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Supporting Adults Who Anticipate or Live with an Ostomy

Second Edition

Registered Nurses' Association of Ontario
L'Association des infirmières et infirmiers autorisés de l'Ontario

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Declarations of Competing Interest

Declarations of competing interest that might be construed as constituting an actual, potential, or apparent conflict were made by all members of the RNAO expert panel, and members were asked to update their disclosures throughout the guideline development process. Information was requested about financial, intellectual, personal, and other interests and documented for future reference. No limiting conflicts were identified. Details regarding disclosures are available at https://rnao.ca/bpg/guidelines/ostomy.

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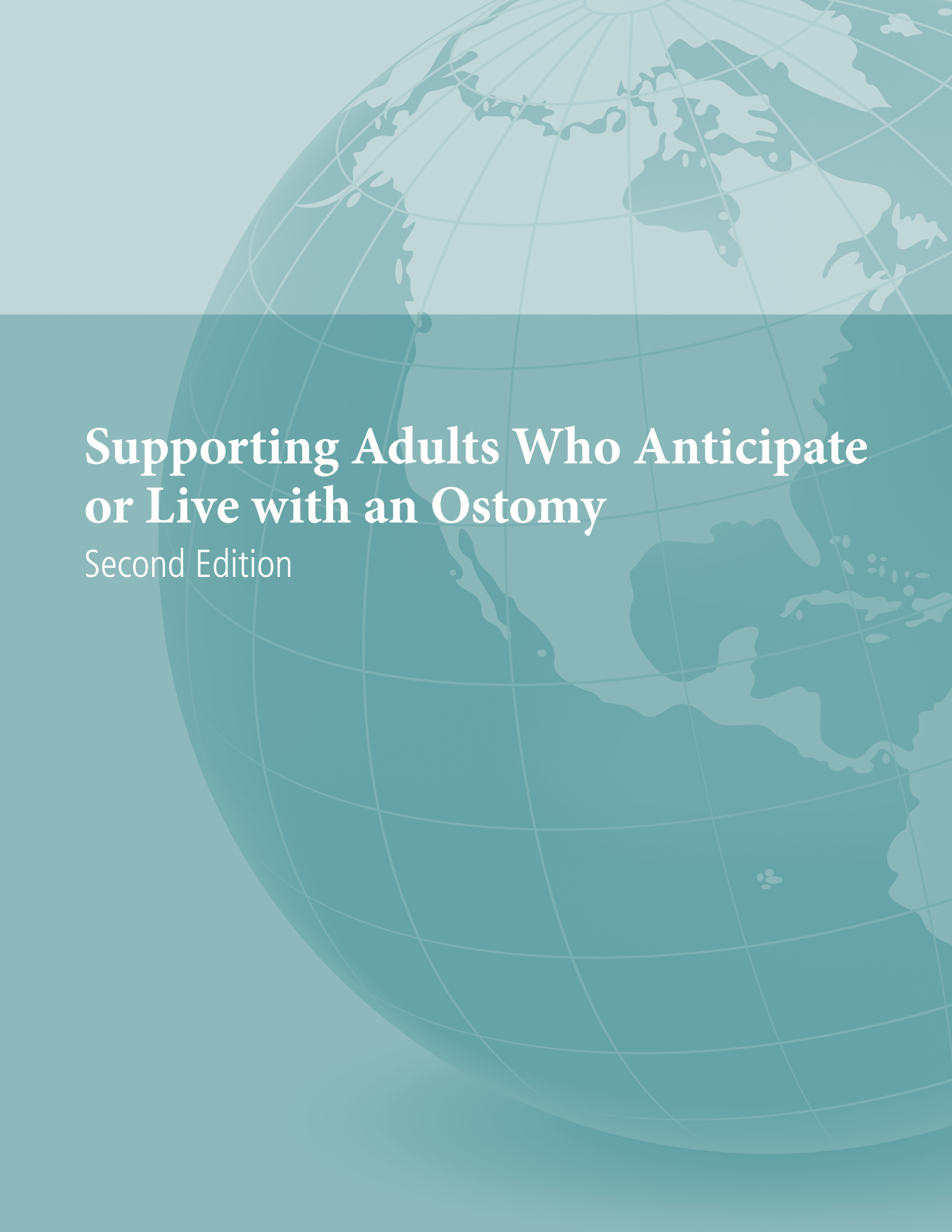

Supporting Adults Who Anticipate or Live with an Ostomy

Second Edition

Greetings from Doris Grinspun,

Chief Executive Officer, Registered Nurses' Association of Ontario

The Registered Nurses' Association of Ontario (RNAO) is delighted to present the second edition of the clinical best practice guideline (BPG) *Supporting Adults Who Anticipate or Live with an Ostomy*. Evidence-based practice supports the excellence in service that health providers are committed to delivering every day.

We offer our heartfelt thanks to the many stakeholders who make our vision for BPGs a reality. First, and most important, we thank the Government of Ontario that recognized early on RNAO's capacity to lead a program that has gained worldwide recognition and is committed to fund it. We also thank the co-chairs of the RNAO expert panel, Dr. Christine Murphy (Nurse Specialist and Enterostomal Therapist, The Ottawa Hospital) and Dr. Kim LeBlanc (Advanced Practice Nurse, KDS Professional Consulting, and Adjunct Faculty, Western University), for their invaluable expertise and stewardship of this BPG. Thanks to RNAO staff Nafsin Nizum (Guideline Development Lead), Greeshma Jacob (Guideline Development Methodologist), Glynis Gittens (Guideline Development Project Coordinator), Megan Bamford (Associate Director, Guideline Development and Evaluation), and the rest of the RNAO Best Practice Guideline Development and Research Team for their intense and expert work in the production of this Guideline. Special thanks to the expert panel for generously providing time, knowledge and perspectives to deliver a rigorous and robust evidence-based resource that will guide the education and practice of millions of health providers. We couldn't have done it without you!

Successful uptake of BPGs requires a concerted effort from educators, clinicians, employers, policy-makers, researchers, and funders. The nursing and health communities, with their unwavering commitment and passion for excellence in patient care, provides the expertise and countless hours of volunteer work essential to the development of new and next edition BPGs. Employers have responded enthusiastically by becoming best practice spotlight organizations (BPSO®), sponsoring best practice champions, implementing RNAO's guidelines, and evaluating their impact on patient and organizational outcomes. Governments at home and abroad have joined in this awesome journey. Together, we are building a culture of evidence-based practice that benefits all.

We invite you to share this BPG with your colleagues from nursing and other professions, with the patient advisors who are partnering within organizations, and with the government agencies with which you work. We have much to learn from one another. Together, we must ensure that the public receives the best possible care every time they come into contact with us—making them the real winners of this great effort!

Doris Grinspun, RN, MSN, PhD, LLD (hon), Dr (hc), FAAN, O. ONT.
Chief Executive Officer
Registered Nurses' Association of Ontario

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How to Use this Document

This **best practice guideline (BPG)**[G]* is a comprehensive document that provides guidance and resources for **evidence-based nursing practice**[G]. It is not intended to be a manual or "how-to" guide; rather, it supports best practices and decision making for **nurses**[G], the **interprofessional team**[G] and health service organizations. This BPG should be reviewed and applied in accordance with the needs and preferences of adults (18 years and older) who anticipate or live with an **ostomy**[G]. This document provides evidence-based **recommendation**[G] statements and descriptions of (a) pragmatic practice and policy considerations, (b) benefits and harms, (c) values and preferences, and (d) health equity considerations.

Nurses, members of the interprofessional team, and administrators who lead and facilitate practice changes will find this document invaluable for developing policies, procedures, protocols, and educational programs to support service delivery. Nurses and members of the interprofessional team in direct care will benefit from reviewing the recommendations and supporting evidence. We encourage practice settings to adapt this BPG in formats that are feasible for daily use.

If your organization is adopting this BPG, we recommend you follow these steps:

1. Assess your existing policies, procedures, protocols, and educational programs in relation to the recommendations in this BPG.
2. Identify existing needs or gaps in your policies, procedures, protocols, and educational programs.
3. Note the recommendations that are applicable to your setting and that can be used to address your organization's existing needs or gaps.
4. Develop a plan for implementing recommendations, sustaining best practices, and evaluating **outcomes**[G].

Implementation resources, including the RNAO *Toolkit: Implementation of Best Practice Guidelines* (2012), are available at RNAO.ca. Description of the *Toolkit* can be found in **Appendix O**. For more information, see **Implementation Strategies**.

All of the RNAO BPGs are available for download, free of charge, on the RNAO website at RNAO.ca/bpg. To locate a particular BPG, search by keyword or browse by topic.

We are interested in hearing your feedback on this BPG and how you have implemented it. Share your story with us at RNAO.ca/contact.

* Throughout this document, terms that are bolded and marked with a superscript G ([G]) can be found in the Glossary of Terms (see **Appendix A**).

Purpose and Scope

Purpose

RNAO's BPGs are systematically developed, evidence-based documents that include recommendations on specific clinical, healthy work environment, and health system topics that are intended for nurses, members of the interprofessional team, educators, leaders, policy-makers, researchers and persons and families with lived experience. BPGs promote consistency and excellence in clinical care, education, and administrative practices and policies with the aim of achieving optimal health outcomes for people, communities, and the health system as a whole.

This BPG replaces the RNAO BPG *Ostomy Care and Management*, which was released in 2009. The purpose of this BPG is to provide nurses and the interprofessional team with evidence-based recommendations for the most effective strategies to support adults (18 years and older) who anticipate or live with an ostomy that will (a) promote **self-management**[G], (b) enhance access and delivery of care, and (c) lead to positive health outcomes. For this BPG, persons who anticipate an ostomy are those who are in the preoperative phase and awaiting an ostomy surgery. This BPG recognizes that adults who anticipate or live with an ostomy and their **support network**[G] are experts in their health and decision making; collaboration among the interprofessional team, the person anticipating or living with an ostomy, and their support network (if needed) therefore is essential for achieving improved health outcomes.

In October 2017, RNAO convened an expert panel to determine the scope of this revised BPG and to develop recommendation questions to inform the **systematic reviews**[G]. The RNAO expert panel included persons with lived experience and was interprofessional in composition, comprising of individuals with knowledge and experience in clinical practice, education, research, and policy across a range of health service organizations, practice areas, and sectors. These experts shared their insights on supporting and caring for adults who anticipate or live with an ostomy across the continuum of care (e.g., acute care, rehabilitation, community, and primary care). A systematic and comprehensive analysis was completed by the RNAO Best Practice Guideline Development and Research Team and the RNAO expert panel to determine the scope of this BPG and to prioritize recommendation questions for its development (see **Appendix D**).

Scope

To determine the scope of this BPG, the RNAO development team conducted the following steps:

- Reviewed the previous RNAO BPG, *Ostomy Care and Management* (2009).
- Conducted a guideline search and gap analysis.
- Undertook a **scoping review**[G] of the literature to determine the depth of peer-reviewed studies in the area of pediatric populations (younger than 18 years) living with an ostomy.
- Conducted six key informant interviews.
- Held two virtual focus groups with experts in the field, including front-line **health providers**[G], researchers, and persons with lived experience.

The analysis informed the scope of this BPG. This BPG will focus on adults (18 years and older) who live with or anticipate an ostomy. The scoping review identified a lack of peer-reviewed studies addressing pediatric populations living with an ostomy. It was thus concluded that a separate search for evidence and approach to guideline development was warranted to address this population.

This BPG will address the most common types of ostomy, which include **colostomy**[G], **ileostomy**[G], or **urostomy**[G]. This BPG is to be used by nurses across the continuum of care and in all domains of practice—such as clinical, research, education, policy, and administration—and members of the interprofessional team. It also is to be used by organizations in which they are employed.

Key Concepts Used in This Guideline

Ostomy: A surgically created opening in the abdominal wall that results in the **external diversion**[G] of feces and urine (1). An ostomy may be permanent or temporary, and each procedure results in a **stoma**[G], which is the end of the small or large intestine that can be seen protruding through the abdominal wall (2). The most common types of ostomy are the following:

- **Colostomy:** A surgically created opening from the colon to the abdominal wall to allow the elimination of feces (3).
- **Ileostomy:** A surgically created opening from the last part of the small intestine (ileum) to the abdominal wall to allow elimination of small bowel **effluent**[G] (3).
- **Urostomy:** A surgically created opening to divert the flow of urine by transplanting the ureters into an isolated segment of the ileum, bringing one end through the abdominal wall to create a stoma. Urine flows from the kidney to the ureters, then through the ileal conduit, exiting through the stoma (3).

Nurse specialized in wound, ostomy, and continence (NSWOC): "A registered nurse with advanced and specialized knowledge and clinical skills in wound, ostomy, and continence care who has graduated from a World Council of Enterostomal Therapists (WCET®) recognized education program" (4). "A NSWOC provides specialized holistic assessment and management as an interprofessional team member to meet the needs of individuals/families with ostomies, acute and chronic wounds, and urinary and fecal continence problems" (4). The NSWOC equivalent in other jurisdictions may be represented with other titles, such as (but not limited to) the following: stoma nurse; wound, ostomy, continence nurse (WOC nurse); or ostomy nurse.

Health provider: Refers to both regulated (e.g., nurses, physicians, dieticians and social workers) and unregulated (e.g., personal support workers) workers that are part of the interprofessional team.

- **Regulated health provider:** In Ontario, the Regulated Health Professional Act, 1991 (RHPA) provides a framework for regulating 23 health professions, outlining the scope of practice and the profession-specific controlled or authorized acts that each regulated professional is authorized to perform when providing health care and services (5).
- **Unregulated health provider:** Unregulated health providers fulfill a variety of roles in areas that are not subject to the RHPA. They are accountable to their employers but not to an external regulating professional body (e.g., College of Nurses of Ontario). Unregulated health providers fulfill a variety of roles and perform tasks that are determined by their employer and employment setting. Unregulated health providers only have the authority to perform a controlled act as set out in the RHPA if the procedure falls under one of the exemptions set out in the Act (6).

Ostomy care program: An organization-level approach to standardize care for persons who anticipate or live with an ostomy. The ostomy care program includes structured treatment, management, and follow-up strategies developed by an interprofessional team, which may consist of NSWOCs, nurses, surgeons, physicians, social workers, dieticians, and pharmacists (among others).

Parastomal hernia: Occurs when one or more loops of the bowel protrude through the abdominal wall, creating a bulge around the **peristomal skin**[G] (7).

Topics Outside the Scope of this Best Practice Guideline

The following conditions and topics are not covered within the scope of this BPG:

- Pharmaceutical interventions for the prevention and management of ostomy-related complications.
- Surgical procedures in the creation of a stoma.
- Surgical interventions for the prevention and management of ostomy-related complications.
- Pediatric populations anticipating or living with an ostomy.

Recommendation Questions

Within the determined scope defined above, the following priority recommendation questions and outcomes were developed by the RNAO expert panel and informed the development of this BPG:

- **Recommendation Question #1:** Should access to nurses specialized in wound, ostomy, and continence or no access to nurses specialized in wound, ostomy, and continence be recommended?

  Outcomes: Peristomal dermatitis[G], **peristomal irritation**[G], **ostomy leakage**[G], quality of life, hospital length of stay and readmission rates to hospital.

- **Recommendation Question #2:** Should an ostomy care program or no ostomy care program be recommended?

  Outcomes: Patient satisfaction, hospital length of stay, readmission rates to hospital and staff satisfaction.

- **Recommendation Question #3:** Should prevention strategies for **parastomal hernia**[G] development or no prevention strategies for parastomal hernia development be recommended?

  Outcomes: Parastomal hernia rates.

- **Recommendation Question #4:** Should quality of life assessment or no quality of life assessment be recommended?

  Outcomes: Psychological health status and self-identity.

Note: These priority recommendation questions are condensed versions of the more comprehensive **PICO**[G] (population, intervention, comparison, outcomes) research questions developed by the RNAO expert panel to guide the systematic reviews and development of this BPG. For the PICO research questions and the detailed process of how the RNAO expert panel determined these priority questions and outcomes, see **Appendix D**.

Recommendations

Recommendations in this BPG address access to the appropriate specialist to support comprehensive care (i.e., **NSWOCs**[G]), the need for a standardized ostomy care program within health service organizations, guidance on the prevention of parastomal hernias, and quality of life assessments in adults who anticipate or live with an ostomy. The evidence-based recommendations in this BPG are applicable to all practice settings where adults who anticipate or live with an ostomy are accessing services (such as, but not limited to, acute care, long-term care, community settings, and rehabilitation settings).

In this BPG, no recommendation questions were identified that addressed the core education and training strategies required for curricula, ongoing education, and professional development of nurses or the interprofessional team in order to support adults living with or anticipating an ostomy. Please refer to **Appendix C** for **education statements**[G] that educators, managers, administrators, and academic and professional institutions can use to support the uptake of this BPG.

Note: Recommendations in this BPG were developed for adults who anticipate or live with an ostomy, but in some cases, recommendations also may be applicable to adults with **continent diversions**[G] (bowel or urinary).

RNAO Guidelines and Resources that Align with this Best Practice Guideline

Other RNAO guidelines and other resources may support implementation of this BPG. See **Appendix B** for RNAO guidelines and other resources on the following related topics:

- Client centred learning.
- Culturally sensitive care.
- Implementation science, implementation frameworks, and resources.
- Interprofessional collaboration.
- Person- and family-centred care.
- Self-management of chronic conditions.
- Therapeutic relationships.

For more information on the guideline development process, systematic reviews, and search strategy for this BPG, see **Appendix D**.

Interpretation of Evidence and Recommendation Statements

RNAO Guidelines are developed using the **Grading of Recommendations Assessment, Development, and Evaluation (GRADE)**[G] and **Confidence in the Evidence from Reviews of Qualitative Research (CERQual)**[G] methods. For more information about the guideline development process, including the use of GRADE and GRADE-CERQual methods, refer to **Appendix D**.

Certainty of Evidence

The certainty of evidence (i.e., the level of confidence we have that an estimate of effect is true) for quantitative research is determined using GRADE methods (8). After synthesizing the evidence for each prioritized outcome, the certainty of evidence is assessed. The overall certainty of evidence is then determined by considering the certainty of evidence across all prioritized outcomes per recommendation question. GRADE categorizes the overall certainty of evidence as *high*, *moderate*, *low*, or *very low*. See **Table 1** for the definition of these categories.

Table 1: Certainty of Evidence

CERTAINTY OF EVIDENCE	DEFINITION
High	We are very confident that the true effect lies close to that of the estimate of the effect.
Moderate	We are moderately confident in the effect estimate: the true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
Low	Our confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the effect.
Very Low	We have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of the effect.

Source: Reprinted from The GRADE Working Group. Quality of evidence. In: Schunemann H, Brozek J, Guyatt G, et al., editors. Handbook for grading the quality of evidence and the strength of recommendations using the GRADE approach [Internet]. [place unknown; publisher unknown]; 2013 [cited 2018 Aug 31]. Table 5.1, Quality of evidence grades. Available from: https://gdt.gradepro.org/app/handbook/handbook.html#h.wsfivfhuxv4r. Reprinted with permission.

Confidence in Evidence

The confidence in evidence for **qualitative research**[G] (i.e., the extent to which the review finding is a reasonable representation of the phenomenon of interest) is determined using GRADE-CERQual methods (hereafter referred to as CERQual) (9). For qualitative evidence, an overall judgment of the confidence is made per finding in relation to each recommendation statement, as relevant. CERQual categorizes the confidence in evidence as *high*, *moderate*, *low*, or *very low*. See **Table 2** for the definitions of these categories.

Table 2: Confidence in Evidence

CONFIDENCE IN EVIDENCE	DEFINITION
High	It is highly likely that the review finding is a reasonable representation of the phenomenon of interest.
Moderate	It is likely that the review finding is a reasonable representation of the phenomenon of interest.
Low	It is possible that the review finding is a reasonable representation of the phenomenon of interest.
Very Low	It is not clear whether the review finding is a reasonable representation of the phenomenon of interest.

Source: Reprinted from Lewin S, Booth A, Glenton C, et al. Applying GRADE-CERQual to qualitative evidence synthesis findings: introduction to the series. Implement Sci. 2018;13(Suppl 1):1–10. Table 3, Description of level of confidence in a review finding in the CERQual approach; p. 6. Reprinted with permission.

Note: The assigned certainty and/or confidence in evidence can be found directly below each recommendation statement. For more information on the process of determining the certainty and/or confidence in the evidence and the documented decisions made by RNAO Guideline Development Methodologists, see **Appendix D**.

Strength of Recommendations

Recommendations are formulated as *strong* or *conditional* by considering the *certainty* and/or *confidence in evidence* and the following key criteria (see **Discussion of Evidence** for definitions):

- Balance of benefits and harms.
- Values and preferences.
- Potential impact on health equity.

Strong Recommendation

"A strong recommendation reflects the expert panel's confidence that the desirable effects of an intervention outweigh its undesirable effects (strong recommendation *for* an intervention) or that the undesirable effects of an intervention outweigh its desirable effects (strong recommendation *against* an intervention)" (8). A strong recommendation implies that the majority of persons will be best served by the recommended action (8).

Conditional Recommendation

"A conditional recommendation reflects the expert panel's confidence that the desirable effects probably outweigh the undesirable effects (conditional recommendation for an intervention) or undesirable effects probably outweigh desirable effects (conditional recommendation against an intervention), but some uncertainty exists" (8). A conditional recommendation implies that not all persons will be best served by the recommended action: "there is a need for more careful consideration of personal circumstances, preferences, and values" (8).

Note: The strength of the recommendation statement is detailed directly below each recommendation statement and in the **Summary of Recommendations.** For more information on the process the expert panel used for determining the strength of each recommendation, please see **Appendix D**.

Discussion of Evidence

The Discussion of Evidence that follows each recommendation includes the following main sections:

1. **Benefits and Harms:** Identifies the potential desirable and undesirable outcomes reported in the literature when the recommended practice is used. Content in this section solely includes research from the systematic review.
2. **Values and Preferences:** Denotes the relative importance or worth of the health outcomes of following a particular clinical action from a person-centered perspective. Content for the Values and Preferences section may include research from the systematic reviews and (when applicable) the RNAO expert panel.
3. **Health Equity:** Identifies the potential impact that the recommended practice could have on health across different populations. Content for the Health Equity section may include research from the systematic reviews and (when applicable) the RNAO expert panel.
4. **Expert Panel Justification of Recommendation:** Provides a rationale for why the expert panel made the decision to rate a recommendation as strong or conditional.
5. **Practice Notes:** Highlights pragmatic information for nurses and members of the interprofessional team. This section may include supporting evidence from the systematic review and/or from other sources (e.g., the RNAO expert panel).
6. **Supporting Resources:** Includes a list of relevant resources (such as websites, books, organizations, and more) that support recommendations. Content listed in this section was not part of the systematic review and therefore not all content was quality appraised. As such, the list is not exhaustive and the inclusion of a resource in one of these lists does not imply an endorsement from RNAO.

Summary of Recommendations

This Guideline replaces the RNAO BPG *Ostomy Care and Management* (2009).

A summary of how the recommendations in this Guideline compare to the recommendations in the previous Guideline is available at https://rnao.ca/bpg/guidelines/ostomy.

RECOMMENDATIONS	STRENGTH OF THE RECOMMENDATION
Recommendation Question #1: Should access to nurses specialized in wound, ostomy, and continence or no access to nurses specialized in wound, ostomy, and continence be recommended? **Outcomes:** Peristomal dermatitis, peristomal irritation, ostomy leakage, quality of life, hospital length of stay and readmission rates to hospital.	
Recommendation 1.1 The expert panel recommends that health service organizations provide access to nurses specialized in wound, ostomy, and continence as essential members of the interprofessional team for all persons who anticipate or live with an ostomy.	Strong
Recommendation 1.2: The expert panel recommends that access to nurses specialized in wound, ostomy, and continence includes the following support within the ostomy care continuum: ■ Performing preoperative stoma site marking. ■ Providing perioperative education and counselling. ■ Providing ongoing follow-up consultation and management. ■ Involving persons who anticipate or live with an ostomy and their support network in all steps of care, as appropriate.	Strong
Recommendation Question #2: Should an ostomy care program or no ostomy care program be recommended? **Outcomes:** Patient satisfaction, hospital length of stay, readmission rates to hospital and staff satisfaction.	
Recommendation 2.1: The expert panel recommends that health service organizations implement an internal expert-guided, standardized ostomy care program that is developed using an interprofessional, team-based approach.	Strong

Recommendation 2.2: The expert panel recommends that health service organizations include the following interventions within a standardized ostomy care program: ■ Preoperative education and counselling on ostomy surgery, daily living, and self-care. ■ Postoperative education regarding stoma self-management and potential complications. ■ Discharge planning that is based on a readiness criteria and includes follow-up information. ■ Scheduled home visits and telephone follow-up within the first four weeks. ■ Access to nurses specialized in wound, ostomy, and continence perioperatively and on an ongoing basis, as necessary.	Strong
Recommendation Question #3: Should prevention strategies for parastomal hernia development or no prevention strategies for parastomal hernia development be recommended? **Outcomes:** Parastomal hernia rates.	
Recommendation 3.1: The expert panel suggests that health providers implement the following interventions to prevent parastomal hernias for persons who anticipate or live with an ostomy: ■ Conduct a risk factor assessment related to body mass index and waist circumference. ■ Provide expert advice on weight management, as needed. ■ Perform stoma site marking preoperatively. ■ Provide postoperative education related to: □ abstinence from heavy lifting postoperatively. □ consideration of lightweight support garments. □ abdominal exercises beginning within three months of surgery.	Conditional
Recommendation Question #4: Should quality of life assessment or no quality of life assessment be recommended? **Outcomes:** Psychological health status and self-identity.	
Recommendation 4.1: In order to guide person-centred care, the expert panel recommends that health providers assess quality of life in persons who anticipate or live with an ostomy. Specific areas of focus should include the following: ■ Psychological distress (anxiety and depression). ■ Self-identity (sexuality and body image).	Strong

Guideline Evaluation

As you implement the recommendations in this BPG, we ask you to consider how you will monitor and evaluate its implementation and impact.

The Donabedian model informs the development of indicators for evaluating quality health care, which includes three categories: structure, process, and outcome (10).

- Structure describes the required attributes of the health system, health service organization or academic institution to ensure quality care. It includes physical resources, human resources, and information and financial resources.
- Process examines the health-care activities being provided to, for, and with persons or populations as part of the provision of quality care.
- Outcome analyzes the effect of quality care on the health status of persons and populations, health workforce, health service organizations, academic institutions or health systems (10).

For additional information, please refer to the RNAO *Toolkit: Implementation of Best Practice Guidelines, Second Edition* (2012).

Tables 3, **4**, and **5** provide potential structure, process and outcome measures to assess Guideline success. It is important to evaluate evidence-based practice changes when implementing a Guideline. Select the measures most relevant to the practice setting. There are few data repositories/indicator libraries available for ostomy support in Ontario and Canada. The following measures will support quality improvement and evaluation.

Table 3 provides potential structure measures associated with all recommendation statements, to assess attributes related to human resources.

Table 3: Structure Measures for Overall Guideline Success

STRUCTURE MEASURES	MEASURES IN DATA REPOSITORIES/ INSTRUMENTS
Ratio of nurses specialized in wound, ostomy, and continence care (NSWOC) to persons who anticipate or live with an ostomy ***Numerator:*** *Number of nurses specialized in wound, ostomy and continence care (NSWOC)* ***Denominator:*** *Total number of persons who anticipate or live with an ostomy*	New

Table 4 supports evaluation of practice changes during implementation. The measures are directly associated with specific recommendation statements and support process improvement.

Table 4: Process Measures for Overall Guideline Success

RECOMMENDATION	PROCESS MEASURES	MEASURES IN DATA REPOSITORIES/ INSTRUMENTS
1.1 **1.2**	Percentage of persons who anticipate or live with an ostomy who received support from a nurse specialized in wound, ostomy and continence care (NSWOC) within the ostomy care continuum ***Numerator:*** *Number of persons who anticipate or live with an ostomy who received support from a nurse specialized in wound, ostomy and continence care (NSWOC) within the ostomy care continuum* ***Denominator:*** *Total number of persons who anticipate or live with an ostomy*	Partial Resident Assessment Instrument – Minimum Data Set (RAI-MDS) Partial Nursing Quality Indicators for Reporting and Evaluation (NQuIRE)
2.1 **2.2**	Percentage of persons who anticipate or live with an ostomy who received care according to a standardized ostomy care program ***Numerator:*** *Number of persons who anticipate or live with an ostomy who received care according to a standardized ostomy care program* ***Denominator:*** *Total number of persons who anticipate or live with an ostomy*	New
4.1	Percentage of persons who anticipate or live with an ostomy with documented assessment for self-identity concerns or psychological distress ***Numerator:*** *Number of persons who anticipate or live with an ostomy with documented assessment for self-identity concerns or psychological distress* ***Denominator:*** *Total number of persons who anticipate or live with an ostomy*	New

Table 5 provides potential outcome measures associated with all recommendation statements, to assess overall Guideline success.

Table 5: Outcome Measures for Overall Guideline Success

OUTCOME MEASURES	MEASURES IN DATA REPOSITORIES/ INSTRUMENTS
Percentage of persons living with an ostomy with documented parastomal hernia ***Numerator:*** *Number of persons living with an ostomy with documented parastomal hernia* ***Denominator:*** *Total number of persons living with an ostomy*	Partial NQuIRE
Percentage of persons living with an ostomy with documented ostomy leakage ***Numerator:*** *Number of persons living with an ostomy with documented ostomy leakage* ***Denominator:*** *Total number of persons living with an ostomy*	Partial NQuIRE
Percentage of persons living with an ostomy with documented peristomal dermatitis ***Numerator:*** *Number of persons living with an ostomy with documented peristomal dermatitis* ***Denominator:*** *Total number of persons living with an ostomy*	Partial NQuIRE
Percentage of persons who anticipate or live with an ostomy who have body image or sexual health concerns ***Numerator:*** *Number of persons who anticipate or live with an ostomy who have body image or sexual health concerns* ***Denominator:*** *Total number of persons who anticipate or live with an ostomy*	New
Percentage of persons who anticipate or live with an ostomy who experienced psychological distress ***Numerator:*** *Number of persons who anticipate or live with an ostomy who experienced psychological distress* ***Denominator:*** *Total number of persons who anticipate or live with an ostomy*	New

Other RNAO resources for the evaluation and monitoring of BPGs:

- Nursing Quality Indicators for Reporting and Evaluation® (NQuIRE®), a unique nursing data system housed in the International Affairs and Best Practice Guidelines Centre, allows Best Practice Spotlight Organizations® (BPSOs®) to measure the impact of BPG implementation by BPSOs worldwide. The NQuIRE data system collects, compares, and reports data on guideline-based, nursing-sensitive process and outcome measures. NQuIRE indicator definitions are aligned with available administrative data and existing repositories wherever possible, adhering to a principle of "collect once, use many times" principle. By complementing other established and emerging performance measurement systems, NQuIRE strives to leverage reliable and valid measures, minimize reporting burden, and align evaluation measures to enable comparative analyses. The international NQuIRE data system was launched in August 2012 to create and sustain evidence-based practice cultures, optimize patient safety, improve patient outcomes, and engage staff in identifying relationships between practice and outcomes to advance quality and advocate for resources and policy that support best practice changes (10). Please visit RNAO.ca/bpg/initiatives/nquire for more information.
- **BPG Order Sets**™ G embedded within electronic records provide a mechanism for electronic data capture of process measures. The ability to link structure and process measures with specific client outcome indicators aids in determining the impact of BPG implementation on specific health outcomes. Please visit http://rnao.ca/ehealth/bpgordersets for more information.

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Stakeholder Acknowledgment

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Background Context

What is an Ostomy?

An ostomy is a surgically created opening in the abdominal wall that results in the external diversion of feces and urine (1). An ostomy may be permanent or temporary, and the surgery is performed for various etiologies, including (but not limited to) diverticulitis, colorectal cancer, bowel obstruction, **inflammatory bowel disease**[G], or bladder cancer (11). Each procedure results in a stoma, which is the end of the small or large intestine that can be seen protruding through the abdominal wall (2). The most common types of ostomy are the following:

- **Colostomy:** A surgically created opening from the colon to the abdominal wall to allow the elimination of feces (3).
- **Ileostomy:** A surgically created opening from the last part of the small intestine (ileum) to the abdominal wall to allow elimination of small bowel effluent (3).
- **Urostomy:** A surgically created opening to divert the flow of urine by transplanting the ureters into an isolated segment of the ileum, bringing one end through the abdominal wall to create a stoma. Urine flows from the kidney to the ureters, then through the ileal conduit, exiting through the stoma (3).

For some people, it is possible to have a continent bowel or urinary diversion in which an internal reservoir is surgically created using a section of the bowel to collect feces or urine. Continent diversions may or may not result in the creation of a stoma, and they eliminate the necessity for a **pouching system**[G] to be worn outside the body (2).

Prevalence and Impact of Living with an Ostomy

An estimated 1.3 million people around the world have an ostomy, whether it be an ileostomy, colostomy, or urostomy (12). North Americans constitute a large portion of this population, with an estimated 750,000 living with an ostomy (13). In Canada alone, approximately 13,000 new ostomy surgeries are performed every year (13).

The creation of an ostomy is a life-changing event and has implications for various aspects of a person's health-related quality of life (11). Living with an ostomy may cause changes to physical and emotional well-being, and it may require lifestyle adjustments. One of the most common physical outcomes of living with an ostomy is the risk for stoma-related complications. Approximately 20 per cent to 71 per cent of persons with an ostomy experience stoma related complications, the most common being ostomy leakage and peristomal skin problems (14). Peristomal skin complications affect one third of persons with a colostomy and two thirds of persons with a urostomy or ileostomy (15).

Another common complication is the incidence of parastomal hernias. A parastomal hernia occurs when one or more loops of the bowel protrude through the abdominal muscle, creating a bulge around the peristomal skin (7). Living with a parastomal hernia has been associated with impairments in quality of life, stressors related to body image, fatigue, and the physical burden of the hernia (1). The reported incidence of parastomal hernia varies widely within the literature, ranging from 0 per cent to 78 per cent; it is caused by risk factors such as high body mass index and waist circumference (7, 16, 17). When persons living with an ostomy have access to evidence-based care provided by knowledgeable and skilled health providers, however, many of these complications are preventable and treatable (18, 19).

Living with an ostomy can impact a person's psychological health and affect social functioning (20). For instance, living with an ostomy can negatively impact body image, sexual function, mood, and daily activities, thus impairing a person's overall psychological health (11, 21). Lifestyle considerations and adjustments may also be required for aspects of daily life, such as diet, exercise, intimacy, and self-management of the ostomy (13). Despite so many challenges, if the right resources and supports are in place, it is certainly possible for persons to live an active and meaningful life after ostomy surgery.

There currently are no definite statistics determining the costs associated with living with an ostomy. However, maintaining an ostomy through the regular use of supplies can be expensive. In Canada, the type and availability of financial support for adults living with an ostomy varies across provinces, ranging from complete coverage to no coverage at all, resulting in many people having to pay out-of-pocket fees (22). Living with an ostomy, whether it is temporary or permanent, also increases the risk of costly complications (23). Research suggests that costs of care are substantially higher for persons with peristomal skin complications related to an ostomy (24). It is estimated that average treatment costs are $77 CDN greater (including pouching systems and accessories) over a seven-week period of treatment for people with peristomal skin complications versus those without peristomal skin complications (25).

Streamlining Ostomy Support

In accordance with the Charter of Ostomates Rights (**Appendix K**), persons living with an ostomy have the right to comprehensive, personalized, and accessible care (26). As the number of persons living with an ostomy increases, the need to provide such care becomes increasingly critical for health service organizations and health systems in order to meet the needs of the persons they serve (23).

The interprofessional team supporting persons living with an ostomy throughout the health continuum includes (but is not limited to) NSWOCs, nurses, surgeons/physicians, social workers, dietitians, and pharmacists. In particular, NSWOCs are designated experts who are highly trained, both in the psychological aspects of care and the care of persons with fecal and urinary diversions (27). "NSWOC" is a protected title and limited to certain jurisdictions, however, its equivalent may be represented in other locations with titles such as stoma nurse, WOC nurse, or ostomy nurse. An NSWOC is deemed certified if they graduate from a WCET®-accredited ostomy education program and pass a national certification exam (4). Ostomy champion roles may assist and support the NSWOC expert in many organizations, but they are not independent subject experts.

Comprehensive ostomy care, which includes access to expert health providers, is related to improved health outcomes. Comprehensive care requires collaboration among the interprofessional team, the person anticipating or living with an ostomy and their support network, along with standardized work processes and care pathways. Furthermore, use of evidence-based practice enables informed decision making at the person, organization, and system levels to ensure improved health outcomes. Consistent use of evidence-based practices related to ostomy care is ultimately enabled by policies and programs that standardize work processes.

Conclusion

Prevention strategies, timely interventions, knowledgeable providers, and accessible resources are required to facilitate optimal well-being for persons who anticipate or live with an ostomy. This BPG provides evidence-based best practice recommendations that will help health service organizations and the interprofessional team to support adults (18 years and older) anticipating or living with a colostomy, ileostomy, or urostomy to enhance access and care delivery, promote self-management, and lead to positive health outcomes.

Recommendations

RECOMMENDATION QUESTION #1:

Should access to nurses specialized in wound, ostomy, and continence or no access to nurses specialized in wound, ostomy, and continence be recommended?

Outcomes: Peristomal dermatitis, peristomal irritation, ostomy leakage, quality of life, hospital length of stay and readmission rates to hospital.

RECOMMENDATION 1.1:

The expert panel recommends that health service organizations provide access to nurses specialized in wound, ostomy, and continence as essential members of the interprofessional team for all persons who anticipate or live with an ostomy.

Strength of recommendation: Strong

Certainty of the evidence of effects: Low

Confidence in evidence: Low

Discussion of Evidence:

Benefits and Harms

Evidence demonstrates that access to a NSWOC may promote positive health outcomes in persons living with or anticipating an ostomy. Studies examined the benefits of one or more of the following interventions: performing preoperative **stoma site marking**[G], providing **perioperative**[G] education and counselling, providing ongoing follow-up consultation and management, and involving persons who anticipate or live with an ostomy and their support network. These interventions were provided by a NSWOC (or a NSWOC as a key member of the interprofessional team) compared to no access to a NSWOC in persons who anticipate or live with an ostomy.

The studies found that regardless of the intervention, access to a NSWOC may reduce the incidence of peristomal dermatitis or skin irritation, readmission rates to hospital, hospital length of stay and the rates of ostomy leakage; access also may improve quality of life in persons anticipating or living with an ostomy across various health settings (community and hospital) (11, 28-35). The evidence was of low certainty due to limitations in how studies were conducted, use of different tools to measure outcomes across studies and the small number of study participants. In qualitative studies reporting on facets of quality of life, persons living with an ostomy indicated that care provided by NSWOCs could help address their psychosocial concerns and help them resume a normal life (36, 37). The qualitative evidence was of low confidence due to limitations in how studies were conducted and the small number of study participants. There were no harms related to the interventions provided by NSWOCs in the literature.

For more detailed information of the impact of the intervention (access to NSWOCs) on each of the prioritized outcomes (peristomal dermatitis, peristomal irritation, ostomy leakage, quality of life, hospital length of stay and readmission rates to hospital), please refer to the evidence profiles available here: https://rnao.ca/bpg/guidelines/ostomy.

See **Recommendation 1.2** for details on the specific interventions provided by NSWOCs and their associated benefits and harms.

Values and Preferences

The evidence indicates that persons with an ostomy attributed high value to the role of the NSWOC. Persons with an ostomy value the opportunity to speak about their challenges and concerns, and to receive timely follow-up advice from a NSWOC (37).

Health Equity

The expert panel suggests that availability and timely access to expert assessment and management provided by a NSWOC in all care settings would improve health equity, particularly in rural settings. Literature demonstrates that living in a rural area was associated with a lack of access to expert ostomy assessment and management (38). Group education provided by NSWOCs may be more effective at increasing quality of life for persons living with an ostomy in rural areas, as these persons may be at greater risk for social isolation (32).

Expert Panel Justification of Recommendation

There were benefits to having access to NSWOCs and no harms were found. However, the certainty in this evidence was low. The expert panel determined that persons would value improvements in outcomes and attributed high value to ensuring that persons who anticipate or live with an ostomy have equitable access to NSWOCs to decrease the risk of complications (peristomal dermatitis, peristomal irritation and ostomy leakage), improve organization-related outcomes (readmission rates to hospital and hospital length of stay) and improve quality of life across populations. Therefore, the expert panel determined the strength of the recommendation to be strong.

Practice Notes

There are no practice notes associated with this recommendation.

Supporting Resources

RESOURCE	DESCRIPTION
Nurses Specialized in Wound, Ostomy and Continence Canada. Welcome to NSWOCC formerly known as the Canadian Association of Enterostomal Therapy [Internet]. [place unknown]: Felix Leclair for Nurses Specialized in Wound, Ostomy and Continence Canada; c2017 [cited 2018 Jul 10]. Available from: https://nswoc.ca/	■ The national website for NSWOC Canada, a not-for-profit association for over 350 nurses specializing in the nursing care of persons with challenges in wound, ostomy, and continence. ■ Outlines how to become a NSWOC and who can use the designation. ■ Provides information about conferences, publications, and educational events.
Nurses Specialized in Wound, Ostomy and Continence Canada. Find an NSWOC [Internet]. [place unknown]: Nurses Specialized in Wound, Ostomy and Continence Canada; [date unknown] [cited 2018 Jul 10]. Available from: https://memberscaet.ca/find.phtml	■ Online search tool to help locate a NSWOC based on city or postal code.

RESOURCE	DESCRIPTION
Nurses Specialized in Wound, Ostomy and Continence Canada. WOC-EP Program [Internet]. [place unknown]: Nurses Specialized in Wound, Ostomy and Continence Canada; c2019 [cited 2019 Feb 8]. Available from: https://wocinstitute.ca/woc-ep-program/	■ Provides information about the NSWOC education program and how to enroll in the program.
Canadian Nurses Association. CNA certification program [Internet]. [place unknown]: Canadian Nurses Association; c2018 [cited 2018 Jul 20]. Available from: https://www.cna-aiic.ca/en/certification	■ Provides registration information to write the NSWOC designation exam in Canada.
Canadian Association for Enterostomal Therapy. The CAET standards for enterostomal therapy nursing practice. 2nd ed. [Internet]. Ottawa (ON): Canadian Association for Enterostomal Therapy; 2016. Available from: https://nswoc.ca/wp-content/uploads/2017/08/CAET-ET-Practice-Standards.pdf	■ Describes the roles and responsibilities of the NSWOC in Canada. ■ Provides an overview of standards of practice for the NSWOC role in Canada related to wound, ostomy, and continence.
Wound Ostomy and Continence Nurses Society. Advancing the practice and guiding the delivery of expert health care to patients. [place unknown]: Wound, Ostomy and Continence Nurses Society; c2018 [cited 2018 Jul 10]. Available from: https://www.wocn.org/	■ Website for the international society for NSWOCs, which aims to advance the practice and delivery of expert health care to individuals with wound, ostomy, and continence needs.
World Council of Enterostomal Therapists. WCET Enterostomal Therapy Nursing Education Program (ETNEP) and Recognised Education Program (REP). Washington (DC): World Council of Enterostomal Therapists; [date unknown] [cited 2018 Jul 10]. Available from: https://www.wcetn.org/etnep-rep-education	■ Organization that sets the standards and recognizes NSWOC education programs internationally.

RECOMMENDATION 1.2:

The expert panel recommends that access to nurses specialized in wound, ostomy, and continence includes the following support within the ostomy care continuum:

- Performing preoperative stoma site marking.
- Providing perioperative education and counselling.
- Providing ongoing follow-up consultation and management.
- Involving persons who anticipate or live with an ostomy and their support network in all steps of care, as appropriate.

Strength of recommendation: Strong

Certainty of the evidence of effects: Low

Confidence in evidence: Low

Discussion of Evidence:

Benefits and Harms

Studies examined one or more of the following interventions: performing preoperative stoma site marking, providing perioperative education and counselling, providing ongoing follow-up consultation and management, and involving persons with an ostomy and their support network in all steps of care, as appropriate. These interventions were provided by a NSWOC (or the NSWOC as a key member of the interprofessional team) compared to no access to an NSWOC. The studies found benefits in outcomes for persons anticipating or living with an ostomy across various health settings (community and hospital) (11, 28-35). The evidence was of low certainty due to limitations in how studies were conducted, use of different tools to measure outcomes across studies and the small number of study participants. For qualitative studies, the confidence in evidence was also low due to limitations in how studies were conducted and the small number of study participants. There were no harms related to these interventions provided by NSWOCs in the literature.

For more detailed information of the impact of the intervention on each of the prioritized outcomes (peristomal dermatitis, peristomal irritation, ostomy leakage, quality of life, hospital length of stay and readmission rates to hospital), refer to the evidence profiles available here: https://rnao.ca/bpg/guidelines/ostomy.

The key interventions provided by the NSWOC throughout the ostomy care continuum and the associated health outcomes are outlined below. Please see **Table 6** under Practice Notes for more details on specific components of the interventions.

Performing Preoperative Stoma Site Marking

The evidence was limited to two studies. The evidence suggests that persons who receive stoma site marking by a NSWOC may experience a reduction in hospital length of stay and peristomal dermatitis (34, 35).

Providing Perioperative Education and Counselling

There is consistent evidence that suggests when NSWOCs provide preoperative and/or postoperative education and counselling, it may reduce hospital length of stay (28, 31, 33) and rates of peristomal dermatitis/irritation (28, 29, 31, 35). The majority of studies suggest that when NSWOCs provide preoperative and/or postoperative education and counselling, it may improve quality of life (28, 31, 32) and reduce readmission rates to hospital (28, 31, 33).

Refer to **Appendix J** for a sample ostomy teaching record to guide perioperative education and counselling for persons anticipating or living with an ostomy. Refer to **Appendix M** for nutritional management tips for persons living with an ostomy, which is an important component of perioperative education and counselling.

Providing Ongoing Follow-up Consultation and Management

There is consistent evidence that suggests when NSWOCs provide ongoing follow-up consultation and management, it may improve quality of life (29, 30). The evidence regarding peristomal dermatitis/irritation was limited to one study; it suggests that when NSWOCs provide ongoing follow-up consultation and management, rates of peristomal dermatitis/irritation may be reduced (29).

In findings from qualitative research reporting on quality of life, persons living with an ostomy expressed that ongoing follow-up consultation and management by NSWOCs could help address their psychosocial concerns and help them resume a normal life (36, 37).

Involving Persons Who Anticipate or Live with an Ostomy and Their Support Network in all Steps of Care, as Appropriate

Education provided by NSWOCs for persons who anticipate or live with an ostomy and their support network may have benefits. The evidence regarding the outcome quality of life was limited to one study; it suggested that involving the support network may improve quality of life for persons who anticipate or live with an ostomy (32). Furthermore, the evidence regarding peristomal dermatistis/irritation and ostomy leakage was also limited to one study, which suggested that involving the support network may decrease rates of peristomal dermatitis/irritation and ostomy leakage (28).

Values and Preferences

See **Recommendation 1.1** for the applicable values and preferences. The research suggests that the values and preferences associated with this recommendation are consistent with those outlined in **Recommendation 1.1**.

Health Equity

See **Recommendation 1.1** for the applicable impact on health equity. The research and the expert panel suggest that the impacts on health equity associated with this recommendation are consistent with those outlined in **Recommendation 1.1**.

Expert Panel Justification of Recommendation

There were benefits to the use of the following interventions when conducted by a NSWOC or the NSWOC as a key member of the interprofessional team: preoperative stoma site marking, providing perioperative education and counselling, providing ongoing follow-up consultation and management, and involving persons who anticipate or live with an ostomy and their support network in all steps of care, as appropriate. No harms were found. However, the certainty in this evidence was low.

The expert panel determined that persons would value improvements in outcomes and attributed high value to ensuring that persons who anticipate or live with an ostomy have equitable access to NSWOCs to decrease risks of complications (peristomal dermatitis, peristomal irritation, and ostomy leakage), to improve organization-related outcomes (readmission rates to hospital and hospital length of stay), and to improve quality of life across populations. The expert panel therefore determined the strength of the recommendation to be strong.

Practice Notes

Table 6: Details of the Key Interventions Provided by a NSWOC

KEY INTERVENTION	DETAILS FROM THE EVIDENCE
Performing preoperative stoma site marking	■ No further details from the evidence regarding performing preoperative stoma site marking. ■ Procedural information can be found within the grey literature, under the Supporting Resources section for this Recommendation.
Providing perioperative education and counselling	Preoperative education and counselling included the following: ■ A description of the surgical procedure and what an ostomy is (31, 33). ■ An explanation of preoperative interventions (e.g. stoma site marking) (28, 33). ■ Instruction and practical demonstration of stoma site care (28). ■ Reviewing ostomy supply needs (28). ■ Describing in-hospital interventions to expect after surgery (28, 31). ■ Explaining how to manage common complications (28, 32, 33). ■ Describing the impact of a stoma on daily life (e.g. sexuality) (31). ■ Reviewing changes to diet and hydration needs (28, 33). Postoperative education and counselling included the following: ■ Directions and hands-on experience on how to change a pouching system and care for the stoma (31, 33). ■ Providing a description of supplies (31, 33). ■ Reviewing changes to diet and hydration (33). ■ Providing resources for social support (31). Educational delivery considerations for preoperative group education: ■ Encouraging discussion, asking questions, and sharing lived experiences (28, 32). ■ Reinforcing through a video demonstration that a person living with an ostomy can do anything (32).

KEY INTERVENTION	DETAILS FROM THE EVIDENCE
Providing ongoing follow-up consultation and management	Follow-up consultation and management included the following: ■ Conducting a peristomal assessment (29, 37). For resources to aid in conducting a peristomal assessment, please refer to: □ **Appendix G** for ostomy assessment terms. □ **Appendix H** for ostomy assessment parameters and definitions. □ **Appendix I** for a sample assessment and management form for peristomal skin breakdown. ■ Conducting a pouching system assessment (29). ■ Evaluating and guiding a person's stoma self-care (36, 37). ■ Helping persons to accept their new condition, and helping them to see that they can continue activities and have control over their lives (36, 37). ■ Answering questions or concerns (36, 37). ■ Providing appropriate referral as needed (in the context of telephone follow-up) (37).
Involving persons with ostomy and their support network in all steps of care, as appropriate	■ No further details from the evidence regarding involving persons anticipating or living with an ostomy and their support network in their care.

Supporting Resources

RESOURCE	DESCRIPTION
Wound, Ostomy and Continence Nurses Society. WOCN Society and ASCRS position statement on preoperative stoma site marking for patients undergoing colostomy or ileostomy surgery [Internet]. Mount Laurel (NJ): Wound, Ostomy and Continence Nurses Society; 2014. Available from: https://www.ostomy.org/wp-content/uploads/2018/01/wocn_ascrs_stoma_site_marking_fecal_2014.pdf	■ Educational guide to assist clinicians in selecting an effective stoma site. ■ Identifies a stoma site marking procedure and provides examples of appropriate stoma site marking.

RESOURCE	DESCRIPTION
World Council of Enterostomal Therapists (WCET). WCET international ostomy guideline recommendations [Internet]. Perth (Australia): WCET; 2014. Available from: https://www.wcetn.org/assets/Publications/wcet_april-june_2014f%20iog%20recommandations.pdf	■ Best practice recommendations document that includes procedural information on stoma site marking (Recommendation 3.1).
Miller D, Pearsall E, Johnston D, et al. Executive summary: enhanced recovery after surgery: best practice guideline for care of patients with a fecal diversion. J Wound Ostomy Continence Nurs. 2017 Jan/Feb;44(1):74–7.	■ An evidence-based ostomy best practice guideline addressing the preoperative, postoperative, and discharge phases of care. ■ Resource for NSWOCs, general nurses, general surgeons, colorectal surgeons, residents, and other health providers involved in the care and management of persons requiring an ostomy.
Mississauga Halton Local Health Integration Network. Ostomy Resources [Internet]. Toronto (ON): Queen's Printer for Ontario; c2017 [cited 2018 Jul 16]. Available from: http://healthcareathome.ca/mh/en/Getting-Care/Patient-and-Caregiver-Resources/Publications/ostomy-care	■ Postoperative education booklets for persons (specific to colostomy, ileostomy, and urostomy). Available for download.

RESOURCE	DESCRIPTION
Canadian Association for Enterostomal Therapy. A guide to living with a colostomy [Internet]. [place unknown]: Canadian Association for Enterostomal Therapy; 2005 [updated 2007 Sep; cited 2018 Jul 16]. Available from: https://nswoc.ca/colostomy-guide/ Canadian Association for Enterostomal Therapy. A guide to living with an ileostomy [Internet]. Canadian Association for Enterostomal Therapy; 2005 [updated 2007 Sep; cited 2018 Jul 16]. Available from: https://nswoc.ca/ileostomy-guide/ Canadian Association for Enterostomal Therapy. A guide to living with a urostomy [Internet]. Canadian Association for Enterostomal Therapy; 2005 [updated 2007 Sep; cited 2018 Jul 16]. Available from: https://nswoc.ca/urostomy-guide/	■ Education guides for persons on how to live with a colostomy, ileostomy, or urostomy. Available for download.
Registered Nurses' Association of Ontario. Care transitions [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2014. Available from: https://rnao.ca/bpg/guidelines/care-transitions	■ This BPG provides evidence-based recommendations for nurses and other members of the interprofessional team who are assessing and managing persons undergoing care transition. ■ It is based on the best available evidence; where evidence was limited, the recommendations were based on the **consensus**[G] of expert opinion.
Registered Nurses' Association of Ontario. Facilitating client centred learning [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2012. Available from: https://rnao.ca/bpg/guidelines/facilitating-client-centred-learning	■ This BPG provides the resources necessary for the support of evidence-based nursing practice in the area of facilitating client-centred learning. ■ It is based on the best available evidence; where evidence was limited, the recommendations were based on the consensus of expert opinion.

RECOMMENDATION QUESTION #2:

Should an ostomy care program or no ostomy care program be recommended?

Outcomes: Patient satisfaction, hospital length of stay, readmission rates to hospital and staff satisfaction.

RECOMMENDATION 2.1:

The expert panel recommends that health service organizations implement an internal expert-guided, standardized ostomy care program that is developed using an interprofessional, team-based approach.

Strength of the recommendation: Strong

Certainty of the evidence of effects: Low

Confidence in evidence: Low

Discussion of Evidence:

Benefits and Harms

A standardized ostomy care program is an organization-level approach established within individual health service organizations to standardize care for persons anticipating or living with an ostomy. The ostomy care program includes structured treatment, management, and follow-up strategies developed and implemented by an interprofessional team that is internal to each organization, which may consist of NSWOCs, nurses, surgeons/physicians, social workers, and dietitians (among others).

Findings from quantitative research suggest that implementing an internal expert-guided, standardized ostomy care program within health organizations—compared to not implementing an ostomy care program—may reduce hospital length of stay and 30-day readmission rates to hospital, and improve patient satisfaction for persons anticipating or living with an ostomy (18, 19, 31, 33, 39-43). The evidence was of low certainty due to limitations in how studies were conducted, use of different tools to measure outcomes across studies and the small number of study participants. There were no harms related to these interventions provided within the ostomy care program in the literature.

For more detailed information of the impact of the intervention (ostomy care program) on each of the specified outcomes (patient satisfaction, hospital length of stay, readmission rates to hospital and staff satisfaction), refer to the evidence profiles available here: https://rnao.ca/bpg/guidelines/ostomy.

See **Recommendation 2.2** for further details regarding specific interventions included within the ostomy care program and the associated benefits and harms.

Refer to **Appendix L** for a sample ostomy care program patient checklist that can be used by the person anticipating an ostomy surgery.

Values and Preferences

Evidence suggests that persons living with an ostomy attributed high value to clear postoperative education, such as understanding common post-operative occurrences and how to resolve complications while at home (41). Some persons also requested the opportunity for family involvement so that they are well informed and can ask questions, as well as more information on types of stomas and where to order supplies (44). Persons living with an ostomy prefer having direct access to an assigned NSWOC or health provider compared to an emergent health visit to address complications after discharge (41).

Health Equity

The expert panel suggests that implementation of an internal, expert-guided, standardized ostomy care program would improve health equity by ensuring the consistency of care delivered across populations. An interprofessional, internal, expert-guided and standardized ostomy care program requires the appropriate health human resources. This may be a challenge in some settings.

Expert Panel Justification of Recommendation

There were benefits in implementing an internal, expert-guided, standardized ostomy care program and no harms were found. However, this evidence was of low certainty. The expert panel determined that persons would value improvements in outcomes and attributed high value to ensuring that health service organizations implement a standardized ostomy care program to improve patient satisfaction, to improve organization-related outcomes (readmission rates to hospital and hospital length of stay) and to enhance staff satisfaction. Therefore, the expert panel determined the strength of the recommendation to be strong.

Practice Notes

The expert panel attributed high value to having experts in ostomy care (e.g., NSWOCs) within health service organizations to guide the implementation of a standardized ostomy care program. Experts are identified as those with formal knowledge and experience in providing care for persons who anticipate or live with an ostomy. The expert panel emphasized the importance of collaboration among the interprofessional team to support standardization of care across the organization.

Supporting Resources

RESOURCE	DESCRIPTION
Registered Nurses' Association of Ontario. Developing and sustaining interprofessional health care: optimizing patients/clients, organizational, and system outcomes [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2013. Available from: https://rnao.ca/bpg/guidelines/interprofessional-team-work-healthcare	■ This BPG identifies best practices to enable, enhance, and sustain teamwork and interprofessional collaboration, and to enhance positive outcomes for persons, systems, and organizations. ■ It is based on the best available evidence; where evidence was limited, the recommendations were based on the consensus of expert opinion.
Registered Nurses' Association of Ontario. Intra-professional collaborative practice among nurses [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2016. Available from: https://rnao.ca/bpg/guidelines/intra-professional-collaborative-practice-among-nurses	■ This BPG identifies best practices to assist nurses, nurse leaders, other health providers, and senior managers to enhance positive outcomes for persons, nurses, and the organization through intra-professional collaborative practice. ■ It is based on the best available evidence; where evidence was limited, the recommendations were based on the consensus of expert opinion.
University of Toronto Best Practices in Surgery. Enhanced recovery after surgery: ERAS for all [Internet]. Toronto (ON): University of Toronto's Best Practice in Surgery Program; 2017. Available from: http://bestpracticeinsurgery.ca/wp-content/uploads/2017/11/ERAS_BPS_FINAL_Nov2017.pdf	■ Guideline outlining recommendations for preoperative, intra-operative and postoperative care that will optimize recovery of persons undergoing surgery. ■ The guideline is intended for use by health providers involved in the management and care of surgical patients, including surgeons, anesthesiologists, nurses, dietitians, physiotherapists, and trainees.
Enhanced Recovery After Surgery (ERAS) Society. List of Guidelines [Internet]. Stockholm: ERAS Society; c2016 [cited 2018 Jul 16]. Available from: http://erassociety.org/guidelines/list-of-guidelines	■ Website with access to all published ERAS guidelines specific to various surgeries

RECOMMENDATION 2.2:

The expert panel recommends that health service organizations include the following interventions within a standardized ostomy care program:

- Preoperative education and counselling on ostomy surgery, daily living, and self-care.
- Postoperative education regarding stoma self-management and potential complications.
- Discharge planning that is based on a readiness criteria and includes follow-up information.
- Scheduled home visits and telephone follow-up within the first four weeks.
- Access to nurses specialized in wound, ostomy, and continence perioperatively and on an ongoing basis, as necessary.

Strength of the recommendation: Strong

Certainty of the evidence of effects: Low

Confidence in evidence: Low

Discussion of Evidence:

Benefits and Harms

Studies examined one or more of the components of a standardized ostomy care program within health service organizations. All interventions involved collaboration among one or more members of the interprofessional team. When compared to no standardized ostomy care program, the proposed interventions within a standardized ostomy care program displayed benefits in outcomes for persons who anticipate or live with an ostomy (18, 19, 27, 33, 39-43, 45). The evidence was of low certainty due to limitations in how studies were conducted and the use of different tools to measure outcomes across studies. The qualitative evidence was of low confidence due to limitations in how the study was conducted and the small number of study participants. There were no harms in the literature related to these interventions provided within the ostomy care program.

For more detailed information on the components of this intervention on each of the specified outcomes (patient satisfaction, hospital length of stay, readmission rates to hospital and staff satisfaction), refer to the evidence profiles available here: https://rnao.ca/bpg/guidelines/ostomy.

The key interventions included within a standardized ostomy care program and the associated health outcomes are outlined below. See **Table 7** under Practice Notes for more details on specific interventions.

Preoperative Education and Counselling on Stoma Surgery, Daily Living, and Self-care

There is consistent evidence that suggests when persons anticipating stoma surgery receive preoperative education and counselling, it may reduce hospital length of stay (19, 31, 33). The majority of studies also suggest that when persons anticipating stoma surgery receive preoperative education and counselling, it may reduce readmission rates to hospital (19, 33, 43). The evidence regarding the outcome patient satisfaction is limited to one study and suggests that when persons anticipating stoma surgery receive preoperative education and counselling, it may improve patient satisfaction (27).

Postoperative Education regarding Stoma Self-management and Potential Complications and Discharge Planning That is Based on a Readiness Criteria and Includes Follow-up Information

There is consistent evidence that suggests when persons receive postoperative education, discharge planning that is based on a readiness criteria and includes follow-up information prior to discharge, it may reduce hospital length of stay (19, 31, 43) and improve patient satisfaction (27, 40, 41). The majority of studies suggest that when persons receive postoperative education, discharge planning that is based on a readiness criteria and includes follow-up information prior to discharge, readmission rates to hospital may be reduced (18, 19, 33, 40, 42, 43).

Scheduled Home Visits and Telephone Follow-up within the First Four Weeks

There is consistent evidence that suggests when persons receive scheduled home visits and telephone follow-up, it may reduce readmission rates to hospital (33, 40, 42, 43) and it may improve patient satisfaction (27, 40, 45). In all studies, health providers carrying out the scheduled home visits and telephone follow-up included NSWOCs, colon and rectal surgeons, physicians, nurse practitioners, or visiting registered nurses.

There is consistent qualitative evidence that indicates that persons who receive home visits and/or telephone follow-up calls experience feelings of reassurance, safety, gratitude, and satisfaction with care (40, 45). The evidence regarding the outcome staff satisfaction was limited to one qualitative study. In this study, NSWOCs who provided telephone follow-up support expressed finding meaningful worth through recognizing the significant impact they have on the lives of persons who anticipate or live with an ostomy (37).

Access to Nurses Specialized in Wound, Ostomy, and Continence Perioperatively and on an Ongoing Basis, as Necessary

There is consistent evidence that suggests access to NSWOCs perioperatively and on an ongoing basis may improve patient satisfaction (27, 40, 41, 45) and reduce hospital length of stay (31, 33, 40). The majority of studies suggest that access to NSWOCs perioperatively and on an ongoing basis may reduce readmission rates to hospital (18, 33, 40, 42).

One qualitative study reported that persons who received telephone follow-up calls from NSWOCs felt excited, comfortable, safe, and reassured, and that they had greater satisfaction with care received (37).

Values and Preferences

Research suggests that persons living with an ostomy attributed high value to having direct access to (or contact information of) a NSWOC (41). Persons with an ostomy indicated that they wanted clear and consistent postoperative education on stoma management, stoma supplies, potential stoma complications, and courses of actions to resolve issues (41). Persons with an ostomy also preferred receiving follow-up telephone calls from hospital staff, as such calls provided reassurance that no pertinent information related to their treatment and recovery had been missed (37).

In relation to staff satisfaction, NSWOCs who conducted the telephone follow-up calls attributed high value to receiving training related to communication skills and counselling techniques; such training helped them to overcome difficulties, such as language barriers, time limitations, and poor patient moods (37). They also felt that providing psychological support to patients to boost confidence and courage and help them resume normal lives was the most valuable component of the telephone follow-up intervention (37).

Health Equity

See **Recommendation 2.1** for the applicable impact on health equity. The expert panel suggests that the impact on health equity associated with this Recommendation is consistent with what is outlined in **Recommendation 2.1**.

Expert Panel Justification of Recommendation

There were benefits of the intervention components included as part of a standardized ostomy care program within health service organizations. No harms were found. However, the certainty in this evidence was low. The expert panel determined that persons would value improvements in outcomes and attributed high value to health organizations implementing a standardized ostomy care program to improve patient satisfaction and organization-related outcomes (readmission rates to hospital and hospital length of stay) and to enhance staff satisfaction. Therefore, the expert panel determined the strength of the recommendation to be strong.

Practice Notes

The expert panel attributed high value to providing persons with an ostomy with direct access to an NSWOC, as needed, during the first four weeks after surgery and on an ongoing basis in order to improve patient satisfaction and decrease readmission rates to hospital.

The expert panel emphasized that scheduled home visits should be conducted by nurses possessing the appropriate knowledge and skills.

The expert panel emphasized that persons who anticipate or live with an ostomy, and who have concerns regarding medications, be directed to their pharmacist.

The expert panel attributed high value to health providers conducting an ostomy assessment immediately postoperatively and throughout the ostomy care program. Refer to **Appendices G**, **H** and **I** for ostomy assessment terms, definitions, parameters and sample assessment form that can be used for persons who live with an ostomy.

The expert panel emphasized that the interventions within the ostomy care program are based on a plan of care promoting self-efficacy that has been established in collaboration with the person, their support network (if needed) and the interprofessional team.

