Development of a clinical tool on the management of high ileostomy output for hospitalized patients

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1 Introduction

According to the Ostomy Canada Society, over 150,000 Canadians live with an ostomy. Of these patients, many will likely be admitted to hospitals where very few clinicians possess the necessary tools and knowledge to provide adequate care to these patients. Patients with an ileostomy in particular bear an increased risk of high output stomas, which can lead to serious complications, such as dehydration and acute kidney injury. To support healthcare professionals in providing safer and more effective care for patients with an ileostomy, members of the *Regroupement de pharmaciens experts en chirurgie* of the *Association des pharmaciens des établissements de santé du Québec* (A.P.E.S.), a professional group of clinical pharmacist experts in surgery, developed a clinical tool on the management of ileostomy output for hospitalised patients.

2 Aims

Clinicians often lack structured guidance for managing high output ileostomies. This tool fills that gap with evidence-based, practical recommendations. The goals of the clinical tool are as follows:

- Group evidence-based information in one tool.
- Educate clinicians on stoma types and their impact on output.
- Present non-pharmacological and pharmacological treatments for high-output ileostomy.

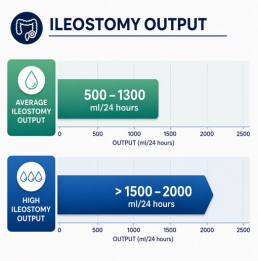
3 Method

1. A literature review was conducted on ileostomy output management by five clinical pharmacists specialised in surgery and members of the professional group.
2. A preliminary version of the tool was developed.
3. The version was then reviewed by a registered dietitian and gastroenterologist with expertise in ostomy care.
4. The revised version of the clinical tool was presented to the other members of the *Regroupement de pharmaciens experts en chirurgie* to gather expert opinion and consensus.
5. The tool went through linguistic and editorial revision by members of the A.P.E.S. group.

4 Results

The tool synthesizes peer-reviewed evidence and clinical expertise into five sections covering stoma characteristics, causes and complications of high output, recommended monitoring, and non-pharmacological and pharmacological treatments.

The tool begins with a short introduction to the definition of high ileostomy output, the different types of gastrointestinal stomas and their main characteristics. Additional sections include causes and complications of high ileostomy output as well as recommended investigations and monitoring parameters.



Non-pharmacological interventions, including recommendations regarding hydration and nutrition, are presented.

CATEGORY	MEASURE	DESCRIPTION/EXAMPLES
RESTRICTIVE MEASURES	Limit the intake of hypotonic fluids	• Restrict to less than 0.5-1L/24h. • Examples: water, tea, coffee, diet beverages, "zero" or sugar-free sports drinks, alcohol, water flavorings.
	Avoid hypertonic fluids	• Pay special attention to liquid medication formulations. • Examples: fruit juices, tomato juice, lemonade, punch, sweetened soft drinks, energy or sports drinks, syrup, ice cream, sorbet, commercial popsicles, sweetened jello, nutritional supplements.
	Avoid foods high in simple sugars	• Examples: desserts, candies.
HYDRATION	Encourage isotonic fluid intake	• Increase as tolerated, aiming for 1 – 1.5 L/24 h. • Note: no commercially available rehydration solution reaches the target sodium concentration of 90 – 120 mmol/L in Canada. • Try doubling the concentration of powder-based productions by using half of the suggested water (limited by taste).
	Examples of isotonic solutions	• Gatorade® (Na: 60 mmol/L) • Pedialyte® (Na: 45-60 mmol/L) • Homemade recipes: o WHO formula: ½ tsp stable salt, ½ tsp salt substitute (potassium chloride), ½ tsp baking soda, 8 tsp sugar, water to complete to 1 L. o Local practice: 1 capsule NaCl 1g (17.1 mmol) to take with each 250ml of hypotonic fluid.
	Divide fluid intake throughout the day	• Prefer small, frequent sips rather than large volumes at once.
NUTRITION	Separate fluid and solid intake	• Maintain a 1-hour window without fluids before and after meals.
	Reduce meal size	• Prefer 4-6 small meals per day, chew thoroughly.
	Increase salt intake	• Salt food to taste.

The final section focuses on pharmacological treatments for high ileostomy output and short bowel syndrome, organized by therapeutic class and place in therapy. It outlines antimotility and antisecretory agents with details on dosing, effectiveness, adverse effects, and practical considerations. To support safe prescribing, the tool also includes a summary table of medication-related issues that may impair adaptation, reduce absorption, increase toxicity, or exacerbate stoma losses, along with recommended clinical actions to guide pharmacists and other healthcare professionals in optimizing therapy.

5 Conclusion

This tool provides clinicians with practical, evidence-based guidance to support safer and more effective management of high-output ileostomies in hospitalized patients, helping reduce complications such as dehydration and acute kidney injury.

Clinical impact
✓ Reduces variability in ileostomy management
✓ Supports safer medication use
✓ Helps prevent dehydration and AKI
✓ Provides structured titration guidance

6 References

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7 Access to the clinical tool

Please scan the following QR code to access the full clinical tool, including dosing tables, treatment algorithms, and medication safety considerations: