (2018) Mistakes in short bowel and how to avoid them. *UEG Education* 7–11.

Stankiewicz, M., Gordon, J., Rivera, J., Khoo, A., Nessen, A. and Goodwin, M. (2019) Clinical management of ileostomy high-output stomas to prevent electrolyte disturbance, dehydration and acute kidney injury: a quality improvement activity. *Journal of Stomal Therapy Australia*. 39(1):8-10.

Villafranca, J.J.A., López-Rodríguez, C., Abilés, J., Rivera, R., Adán, N.G. and Navarro, P.U. (2015) Protocol for the detection and nutritional management of high-output stomas. *Nutrition Journal*. 14:45. Available at: <https://DOI10.1186/s12937-015-0034-z>.

### Suggested reading

Villafranca, J.J.A., López-Rodríguez, C., Abilés, J., Rivera, R., Adán, N.G. and Navarro, P.U. (2015) Protocol for the detection and nutritional management of high-output stomas. *Nutrition Journal*. 14:45. Available at: <https://DOI10.1186/s12937-015-0034-z>.