Table 7: Details of the Key Interventions within a Standardized Ostomy Care Program

KEY INTERVENTION	DETAILS FROM THE EVIDENCE
Providing preoperative education and counselling on stoma surgery, daily living, and self-care	Preoperative education and counselling included the following: ■ Explaining what an ileostomy is (33). ■ Demonstrating pouching systems and techniques (33). ■ Introducing concepts of stoma output management in relation to diet and antidiarrheals (33). ■ Describing the surgical procedure and showing pictures of stomas (31). ■ Describing the potential impact of stoma on relationships, sexuality, showering, and other activities of daily life (31). ■ Explaining postoperative routines (31). ■ Holding practice sessions to change and manage stomas (31). ■ Provision of information regarding the purchase of stoma care equipment (31).
Postoperative education regarding stoma self-management and potential complications ***Discharge planning that is based on a readiness criteria and includes follow-up information***	Postoperative education and discharge planning included the following: ■ Strategies to improve self-management of the ostomy in the hospital (18, 33, 42). ■ Using a readiness criteria or checklist to determine when a person can be discharged; for instance, using a person-centred checklist to teach stoma care and evaluate readiness for discharge (18, 33, 42). ■ Establishing discharge and follow-up plans that include providing home care support or referral (40-43). ■ Providing an overview of signs and symptoms of dehydration and/or other complications (40, 41). ■ Providing instructions on how to document intake and output and monitor for signs and symptoms of dehydration for persons with an ileostomy (33, 42).
Scheduled home visits and telephone follow-up within the first four weeks.	Scheduled home visits and telephone follow-up included the following: ■ Providing a telephone consult regarding intake/output and how to avoid dehydration (40). ■ Home visits by trained nurses after hospital discharge for four continuous weeks to assess for signs of dehydration, pouching issues, stoma output, and infection (42). ■ Providing appropriate referral for stoma nurse clinic, surgical consultation, or emergency room based on evaluation from the telephone consultation (45).

Supporting Resources

RESOURCE	DESCRIPTION
Rectal Cancer Decision Aid. Ottawa rectal cancer decision aid [Video]. [place unknown]: YouTube; 2017 Jun 8 [cited 2018 Jul 24]. Available from: https://www.youtube.com/watch?v=ZULqkJKyBqo&feature=youtu.be	■ Decision support video for persons who are faced with surgery (low anterior resection or **abdominoperineal resection**[G]) for mid- to low-rectal cancer. ■ The video provides general information about rectal cancer, the surgical options, and risks and benefits.
Missisauga Halton Local Health Integration Network. Ostomy Resources [Internet]. Toronto (ON): Queen's Printer for Ontario; c2017 [cited 2018 Jul 16]. Available from: http://healthcareathome.ca/mh/en/Getting-Care/Patient-and-Caregiver-Resources/Publications/ostomy-care	■ Postoperative education booklets for persons who will live with an ostomy. ■ Specific content related to colostomy, ileostomy, and urostomy.
Canadian Association for Enterostomal Therapy. A guide to living with a colostomy [Internet]. [place unknown]: Canadian Association for Enterostomal Therapy; 2005 [updated 2007 Sep; cited 2018 Jul 16]. Available from: https://nswoc.ca/colostomy-guide/ Canadian Association for Enterostomal Therapy. A guide to living with an ileostomy [Internet]. [place unknown]: Canadian Association for Enterostomal Therapy; 2005 [updated 2007 Sep; cited 2018 Jul 16]. Available from: https://nswoc.ca/ileostomy-guide/ Canadian Association for Enterostomal Therapy. A guide to living with a urostomy [Internet]. [place unknown]: Canadian Associa tion for Enterostomal Therapy; 2005 [updated 2007 Sep; cited 2018 Jul 16]. Available from: https://nswoc.ca/urostomy-guide/	■ The national website for NSWOC Canada, a not-for-profit association for over 350 nurses specializing in the nursing care of persons with challenges in wound, ostomy, and continence. ■ The website includes education guides for persons on how to live with a colostomy, ileostomy, or urostomy.
Registered Nurses' Association of Ontario. Care transitions [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2014. Available from: http://rnao.ca/sites/rnao-ca/files/Care_Transitions_BPG.pdf	■ This BPG provides evidence-based recommendations for nurses and other members of the interprofessional team who are assessing and managing persons undergoing care transition. ■ It is based on the best available evidence; where evidence was limited, the recommendations were based on the consensus of expert opinion.

RECOMMENDATION QUESTION #3:

Should prevention strategies for parastomal hernia development or no prevention strategies for parastomal hernia development be recommended?

Outcome: Parastomal hernia rates.

RECOMMENDATION 3.1:

The expert panel suggests that health providers implement the following interventions to prevent parastomal hernias for persons who anticipate or live with an ostomy:

- Conduct a risk factor assessment related to body mass index and waist circumference.
- Provide expert advice on weight management, as needed.
- Perform stoma site marking preoperatively.
- Provide postoperative education related to:
  - abstinence from heavy lifting postoperatively;
  - consideration of lightweight support garments; and
  - abdominal exercises beginning within three months of surgery.

Strength of the recommendation: Conditional

Certainty of the evidence of effects: Very Low

Confidence in evidence: Not Applicable

Discussion of Evidence:

Benefits and Harms

Research suggests that six key interventions performed by health providers that support prevention of parastomal hernias may decrease incidence of parastomal hernias in persons who anticipate or live with an ostomy (16). However, two studies by Thompson and Trainer as cited in Bland and Young (1) reported a 17 per cent increase in the incidence of parastomal hernias after implementation of an early hernia prevention program that utilized the six key strategies. The studies concluded that the rise was related to participant non-adherence. The studies also reported a long term reduction in incidence of parastomal hernias among those who adhered to the early hernia prevention program (1). The body of evidence was of very low certainty due to limitations in how studies were conducted and the small number of study participants.

For more detailed information on the impact of the components of hernia prevention strategies on the outcome rates of parastomal hernia, please refer to the evidence profiles available here: https://rnao.ca/bpg/guidelines/ostomy.

The hernia prevention strategies and their impact on rates of parastomal hernia in persons who live with an ostomy are summarized on the next page. Specific components of the interventions noted in the literature and identified by the expert panel are outlined under Practice Notes.

Conduct a Risk Factor Assessment Related to Body Mass Index (BMI) and Waist Circumference, and Provide Expert Advice on Weight Management, as Needed

De Raet et al. as cited in Bland and Young (1) identify that BMI and waist circumference are both risk factors for parastomal hernia prevention among persons living with an ostomy; they should therefore be assessed. Persons with a waist circumference > 100 cm may have 75 per cent probability of herniation. According to De Raet et al. as cited in Bland and Young (1), an optimal BMI between 20 and 25 kg/m^2 may reduce the occurrence of parastomal herniation, indicating that persons living with an ostomy may need to receive advice on weight management.

Perform Stoma Site Marking Preoperatively

The evidence regarding performing stoma site marking preoperatively is limited to one study. According to Person et al. as cited in Bland and Young (1), preoperative stoma site marking by a NSWOC may reduce rates of parastomal hernia in persons living with an ostomy. The rate of parastomal hernia was 3.8 per cent in the group that received stoma site marking compared to 24.5 per cent in the group that did not receive a stoma site marking.

Provide postoperative education related to:
Abstinence from Heavy Lifting Postoperatively;
Consideration of Lightweight Support Garments; and
Abdominal Exercises Beginning within Three Months of Surgery

According to two studies by Thompson and Trainer as cited in Bland and Young (1) and North (16), persons who anticipate or live with an ostomy—and who receive advice on abstinence from heavy lifting, consideration of lightweight support garments and instructions to begin specific abdominal exercises within three months after surgery as part of a hernia prevention program—may experience a decrease in the rates of parastomal hernias. One research study reported that after implementing the program, the rates of parastomal hernia were 15 per cent in all study participants and 1 per cent among those who were fully compliant (compared to 23 per cent local incidence and 44 per cent overall incidence reported in existing studies) (16). The 2005 and 2007 studies by Thompson and Trainer as cited in Bland and Young (1) indicated that reduction in parastomal hernias was 14 per cent after implementing the hernia prevention program compared to 28 per cent before the program. There was limited and very low certainty of evidence about how long a person with an ostomy needs to abstain from heavy lifting postoperatively. Please refer to Practice Notes for the expert panel consensus time frame on abstaining from heavy lifting postoperatively.

Values and Preferences

Evidence indicates that only 45 per cent of participants who ordered a support garment utilized it on a regular basis, and only 27 per cent of participants believed that wearing the garment was important to prevent hernia (1).

Health Equity

The expert panel recognizes that there is limited evidence that supports the benefits of lightweight support garments in prevention of parastomal hernias. In addition, persons of lower socio-economic status may have challenges with access to lightweight support garments due to cost.

Expert Panel Justification of Recommendation

The expert panel determined that there is likely high variability in how much persons living with an ostomy value the outcomes associated with this recommendation. Given the unclear benefits associated with wearing lightweight support garments compared to other factors (such as cost and comfort), persons with an ostomy may choose not to receive the intervention. In addition, the overall evidence for hernia prevention strategies was of very low certainty. Therefore, the expert panel determined the strength of the recommendation to be conditional.

Practice Notes

Table 8: Intervention Suggestions from Expert Panel

KEY INTERVENTION	SUGGESTIONS FROM EXPERT PANEL
Conducting a risk factor assessment related to body mass index (BMI) and waist circumference	■ An online calculator to measure BMI is provided in the Supporting Resources section. ■ A risk factor assessment should be conducted preoperatively, postoperatively and on an as needed basis.
Providing expert advice on weight management, as needed	■ Referral to a registered dietician for education regarding nutrition and weight management.
Advising abstinence from heavy lifting postoperatively	■ Providing immediate postoperative education on the following: □ Heavy lifting. □ Weight transfer. □ Splinting with coughing, nausea, or vomiting. □ Avoiding straining with constipation. ■ Avoid lifting no more than 10 lbs for the first month after surgery, and then slowly work back up to lifting normal weights.
Consideration of lightweight support garments before discharge	■ Providing information on support garments.
Providing instructions on abdominal exercises to begin within three months of surgery	■ Surgeons to recommend abdominal exercises with specific instructions on when to begin and how to perform them. ■ Providing appropriate referral to a physiotherapist to provide education on abdominal exercises and proper body mechanics to perform during the first three months after surgery.
Additional considerations	■ Providing education on what a parastomal hernia is. ■ Having an anti-emetic protocol in place immediately after surgery.

Table 9: Intervention Details from the Evidence

KEY INTERVENTION	DETAILS FROM THE EVIDENCE
Providing instructions on abdominal exercises to begin within three months of surgery	■ The abdominal exercises recommended in the prevention program by North (2014) included the following:

TABLE 3. ABDOMINAL EXERCISES

Start all abdominal exercises by lying with your head on a pillow, knees bent and feet flat on the bed.
1. Abdominal exercise Gently place your hands on your lower tummy. Breathe in through your nose and, as you breathe out, gently pull your tummy button down towards your spine. Feel the muscles tighten, try to hold for a count of 3 and then relax. Breathe in and out normally.
2. Pelvic tilting Place your hands in the hollow of your back. Tighten your tummy muscles (as exercise 1), flatten your lower back onto your hands and tilt your bottom. Breathe normally. Hold for 3 seconds and release gently.
3. Knee rolling Tighten your tummy muscles (as exercise 1) and gently lower both knees to one side as far as is comfortable. Bring them back to the middle and relax. Repeat to the other side. This exercise has the added benefit of releasing trapped wind.
Aim to do each of these exercises five times, three times a day. Do more repetitions as you feel able.
Source: Oxford Radcliffes Hospitals, 2013

Source: Reprinted from North J. Early intervention, parastomal hernia and quality of life: a research study. Br J Nurs. 2014;23(5):S14–8. Table 3, Abdominal exercises; p. S15. Reprinted with permission.

Supporting Resources

RESOURCE	DESCRIPTION
Kojima K, Nakamura T, Sato T, et al. Risk factors for parastomal hernia after abdominoperineal resection for rectal cancer. Asian J Endosc Surg. 2017;10(3) :276–81. Temple B, Farley T, Popik K, et al. Prevalence of parastomal hernia and factors associated with its development. J Wound Ostomy Continence Nurs. 2016;43(5):489–93.	■ Peer-reviewed articles that provide information on risk factors associated with the development of parastomal hernias. The following information is highlighted: □ Patient-related factors include age, obesity (BMI ≥ 25 kg/m^2), increased abdominal wall pressure, weakened abdominal muscles, physical activity after surgery, abnormal collagen formation, steroid use, and smoking. □ Surgery-related risk factors include the absence of a preoperative ostomy site marking by a NSWOC, inappropriate stoma site, laparoscopic colostomy, ostomy type, and techniques of ostomy construction (non-fixation of abdominal wall to the intestine).

RESOURCE	DESCRIPTION
Dietitians of Canada. BMI Calculator [Internet]. [place unknown]: Dieticians of Canada; c2018 [cited 2018 Jul 16]. Available from: https://www.dietitians.ca/your-health/assess-yourself/assess-your-bmi/bmi-adult.aspx	■ Provides calculator to determine BMI and the associated classifications. ■ Link provided at the end of page for how to find a registered dietitian in your area.
Government of Ontario. Canada's food guide [Internet]. [place unknown]: Government of Canada; c2019 [updated 2019 Feb 12; cited 2019 Mar 5]. Available from https://food-guide.canada.ca/en/	■ Provides an overview of how to make healthy food choices.
Nurses Specialized in Wound, Ostomy and Continence Canada. Parastomal Care: General advice to help minimize the risk of parastomal hernia development following surgery [Internet]. [place unknown]: Felix Leclair for Nurses Specialized in Wound, Ostomy and Continence Canada; c2017 [cited 2018 Jul 16]. Available from: http://nswoc.ca/parastomal-care/	■ Provides general advice to minimize the risk of parastomal hernia after surgery, including abdominal exercises following stoma forming.

RECOMMENDATION QUESTION #4:

Should quality of life assessment or no quality of life assessment be recommended?

Outcomes: Psychological health status and self-identity.

RECOMMENDATION 4.1:

In order to guide person-centred care, the expert panel recommends that health providers assess quality of life in persons who anticipate or live with an ostomy. Specific areas of focus should include the following:

- Psychological distress (anxiety and depression).
- Self-identity (sexuality and body image).

Strength of the recommendation: Strong

Certainty of the evidence: Very Low

Confidence in evidence: Low

Discussion of Evidence:

Benefits and Harms

Systematic review results highlight the lack of literature on the impact of conducting a quality of life assessment for persons who anticipate or live with an ostomy. As a result, literature was examined to understand the relationship between anticipating or living with an ostomy, and quality of life outcomes of psychological distress and self-identity. Studies demonstrate the impact of living with an ostomy on quality of life through the use of quality of life assessments. The evidence was of very low certainty due to limitations in how studies were conducted, the use of different tools to measure outcomes across studies and the small number of study participants. For qualitative studies, the evidence was of low confidence due to some limitations in how studies were conducted and the small number of study participants.

The creation of an ostomy is a life-changing event and may have implications on various aspects related to quality of life, most notably psychological health and self-identity. Descriptive studies report that 46 per cent to 63 per cent of people expressed feelings of depression following stoma surgery and had lower quality of life scores in the mental health domain compared to the general public (46, 47). Conversely, a descriptive study reported no difference between the general public and persons with a stoma in quality of life scores after surveying 2,329 community-dwelling persons with an ostomy (48). However, specific to the mental health domain of the survey, Nichols (48) reported that persons with an ostomy were more likely to indicate feeling "down in the dumps" most or all of the time and downhearted and depressed most or all of time. Furthermore, Knowles et al. (49) reported that results from survey data indicated that nearly 50 per cent of respondents who had **Crohn's disease**[G] and were living with an ostomy had scores indicating possible or probable anxiety disorder, while 42 per cent had a depressive symptom score.

A majority of the literature reported that living with an ostomy may have a negative impact on aspects of self-identity, most notably on body image and sexuality. Descriptive studies reported that body image was inferior for persons living with a permanent stoma after rectal cancer surgery compared to those without a stoma, while most persons

reported their sexual life was affected negatively after creation of a stoma (50, 51). Persons who were diagnosed with rectal cancer and were living with an ostomy were more likely to be fearful of resuming sexual activity or to have problems undressing in front of a partner, interference with personal relationships, decreased ability to be intimate, and less satisfaction with appearance (52). For persons who were sexually active, descriptive studies reported that 33 per cent of them resumed sexual activity after stoma surgery (46, 47).

Similarly, qualitative studies found that persons living with an ostomy expressed several changes in sexual function, such as erectile dysfunction, vaginal dryness, and pain during intercourse. Persons also experienced psychological impacts such as fear and anxiety related to sexual competence and/or the potential for pouching system mishaps during intimacy (53, 54).

Fewer studies reported that living with an ostomy has no substantial (or a lesser) effect on body image and sexuality (55, 56). Furthermore, some persons in two qualitative studies expressed that their self-perceptions about body image did not change, while others described negative self-perceptions about body image (53, 54).

Values and Preferences

In a qualitative study, persons with an ostomy expressed that they valued nurses as a source of practical and psychological support (54). In another qualitative study, persons with an ostomy expressed that they expect sexual counselling from a nurse to help them normalize their sexual lives (53). Persons with an ostomy also expressed the importance of support from family and friends during the adaption stage after ostomy surgery (54).

Health Equity

No studies were found that directly assessed the impact of conducting a quality of life assessment on health equity. In a study conducted by Knowles et al. (49), 77 per cent of participants reported no current or past professional support to address their mental health concerns, despite a substantial portion of participants who had psychological concerns. These findings highlight the need for improved access to psychological services for persons living with an ostomy (49). Psychological services may include further assessment and management of psychological distress (anxiety and depression) and self-identity (sexuality and body image).

Expert Panel Justification of Recommendation

The impact of a quality of life assessment was not evident in the literature. Instead, evidence regarding the impact of living with an ostomy on psychological health and self-identity was explored, which was of very low certainty. However, as the majority of literature reported on the negative effects of living with an ostomy on psychological health status and self-identity, the expert panel felt it is necessary to assess quality of life in all persons who anticipate or live with an ostomy as a precaution so that the appropriate follow-up can be completed (if needed). Therefore, the expert panel determined the strength of the recommendation to be strong.

Practice Notes

The expert panel attributed high value to ongoing assessment of quality of life in persons who anticipate or live with an ostomy, paying particular attention to psychological health and self-identity throughout the continuum of care, as needed. Assessments of quality of life can be conducted through the use of existing validated tools (an example is provided in the Supporting Resources section) or by asking open-ended questions. Use of either a validated assessment tool or asking open-ended questions may depend on the clinical environment and/or the preferences of those receiving care.

Examples of open-ended questions to assess quality of life:

Preoperatively:

- How do you expect your life to change after surgery?
- What are your greatest concerns regarding your upcoming surgery?

Postoperatively:

- How have you been feeling since surgery?
- Have you had any concerns with your ostomy since surgery?
- What changes have you noticed to your activities of daily living since surgery? What challenges have you encountered with performing your activities of daily living since surgery? How have you been managing with these changes?
- Do you have a good support system in place to help you manage these changes to your day-to-day life?
- Sometimes others who undergo the same type of surgery as you have difficulty enjoying things that they used to do. Have you experienced this?
- Do you feel an increase in anxiety in social environments since your surgery?
- Have you been able to return to work?
- Others report a low mood after surgery. How would you describe your mood compared to before your surgery?
- Are you sleeping well?
- How would you describe your appetite compared to before?
- Do you talk to anyone about how you are feeling?
- How has getting the necessary ostomy supplies been for you?

For those who are in committed relationships:

- Some people who have the same surgery as you report feelings of discomfort or anxiety with resuming sexual or intimate activities with their partner. Have you experienced this?

For those who are not in a relationship:

- Some people who have the same surgery as you report that becoming involved in an intimate relationship is problematic. Have you been experiencing this since surgery?

The expert panel emphasized the importance of follow-up care after completing a quality of life assessment. Follow-up care can include the following:

- Providing education and counselling on how to mititigate negative feelings.
- Providing referrals for further support (e.g., psychotherapists, psychiatrists, and counselors).
- Incorporating the person's needs (such as emotional or cultural needs) into the plan of care.
- Empowering persons who anticipate or live with an ostomy through ongoing education and training.

Appendix N outlines person-centred education and self-management resources for persons who anticipate or live with an ostomy.

Supporting Resources

RESOURCE	DESCRIPTION
Ostomy Guide. A Guide to Sex with an Ostomy: Ostomy and Intimacy [Internet]. [place unknown]: Ostomy Guide; [date unknown] [cited 2018 Jul 17]. Available from: http://www.ostomyguide.com/a-guide-to-sex-with-an-ostomy/	■ Provides overview of impact of ostomy on sexuality and sex tips for physical and psychological issues.
Grant M, Ferrell BR, Dean G, et al. Quality of life questionnaire for a patient with an ostomy (QOL-O) [Internet]. Duarte (CA): City of Hope and Beckman Research Institute; 2012 [cited 2018 Jul 17]. Available from: http://www.midss.org/sites/default/files/ost-47.pdf	■ Ostomy quality of life tool (for structured assessment) with information regarding its components, reliability, and validity, and with instructions for scoring.
Luchterhand C. The PLISSIT model clinical tool [Internet]. [place unknown: publisher unknown; date unknown]. Available from: http://projects.hsl.wisc.edu/SERVICE/modules/3/M3_CT_The_PLISSIT_Model.pdf	■ Provides overview of the four interventions of PLISSIT (Permission, Limited Information, Specific Suggestions, and Intensive Therapy), which is a model to address sexuality issues with patients.
Ostomy Canada Society. Chapters, Satellites and Peer Support Groups of Ostomy Canada Society [Internet].[place unknown]: Ostomy Canada Society; [date unknown] [cited 2018 Jul 17]. Available from: https://www.ostomycanada.ca/support/canadian-chapters/	■ Includes outline of chapters, satellites, and peer support groups of Ostomy Canada Society by province. ■ Also includes a search engine to find the nearest chapter, satellite, or peer support group by postal code.
United Ostomy Associations of America, Inc. Intimacy after Ostomy Surgery Guide [Internet]. [place unknown]: United Ostomy Association of America; 2018. Available from: https://www.ostomy.org/wp-content/uploads/2018/03/Intimacy-After-Ostomy-Surgery-Guide.pdf	■ Comprehensive guide to intimacy after ostomy surgery, including dispelling myths about sex and stoma, overview of common sexual problems, guidance on what to talk about with your partner, the effect of medicines on sex, tips on controlling gas and odor, and more.

Research Gaps and Future Implications

The RNAO Best Practice Guideline Development and Research Team and expert panel identified priority areas for future research (outlined in **Table 10**). Studies conducted in these areas would provide further evidence to support high-quality and equitable support for adults who anticipate or live with an ostomy. The list is not exhaustive; other areas of research may be required.

Table 10: Priority Research Areas per Recommendation Question

RECOMMENDATION QUESTION	PRIORITY RESEARCH AREA
RECOMMENDATION QUESTION #1: **Should access to nurses specialized in wound, ostomy, and continence or no access to nurses specialized in wound, ostomy, and continence be recommended?** **Outcomes: Peristomal dermatitis, peristomal irritation, ostomy leakage, quality of life, readmission rates to hospital and hospital length of stay.**	■ Health needs of persons who anticipate or live with an ostomy in geographically remote areas. ■ Comparative effectiveness of stoma site marking completed by an NSWOC versus a non-specialized health provider on persons anticipating ostomy outcomes. ■ Identification of perioperative education strategies for adults who anticipate or live with an ostomy. ■ Identification of strategies for engaging support networks in the care of adults who anticipate or live with an ostomy. ■ Long-term effectiveness–health, quality of life, and cost-effectiveness–of interventions provided by NSWOCs on persons who anticipate or live with an ostomy.
RECOMMENDATION QUESTION #2 **Should an ostomy care program or no ostomy care program be recommended?** **Outcomes: Patient satisfaction, hospital length of stay, readmission rates to hospital and staff satisfaction.**	■ Impact of an ostomy care program on occurrences of preoperative stoma site marking for adults anticipating ostomy surgery. ■ Impact of utilization of an ostomy care program on staff satisfaction. ■ Identification of effective strategies for collaboration between members of the interprofessional team that lead the development and implementation of an ostomy care program. ■ Comparative effectiveness of the delivery of scheduled home visits after stoma surgery by an NSWOC versus non-specialized health provider.

RECOMMENDATION QUESTION	PRIORITY RESEARCH AREA
RECOMMENDATION QUESTION #3 **Should prevention strategies for parastomal hernia development or no prevention strategies for parastomal hernia development be recommended?** **Outcomes: Parastomal hernia rates.**	■ The effectiveness of abdominal exercises in the prevention of parastomal hernias. ■ The identification of specific abdominal exercises to prevent occurrence of parastomal hernias. ■ Exploring the benefits of preoperative versus postoperative abdominal exercises to prevent occurrence of parastomal hernias. ■ The effectiveness of lightweight support garments in the prevention of parastomal hernias. ■ The identification of specific instructions and considerations related to heavy lifting at any point after stoma surgery.
RECOMMENDATION QUESTION #4 **Should quality of life assessment or no quality of life assessment be recommended?** **Outcomes: Psychological health status and self-identity.**	■ The effectiveness of education and appropriate referral on psychological outcomes in adults who anticipate or live with an ostomy. ■ The effectiveness of education and appropriate referral on outcomes related to self-identity in adults who anticipate or live with an ostomy. ■ Identifying effective communication strategies to explore sexuality issues in persons who anticipate or live with an ostomy. ■ Decision-making pathways for appropriate referrals to follow-up care after a quality of life assessment. ■ Use of standardized assessment tool for quality of life to customize care plan (for education and referral) for adults who anticipate or live with an ostomy.
Evaluation (see Tables 3, 4 and 5)	■ Development of public data repositories and indicators for provincial, national, and international data collection of outcomes relevant to ostomy care. ■ Development of reliable and valid instruments that measure quality of life for persons who anticipate or live with an ostomy. ■ Standardized ostomy definitions, certifications, and training for program monitoring and evaluation.

Implementation Strategies

Implementing guidelines at the point of care is multi-faceted and challenging. It takes more than awareness and distribution of guidelines for practice to change: guidelines must be adapted for each practice setting in a systematic and participatory way to ensure that recommendations fit the local context (57). The 2012 RNAO *Toolkit: Implementation of Best Practice Guidelines, Second Edition* provides an evidence-based process for doing this. It can be downloaded at www.RNAO.ca/bpg/resources/toolkit-implementation-best-practice-guidelines-second-edition.

The *Toolkit* is based on emerging evidence that successful uptake of best practices in health care is more likely when the following occur:

- Leaders at all levels are committed to supporting guideline implementation.
- Guidelines are selected for implementation through a systematic, participatory process.
- Stakeholders for whom the guidelines are relevant are identified and engaged in the implementation.
- Environmental readiness for implementing guidelines is assessed.
- The guideline is tailored to the local context.
- Barriers and facilitators to using the guideline are assessed and addressed.
- Interventions to promote use of the guideline are selected.
- Use of the guideline is systematically monitored and sustained.
- Evaluation of the guideline's impact is embedded in the process.
- There are adequate resources to complete all aspects of the implementation.

The *Toolkit* uses the "Knowledge-to-Action" framework to demonstrate the process steps required for knowledge inquiry and synthesis (58) (see **Figure 3**). It also guides the adaptation of the new knowledge to the local context and implementation. This framework suggests identifying and using knowledge tools (such as guidelines) to identify gaps and begin the process of tailoring the new knowledge to local settings.

RNAO is committed to widespread deployment and implementation of our BPGs. We use a coordinated approach to dissemination, incorporating a variety of strategies, including the following:

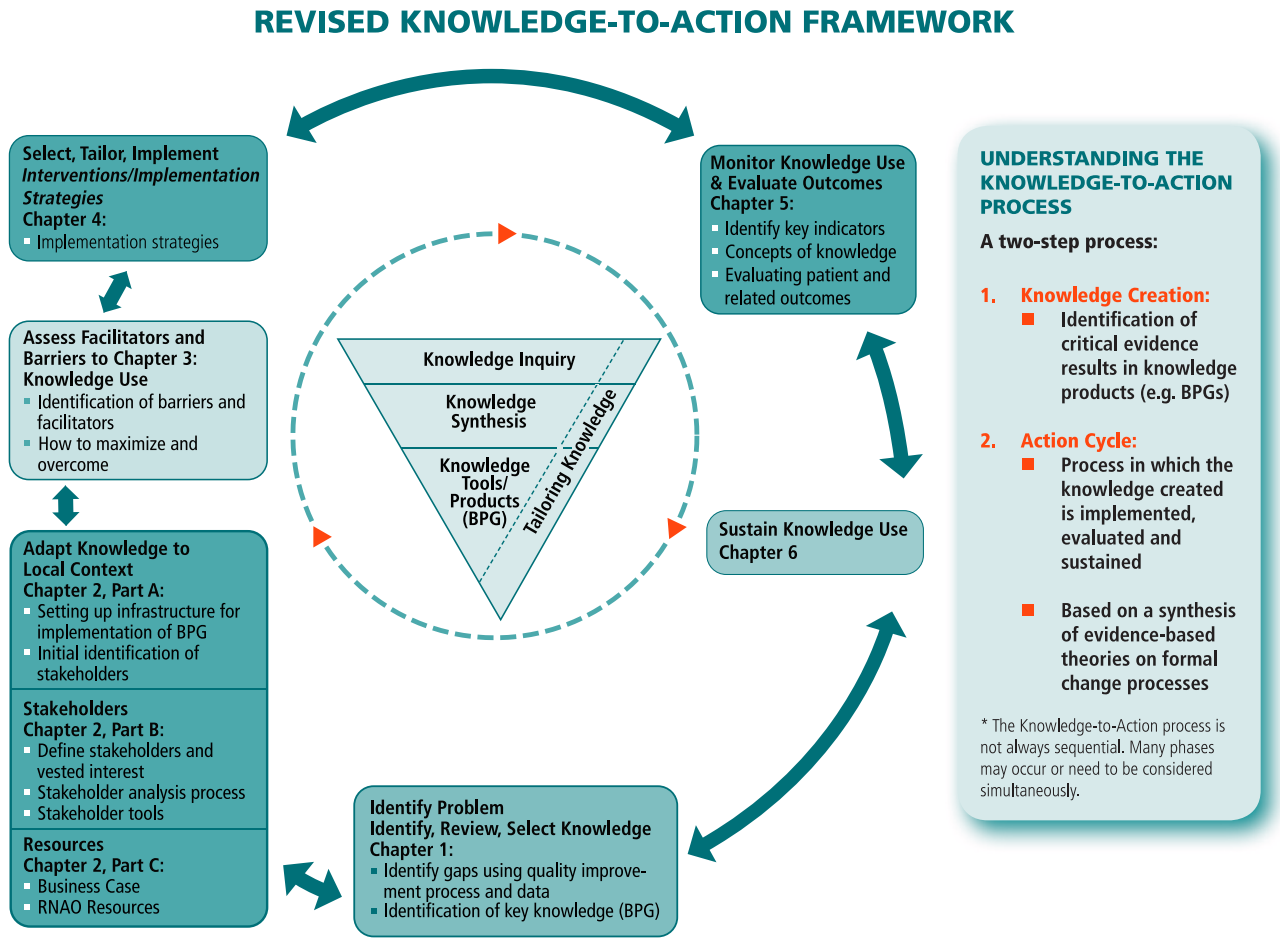
1. The Nursing Best Practice Champion Network®, which develops the capacity of individual nurses to foster awareness, engagement, and adoption of BPGs.
2. The BPG Order Set™ provide clear, concise, and actionable intervention statements derived from practice recommendations. BPG Order Sets can be readily embedded within electronic records, but they can also be used in paper-based or hybrid environments.
3. The Best Practice Spotlight Organization® (BPSO®) designation, which supports implementation at the organization and system levels. BPSOs focus on developing evidence-based cultures with the specific mandate to implement, evaluate, and sustain multiple RNAO BPGs.

In addition, we offer annual capacity-building learning institutes on specific BPGs and their implementation.

Information about our implementation strategies can be found at:

- RNAO Best Practice Champions Network®: https://rnao.ca/bpg/get-involved/champions
- RNAO BPG Order Sets: http://rnao.ca/ehealth/bpgordersets
- RNAO BPSO®: https://rnao.ca/bpg/bpso
- RNAO capacity-building learning institutes and other professional development opportunities: https://rnao.ca/events

Figure 3: Knowledge-to-Action Framework



Source: S. Straus, J. Tetroe, and I. Graham. Copyright 2009 by the Blackwell Publishing Ltd. Adapted with permission.Adapted from "Knowledge Translation in Health Care: Moving from Evidence to Practice".

References

1. Bland C, Young KR. Nurse activity to prevent and support patients with a parastomal hernia. Gastrointestinal Nursing. 2015;13(10):16-24.

2. United Ostomy Associations of America Inc. What is an Ostomy? [Internet]. [place unknown]: United Ostomy Associations of America, Inc.; c2005-2018. Available from: https://www.ostomy.org/what-is-an-ostomy/.

3. Piercy DL. Gastrointestinal disorders. In: Nettina SM, editor. Lippincott manual of nursing practice 10th ed. Philadelphia (PA): Wolters Kluwer Health, Lippincott Williams & Wilkins 2014; p. 641-706.

4. Nurses Specialized in Wound Ostomy and Continence Canada. What is an NSWOC nurse? [Internet]. [place unknown]: Felix Leclair for Nurses Specialized in Wound, Ostomy and Continence Canada; c2017. Available from: https://nswoc.ca/what-is-an-et-nurse/.

5. College of Nurses of Ontario. RHPA: Scope of Practice, Controlled Acts Model [Internet]. Toronto (ON): College of Nurses of Ontario; 2018. Available from: http://www.cno.org/globalassets/docs/policy/41052_rhpascope.pdf.

6. College of Nurses of Ontario. Working with Unregulated Care Providers [Internet]. Toronto (ON): College of Nurses of Ontario; 2013. Available from: http://www.cno.org/globalassets/docs/prac/41014_workingucp.pdf.

7. Russell S. Parastomal hernia and physical activity. Are patients getting the right advice? Br J Nurs. 2017;26(17):S12-8.

8. The GRADE Working Group. Handbook for grading the quality of evidence and the strength of recommendations using the GRADE approach. 2013 [Internet]. Available from: http://gdt.guidelinedevelopment.org/app/handbook/handbook.html#h.svwngs6pm0f2.

9. Lewin S, Booth A, Glenton C, et al. Applying GRADE-CERQual to qualitative evidence synthesis findings: introduction to the series. Implement Sci. 2018;13(Suppl 1):1-10.

10. Donabedian A. Evaluating the quality of medical care. Milbank Q. 2005;83(4):691-729.

11. Coca C, Fernández de Larrinoa I, Serrano R, et al. The impact of specialty practice nursing care on health-related quality of life in persons with ostomies. J Wound, Ostomy Continence Nurs. 2015;42(3):257-63.

12. Stomaatje.com. What is a stoma? [Internet]. [place unknown]: stomaatje.com;c2005-2018. Available from: http://www.stomaatje.com/whatisastoma.html.

13. Vancouver United Ostomy Association Chapter, Inc. A handbook for new ostomy patients [Internet]. 7th ed. Vancouver (BC): Vancouver United Ostomy Association Chapter Inc.; 2017. Available from: http://www.uoavancouver.com/uploads/2/6/8/9/26894454/final_new_patients_edition_7th_printing_web_2017.pdf.

14. Medley JA. Cost-effectiveness of a WOC advanced practice nurse in the acute care and outpatient setting. J Wound Ostomy Continence Nurs. 2014;41(4):307-10.

15. Williams J. Management of parastomal hernias...[corrected] [published errata appear in GASTROINTEST NURS 2011 Jul;9(6):16]. Gastrointestinal Nursing. 2011;9(5):15-6.

16. North J. Early intervention, parastomal hernia and quality of life: a research study. Br J Nurs. 2014;23(5):S14-8.

17. Osborne W, North J, Williams J. Using a risk assessment tool for parastomal hernia prevention. Br J of Nurs. 2018;27(5):15-9.

18. Hardiman KM, Reames CD, McLeod MC, et al. Patient autonomy-centered self-care checklist reduces hospital readmissions after ileostomy creation. Surgery. 2016;160(5):1302-8.

19. Sarin A, Litonius ES, Naidu R,et al. Successful implementation of an Enhanced Recovery After Surgery program shortens length of stay and improves postoperative pain, and bowel and bladder function after colorectal surgery. BMC Anesthesiol. 2016;16 (1):55.

20. Ratliff CR, Haugen V. Selecting a tool for assessing health-related quality of life in ostomates. J Wound Ostomy Continence Nurs. 2013;40(5):462-7.

21. White C. Sexual health following stoma surgery. Gastrointestinal Nursing. 2013;11(6):38-42.

22. The Canadian Association for Enterostomal Therapy. Ostomy reimbursement programs. The Link 2015.

23. Escalante R, Siso L, Mendoza S. Complication of ostomies. Lithunian Surgery. 2016;15(1):11-3.

24. Meisner S, Lehur PA, Moran B, et al. Peristomal skin complications are common, expensive, and difficult to manage: a population-based cost modeling study. PLoS ONE. 2012;7 (5) (no pagination)(e37813).

25. Meisner S, Lehur P, Moran B, Martins L, Jemec GB. Peristomal skin complications are common, expensive, and difficult to manage: A population based cost modeling study. PLoS One. 2012;7(5):e37813.

26. Society OC. Charter of Ostomates Rights 2007 [Available from: https://www.ostomycanada.ca/charter-of-ostomates-rights/.

27. Edis H. Meeting the needs of new ostomists: a patient evaluation survey. Br J Nurs. 2015;24(17):S4, S6, S8 passim.

28. Stokes AL, Tice S, Follett S, et al. Institution of a preoperative stoma education group class decreases rate of peristomal complications in new stoma patients. J of Wound Ostomy Continence Nurs. 2017;44(4):363-7.

29. Erwin-Toth P, Thompson SJ, Davis JS. Factors impacting the quality of life of people with an ostomy in North America: results from the dialogue study. J of Wound Ostomy Continence Nurs. 2012;39(4):417-22.

30. Chandler P, Buckley M, Canty T,et al. Assessing ostomates' quality of life in the Republic of Ireland. Gastrointestinal Nursing. 2017;15(2):45-50.

31. Forsmo HM, Pfeffer F, Rasdal A, et al. Pre- and postoperative stoma education and guidance within an enhanced recovery after surgery (ERAS) programme reduces length of hospital stay in colorectal surgery. Int J Surg. 2016;36(Pt A):121-6.

32. Altuntas YE, Kement M, Gezen C, et al. The role of group education on quality of life in patients with a stoma. Eur J Cancer Care (Engl). 2012;21(6):776-81.

33. Nagle D, Pare T, Keenan E, et al. Ileostomy pathway virtually eliminates readmissions for dehydration in new ostomates. Dis Colon Rectum. 2012;55(12):1266-72.

34. Burke K. The correlation between stoma siting by a stomal therapy nurse and the rate of post-operative complications and length of stay. Journal of Stomal Therapy Australia. 2017;37(4):10-2.

35. Phatak UR, Li LT, Karanjawala B, et al. Systematic review of educational interventions for ostomates. Dis Colon Rectum. 2014;57(4):529-37.

36. Soares Mota M, Von Schustuschitz dos Reis TR, Calcagno Gomes G, et al. Stomized patients' perception of the stomatherapy service: a descriptive study. Online Brazilian Journal of Nursing. 2015;14(3):1-6.

37. Zheng MC, Zhang JE, Qin HY, et al. Telephone follow-up for patients returning home with colostomies: views and experiences of patients and enterostomal nurses. Eur J Oncol Nurs. 2013;17(2):184-9.

38. McKenna LS, Taggart E, Stoelting J, et al. The impact of preoperative stoma marking on health-related quality of life: a comparison cohort study. J Wound Ostomy Continence Nurs. 2016;43(1):57-61.

39. Hardt J, Schwarzbach M, Hasenberg T, et al. The effect of a clinical pathway for enhanced recovery of rectal resections on perioperative quality of care. Int J Colorectal Dis. 2013;28(7):1019-26.

40. Iqbal A, Raza A, Huang E, et al. Cost effectiveness of a novel attempt to reduce readmission after ileostomy creation. JSLS. 2017;21(1):e2016.00082.

41. Jones D, Musselman R, Pearsall E, et al. Ready to go home? Patients' Experiences of the Discharge Process in an Enhanced Recovery After Surgery (ERAS) Program for Colorectal Surgery. J Gastrointest Surg. 2017;21(11):1865-78.

42. Shaffer VO, Owi T, Kumarusamy MA, et al. Decreasing hospital readmission in ileostomy patients: results of novel pilot program. J Am Coll Surg. 2017;224(4):425-30.

43. Shah PM, Johnston L, Sarosiek B, et al. Reducing readmissions while shortening length of stay: the positive impact of an enhanced recovery protocol in colorectal surgery. Dis Colon Rectum. 2017;60(2):219-27.

44. Walker K, Watkins R, Newman S, et al. Sharing the results of a patient satisfaction audit. Bri J Nur. 2018;27(5):S4-S14.

45. Zhang JE, Wong FK, You LM, et al. Effects of enterostomal nurse telephone follow-up on postoperative adjustment of discharged colostomy patients. Cancer Nurs. 2013;36(6):419-28.

46. Jayarajah U, Samarasekera DN. A cross-sectional study of quality of life in a cohort of enteral ostomy patients presenting to a tertiary care hospital in a developing country in South Asia. BMC Res Notes. 2017;10(1):75.

47. Anaraki F, Vafaie M, Behboo R, et al. Quality of life outcomes in patients living with stoma. Indian J Palliat Care. 2012;18(3):176-80.

48. Nichols TR. Quality of life in persons living with an ostomy assessed using the SF36v2: mental component summary: vitality, social Function, role-emotional, and mental health. J Wound Ostomy Continence Nurs. 2016;43(6):616-22.

49. Knowles SR, Wilson J, Wilkinson A, et al. Psychological well-being and quality of life in crohn's disease patients with an ostomy. J Wound Ostomy Continence Nurs. 2013;40(6):623-9.

50. Liao C, Qin Y. Factors associated with stoma quality of life among stoma patients. Int J Nurs Sci. 2014;1(2):196-201.

51. Yilmaz E, Celebi D, Kaya Y, et al. A descriptive, cross-sectional study to assess quality of life and sexuality in Turkish patients with a colostomy. Ostomy Wound Manage. 2017;63(8):22-9.

52. Sun V, Grant M, Wendel CS, et al. Sexual function and health-related quality of life in long-term rectal cancer survivors. J Sex Med. 2016;13(7):1071-9.

53. Vural F, Harputlu D, Karayurt O, et al. The impact of an ostomy on the sexual lives of persons with stomas: a phenomenological study. J Wound Ostomy Continence Nurs. 2016;43(4):381-4.

54. Villa G, Manara DF, Brancato T, et al. Life with a urostomy: A phenomenological study. Appl Nurs Res. 2018;39:46-52.

55. Jayarajah U, Samarasekera DN. Psychological adaptation to alteration of body image among stoma patients: a descriptive study. Indian J Psychol Med. 2017;39(1):63-8.

56. Orsini RG, Thong MSY, Van De Poll-Franse LV, et al. Quality of life of older rectal cancer patients is not impaired by a permanent stoma. Eur J Surg Oncol. 2013;39(2):164-70.

57. Harrison M, Graham ID, Fervers B. Adapting knowledge to local context. In: Straus SE, Tetroe J, Graham ID, editors. Knowledge translation in health care: moving from evidence to practice. Chichester (UK): John Wiley & Sons; 2013. p. 110-20.

58. Straus S, Tetroe J, Graham ID. Monitoring and evaluating knowledge. In: Straus SE, Tetroe J, Graham ID, editors. Knowledge translation in health care. Oxford (UK): Wiley-Blackwell; 2009. p. 151-9.

59. Registered Nurses' Association of Ontario. Ostomy care and management. Toronto (ON): Registered Nurses' Association of Ontario; 2009.

60. Registered Nurses' Association of Ontario. Initiation, exclusivity, and continuation of breastfeeding for newborns, infants, and young children. Toronto (ON): Registered Nurses' Association of Ontario; 2018.

61. Lewin S, Glenton C, Munthe-Kaas H, et al. Using qualitative evidence in decision making for health and social interventions: an approach to assess confidence in findings from qualitative evidence syntheses (GRADE-CERQual). PLoS Med. 2015;12(10):1-18.

62. Avella JR. Delphi panels: research design, procedures, advantages, and challenges. International Journal of Doctoral Studies. 2016;11:305-21.

63. Dijkers M. Introducing GRADE: a systematic approach to rating evidence in systematic reviews and to guideline development. KT Update. 2013;1(5):1-9.

64. Dijkers M. Introducing GRADE: a systematic approach to rating evidence in systematic reviews and to guideline development. KT Update. 2013;1(5):1-9.

65. Kwiatt M, Kawata M. Avoidance and management of stomal complications. Clin Colon Rectal Surg. 2013;26(2):112-21.

66. Stevens K. The impact of evidence-based practice in nursing and the next big ideas. Online J Issues Nurs. 2013;18(2): 4.

67. The GRADE working group. Handbook for grading the quality of evidence and the strength of recommendations using the GRADE approach [Internet]. 2013. Available from: http://gdt.guidelinedevelopment.org/app/handbook/handbook.html.

68. Crohn's and Colitis Canada. About Crohn's and Colitis: What are Crohn's and colitis? [Internet]. [place unknown]: Crohn's and Colitis Canada; c2016. Available from: http://crohnsandcolitis.ca/About-Crohn-s-Colitis/What-are-Crohns-and-Colitis.

69. The Cochrane Collaboration. Glossary [Internet]. [place unknown]: The Cochrane Collaboration; c2018. Available from: http://community.cochrane.org/glossary.

70. Registered Nurses' Association of Ontario. Person- and family-centred care. Toronto (ON): Registered Nurses' Association of Ontario, 2015.

71. National Cancer Institute. NCI Dictionary of Cancer Terms [Internet]. [place unknown]: National Institutes of Health; [date unknown]. Available from: https://www.cancer.gov/publications/dictionaries/cancer-terms/def/perioperative.

72. Salvadalena G. The incidence of stoma and peristomal complications during the first 3 months after ostomy creation. J Wound Ostomy Continence Nurs. 2013;40(4):400-6.

73. Austin Z, Sutton J. Qualitative research: getting started. Canadian J Hosp Pharm. 2014;67(6):436-40.

74. Rockers PC, Rottinggen J-A, Shemilt I, et al. Inclusion of quasi-experimental studies in systematic reviews of health systems research. Health Policy. 2015;119(4):511-21.

75. Armstrong R, Hall BJ, Doyle J, et al. Scoping the scope of a Cochrane review.

76. Registered Nurses' Association of Ontario. Strategies to support self-management in chronic conditions: collaboration with clients. Toronto (ON): Registered Nurses' Association of Ontario, 2010.

77. Baker CM, Ogden SJ, Prapaipanich W, et al. Hospital consolidation: applying stakeholder analysis to merger life cycle. J Nurs Adm. 1999;29(3):11-20.

78. Community Living British Columbia. Support networks: a guide for self advocates. Vancouver (BC): Community Living British Columbia; 2010.

79. Canadian Nurses Association. Advanced nursing practice: a pan-Canadian framework. [Internet]. 2019. Available from: https://www.cna-aiic.ca/-/media/cna/page-content/pdf-en/apn-a-pan-canadian-framework.pdf?la=en&hash=E1387634D492FD2B003964E3CD4188971305469E.

80. MacDonald J, Silva-Galleguillos A, Diaz OLG, et al. Enhancing the evidence-based nursing curriculum and competence in evidence-based practice. In: Grinspun D, Bajnok I, editors. Transforming nursing through knowledge: best practices for guideline development, implementation science, and evaluation. Indianopolis (IN): Sigma; 2018.

81. Monaghan T. A critical analysis of the literature and theoretical perspectives on theory-practice gap amongst newly qualified nurses within the United Kingdom. Nurse Educ Today. 2015;35:e1-e7.

82. Smith SJ, Barry DG. The use of high-fidelity simulation to teach home care nursing. West J Nurs Res. 2013b;35(3):297-312.

83. Browning M, Pront L. Supporting nursing student supervision: an assessment of an innovative approach to supervisor support. Nurse Educ Today. 2015;35(6):740-5.

84. Price S, Reichert C. The importance of continuing professional development to career satisfaction and patient care: meeting the needs of novice to mid- to late-career nurses throughout their career span. Adm Sci. 2017;7(17):1-13.

85. Palis AG, Quiros PA. Adult learning principles and presentation pearls. Middle East Afr Ophthalmol. 2014;21(2):114-22.

86. Eggenberger E, Heimerl K, Bennet MI. Communication skills training in dementia care: a systematic review of effectiveness, training content, and didactic methods in different care settings. Int Psychogeriatr. 2013;25(3):345-58.

87. Yanamadala M, Wieland D, Heflin MT. Educational interventions to improve recognition of delirium: a systematic review. J Am Geriatr Soc. 2013;61(11):1983-93.

88. Grinspun D, McConnell H, Virani T, et al. Forging the way with implementation science. In: Grinspun D, Bajnok I, editors. Transforming nursing through knowledge: best practices for guideline development, implementation science, and evaluation Indianopolis (IN): Sigma; 2018.

89. Thompson L, editor. Accreditation Canada NQuIRE International Advisory Council (IAC) Meeting, 2018, Apr. Toronto (ON): place; date.

90. Accrediation Canada. Accreditation Overview [Internet]. [place unknown]: Accreditation Canada; c2018. Available from: https://accreditation.ca/accreditation/.

91. Marnocha S, Westphal J, Cleveland B. Pilot Program to Mentor Nurse Leaders for the Future [Internet]. 2016 Sep 30. [place unknown]: Wisconsin Nurses Association; 2016. Available from: https://wisconsinnurses.org/mentor-nurse-leaders-program/.

92. Brouwers M, Kho ME, Browman GP. AGREE II: advancing guideline development, reporting and evaluation in health care. CMAJ. 2010;182(18):E839–42.

93. Registered Nurses' Association of Ontario. Mission and Values [Internet]. [place unknown]: Registered Nurses' Association of Ontario; [date unknown]. Available from: https://rnao.ca/about/mission.

94. A revised tool for assessing risk of bias in randomized trials [Internet]. 2016.

95. Sterne JAC, Hernán MA, Reeves B, et al. ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions. BMJ. 2016:355:i4919.

96. Shea BJ, Reeves BC, Wells G, et al. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. BMJ. 2017:358:j4008.

97. Critical Appraisal Skills Programme. CASP qualitative checklist 2018. Available from: https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist.pdf.

98. McMaster University and Evidence Prime. GRADEpro/GDT. [place unknown]: McMaster University and Evidence Prime; c2015. Available from: https://gradepro.org/.

99. Guyatt GH, Oxman AD, Kunz R, et al. Rating quality of evidence and strength of recommendations: going from evidence to recommendations. BMJ. 2008;336(7652):1049-51.

100. Balshem H, Helfand M, Schunemann HJ, et al. GRADE guidelines: 3. Rating the quality of evidence. J Clin Epidemiol. 2011;64(4):401-6.

Appendix A: Glossary of Terms

Abdominoperineal resection: "A procedure using an abdominal and perineal approach for the resection of rectal resection (APR) cancer. The procedure involves removal of the rectum, anus and perirectal lymphatics" (59).

Best practice guideline: "Best practice guidelines are systematically developed, evidence-based documents that include recommendations for nurses and the interprofessional team, educators, leaders and policy-makers, persons and their families on specific clinical and healthy work environment topics. BPGs promote consistency and excellence in clinical care, health policies, and health education, ultimately leading to optimal health outcomes for people and communities and the health system" (60).

CERQual: The Confidence in the Evidence from Reviews of Qualitative Research (CERQual) is a methodological approach to assess the amount of confidence that can be placed in findings from a body of qualitative evidence about an outcome of interest. The assessment provides a transparent means to decide if the review finding reasonably represents the phenomenon under study, which can facilitate expert panels to make health recommendations (61).

CERQual criteria: When using CERQual, four components contribute to the assessment of confidence in the evidence for each individual finding:

1. Methodological limitations, which look at issues in the design of the primary study or problems in the way it is conducted.
2. Relevance, whereby each primary study that supports a finding is assessed together and a decision is made regarding the applicability of the findings to the population, phenomenon, and setting outlined in the research question.
3. Coherence, whereby an assessment is made of whether the primary studies provide sufficient data and a convincing explanation for the review findings.
4. Adequacy of data, whereby an overall assessment is made about the richness and quantity of data that supports the review finding and phenomenon of interest (61).

Colostomy: A surgically created opening from the colon to the abdominal wall to allow the elimination of feces. A colostomy can be either temporary or permanent (3).

Consensus: A process used to reach agreement among a group or panel during a Delphi or modified Delphi technique (62). A consensus of 70 per cent agreement from all panel members was required for the strength of recommendations within this Guideline.

Continent diversion: An internal reservoir is surgically created using a section of the bowel to collect feces and urine. Continent diversions may or may not result in the creation of a stoma, eliminating the necessity for a pouching system to be worn outside the body (2).

Crohn's disease: Chronic idiopathic disease that causes inflammation of the lining of the gastrointestinal tract. This condition usually presents with abdominal pain and chronic diarrhea (3).

Diversion: Surgical creation of an alternative route through the abdominal wall to divert feces and urine (2).

Downgrade: In GRADE and GRADE-CERQual, when limitations in the individual studies potentially bias the results, the certainty of evidence will decrease (63). For example, a body of quantitative evidence for one priority outcome may begin with high certainty, but due to serious limitations in one or more of the five GRADE criteria, it will be rated down by one or two levels (64).

Education statement: Organizational approaches to the delivery of education in health service organizations and academic institutions to support evidence-based practice. Education statements are based on an analysis of educational recommendations across several BPGs on diverse clinical topics and populations. Education statements can be applicable to all clinical BPGs and can be contextually adapted within health service organizations and academic institutions to support implementation of clinical recommendations.

Effluent: Fecal or urinary discharge from the stoma after ostomy surgery (65).

Evidence-based nursing practice: The integration of research evidence with clinical expertise and patient values; unifies research evidence with clinical expertise and encourages the inclusion of patient preferences (66).

Evidence-to-Decision (EtD) frameworks: A table that facilitates expert panels to make decisions when moving from evidence to recommendations. The purpose of the EtD framework is to summarize the research evidence, outline important factors that can determine the recommendation, inform panel members about the benefits and harms of each intervention considered, and increase transparency about the decision-making process in the development of recommendations (67).

GRADE: The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) is a methodological approach to assess the certainty of a body of evidence in a consistent and transparent way, and to develop recommendations in a systematic way. The body of evidence across identified important and/or critical outcomes is evaluated based on risk of bias, consistency of results, relevance of the studies, precision of the estimates, publication bias, large effect, dose response, and opposing confounding (67). cont.

When using GRADE, five components contribute to the assessment of confidence in the evidence for each outcome. These components are as follows:

1. Risk of bias, which focuses on the flaws in the design of a study or problems in its execution.
2. Inconsistency, which looks at a body of evidence and assesses whether the results point in the same direction or are different.
3. Imprecision, which refers to the accuracy of results based on the number of participants and/or events included, and the width of the confidence intervals across a body of evidence.
4. Indirectness, whereby each primary study that supports an outcome is assessed and a decision is made regarding the applicability of the findings to the population, intervention, and outcome outlined in the research question.
5. Publication bias, where a decision is made about whether the body of published literature for an outcome potentially includes only positive or statistically significant results (67).

Health provider: Refers to both regulated (e.g., nurses, physicians, dieticians and social workers) and unregulated (e.g., personal support workers) workers that are part of the interprofessional team.

Regulated health provider: In Ontario, the Regulated Health Professional Act, 1991 (RHPA) provides a framework for regulating 23 health professions, outlining the scope of practice and the profession-specific controlled or authorized acts that each regulated professional is authorized to perform when providing health care and services (5).

Unregulated health provider: Unregulated health providers fulfill a variety of roles in areas that are not subject to the RHPA. They are accountable to their employers but not to an external regulating professional body (e.g., College of Nurses of Ontario). Unregulated health providers fulfill a variety of roles and perform tasks that are determined by their employer and employment setting. Unregulated health providers only have the authority to perform a controlled act as set out in the RHPA if the procedure falls under one of the exemptions set out in the Act (6).

Hernia (parastomal): A parastomal hernia occurs when one or more loops of the bowel protrude through the abdominal wall, creating a bulge around the peristomal skin (7).

Ileostomy: A surgically created opening from the last part of the small intestine (ileum) to the abdominal wall to allow the elimination of small bowel effluent. An ileostomy can be either temporary or permanent (3).

Inflammatory bowel disease: The term refers to a group of chronic, relapsing gastrointestinal tract conditions, with ulcerative colitis and Crohn's disease being two main forms (68).

Interprofessional team: "A team comprised of multiple health providers (regulated and unregulated) who work collaboratively to deliver comprehensive and quality health care and services to people within, between, and across health settings" (60). Key interprofessional team members supporting adults who anticipate or live with an ostomy include NSWOCs, nurses, surgeons, physicians, social workers, dietitians, and pharmacists.

Meta-analysis: A systematic review of randomized controlled trials that uses statistical methods to analyze and summarize the results of the included studies (69).

See *systematic review*

Nurse: "Refers to registered nurses, licensed practical nurses (referred to as registered practical nurses in Ontario), registered psychiatric nurses, and nurses in advanced practice roles such as nurse practitioners and clinical nurse specialists" (70).

Nurse specialized in wound, ostomy, and continence (NSWOC): "A registered nurse with advanced and specialized knowledge and clinical skills in wound, ostomy, and continence care who has graduated from a World Council of Enterostomal Therapists (WCET®) recognized education program" (4). A NSWOC provides specialized holistic assessment and management as an interprofessional team member to meet the needs to individuals/families with ostomies, acute and chronic wounds, and urinary and fecal continence problems" (4). The NSWOC equivalent may be represented with other titles around the world, such as (but not limited to): stoma nurse; wound, ostomy, continence nurse (WOC nurse); or ostomy nurse.

Ostomy: Ostomy refers to a surgically created opening in the abdominal wall that results in the external diversion of feces and urine. The most common types of ostomy are colostomy and ileostomy for feces and urostomy for urine (2). A permanent ostomy refers to an ostomy "that will never be closed" (59). In the case of a temporary ostomy, "usually the surgical plan is to reconnect the intestine and to close the ostomy" (59).

Ostomy care program: An ostomy care program is an organization-level approach to standardize care for persons anticipating or living with an ostomy. The ostomy care program includes structured treatment, management, and follow-up strategies developed by an interprofessional team that may consist of NSWOCs, nurses, surgeons, physicians, social workers, dieticians, and pharmacists (among others).

Ostomy leakage: Exudate that seeps out of the stoma.

Outcomes: A dependent variable, or the clinical and/or functional status of a patient or population, that is used to assess if an intervention is successful. In GRADE, outcomes are prioritized based on if they are critical for decision making, important but not critical for decision making, or not important. Use of these outcomes helps literature searches and systematic reviews to be more focused (67).

Perioperative: Something occurring "around the time of surgery. This usually lasts from the time the patient goes into the hospital or doctor's office for surgery until the time the patient goes home" (71).

Peristomal dermatitis (allergic and irritant): Peristomal dermatitis (allergic) is skin damage caused by pouching system adhesives, powders, or barriers. Allergic dermatitis occurs at the site where offending agents or adhesives contact the skin (65). Peristomal dermatitis (irritant) is skin damage resulting from contact with fecal or urinary drainage. Irritant contact dermatitis is the most common peristomal skin complication and occurs at the site of effluent leakage (65).

Peristomal irritation: Peristomal irritation is a common complication resulting from moisture-associated skin damage. It may cause the peristomal skin to be inflamed, sore, itchy, and red (72).

Peristomal skin/plane: An area of "3 to 4 inches (10 x 10 cm) of skin surface surrounding an abdominal stoma" (59).

PICO question: A framework to outline a focused question. It specifies four components:

1. The patient or population that is being studied.
2. The intervention to be investigated.
3. The alternative or comparison intervention.
4. The outcome that is of interest (67).

Pouching systems (ostomy pouching systems): A system "composed of a skin barrier and a collection device to collect drainage (effluent) and protect the skin. Pouching systems are one-piece or two-piece products. The pouch attaches to the skin barrier, which adheres to the abdomen, and is fitted over and around the stoma to collect stool or urine" (59).

Qualitative research: An approach to research that seeks to convey how human behaviour and experiences can be explained within the contexts of social structures and through the use of an interactive and subjective approach to investigate and describe phenomena (73).

Quasi-experimental study: A study that estimates causal effects by observing the exposure of interest, but in which the experiments are not directly controlled by the researcher and lack randomization (i.e., before-and-after designs) (74).

Randomized controlled trial (RCT): An experiment in which the investigator assigns one or more interventions to participants who are randomly allocated to either the experimental group (receives intervention) and the comparison (conventional treatment) or control group (no intervention or placebo) (69).

Recommendation: A course of suggested action(s) that directly answers a recommendation question. A recommendation is based on a systematic review of the literature and is made in consideration of its potential benefits and harms, values and preferences from a person-centered perspective, and impact on health equity. All recommendations are given a strength, either strong or conditional through expert panel consensus. It is important to note that recommendations should not be viewed as prescriptive, as recommendations cannot take into account all of the unique features of individual, organizational and clinical circumstances (8).

Recommendation question: A priority research area of practice, policy or education identified by expert panel members that requires evidence to answer. The recommendation question may also aim to answer a topic area around which there is ambiguity or controversy. The recommendation question informs the research question, which guides the systematic review.

Scoping review: "Scoping reviews have been described as a process of mapping the existing literature or evidence base. Scoping reviews can be used in a number of ways, for example identifying research gaps and summarizing findings of research. They can also be used to inform systematic reviews" (75).

Self-management: "The tasks that individuals must undertake to live well with one or more chronic conditions. These tasks include having the confidence to deal with medical management, role management, and emotional management of their conditions. The goal of self-management is increased confidence in the ability to change, rather than compliance with the caregiver's advice. The purpose of self-management support is to help persons become informed about their conditions and take an active role in treatment" (76).

Stakeholder: An individual, group, or organization that has a vested interest in the decisions and actions of organizations, and may attempt to influence decisions and actions (77). Stakeholders include all of the individuals and groups who will be directly or indirectly affected by the change or solution to the problem.

Stoma: An opening created on the abdominal wall by ostomy surgery to allow elimination of urine and feces. A stoma is usually dark pink in colour (2).

Stoma site marking: "Selection of the ideal location on the abdomen for a stoma prior to surgery by a trained health professional, usually a NSWOC or surgeon to help prevent future stoma complications and pouching problems" (59).

Support network: A term used to refer to those whom the person identifies as significant in his or her life. This can include individuals who are related (biologically, emotionally, or legally) and/or those with close bonds (friendships, commitments, shared household and child-rearing responsibilities, and romantic attachment) (70, 78).

Systematic review: A comprehensive review of the literature that uses clearly formulated questions and systematic and explicit methods to identify, select, and critically appraise relevant research. A systematic review collects and analyzes data from the included studies and presents them, sometimes using statistical methods (69).

See *meta-analysis*

Urostomy (ileal conduit): A surgical procedure to divert the flow of urine by transplanting the ureters into an isolated segment of the ileum, bringing one end through the abdominal wall to create a stoma. Urine flows from the kidney to the ureters, then through the ileal conduit, exiting through the stoma. A urostomy can be either temporary or permanent (3).

Appendix B: RNAO Guidelines and Resources that Align with this Guideline

The following are topics that align with this Guideline and with suggested RNAO guidelines and resources from other organizations.

TOPIC	RESOURCE(S)
Client centred learning	■ Registered Nurses' Association of Ontario. Facilitating client centred learning [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2012. Available from: https://rnao.ca/sites/rnao-ca/files/BPG_CCL_2012_FA.pdf
Culturally sensitive care	■ College of Nurses of Ontario. Culturally sensitive care [Internet]. 2018 [cited 21 March 2019]. Available from: http://www.cno.org/en/learn-about-standards-guidelines/educational-tools/ask-practice/culturally-sensitive-care/ ■ World Council of Enterostomal Therapists (WCET). WCET international ostomy guideline recommendations. Summary [Internet]. Perth (Australia): WCET; 2014. Available from: https://www.wcetn.org/assets/Publications/wcet_april-june_2014f%20iog%20recommandations.pdf □ The full guideline provides depth in regards to cultural considerations in providing care for persons who anticipate or live with an ostomy and is available for purchase.
Implementation science, implementation frameworks, and resources	■ Registered Nurses' Association of Ontario. Toolkit: implementation of best practice guidelines [Internet]. 2nd ed. Toronto (ON): Registered Nurses' Association of Ontario; 2012. Available from: https://rnao.ca/bpg/resources/toolkit-implementation-best-practice-guidelines-second-edition ■ The National Implementation Research Network's Active Implementation Hub. Get Started [Internet]. [place unknown]: AI Hub; c2013–2018. Available from: http://implementation.fpg.unc.edu/ ■ Canadian Patient Safety Institute. Improvement Frameworks Getting Started Kit [Internet]. [place unknown]: safer healthcare now!; August 2015. Available from: http://www.patientsafetyinstitute.ca/en/toolsResources/ImprovementFramework/Documents/Improvement%20Frameworks%20GSK%20EN.PDF ■ Dissemination & Implementation Models in Health Research & Practice [Internet]. [place unknown]: The Center for Research in Implementation Science and Prevention; [date unknown]. Available from: http://dissemination-implementation.org/content/resources.aspx
Interprofessional collaboration	■ Registered Nurses' Association of Ontario. Developing and sustaining interprofessional health care: optimizing patients/clients, organizational, and system outcomes [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2013. Available from: https://rnao.ca/bpg/guidelines/interprofessional-team-work-healthcare

TOPIC	RESOURCE(S)
Person- and family-centred care	■ Registered Nurses' Association of Ontario. Person-and family-centred care [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2015. Available from: https://rnao.ca/bpg/guidelines/person-and-family-centred-care
Self-management	■ Registered Nurses' Association of Ontario. Strategies to support self-management in chronic conditions: collaboration with clients [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2010. Available from: https://rnao.ca/bpg/guidelines/strategies-support-selfmanagement-chronic-conditions-collaboration-clients
Therapeutic relationships	■ Registered Nurses' Association of Ontario. Establishing therapeutic relationships [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2006. Available from: https://rnao.ca/sites/rnao-ca/files/Establishing_Therapeutic_Relationships.pdf

Appendix C: Education Statements

Education Statements for this Guideline

RNAO has been at the forefront of creating BPGs since 1999, with its first guideline being issued in 2002. From the outset, RNAO recognized the importance of individual and organizational approaches to the delivery of education on clinical BPG content to support evidence-based practice changes. As such, RNAO clinical BPGs included education recommendations directed to those responsible for the academic and in-service education of nursing students, nurses and the interprofessional team. These recommendations outlined core content and training strategies required for entry-level health programs, continued education, and professional development.

An in-depth analysis of RNAO's educational recommendations was conducted in 2018. It included clinical BPGs published within a five-year time frame, as all clinical BPGs published within this period are based on a systematic review of the literature. It examined 26 education recommendations from nine different guidelines with diverse clinical topics and populations.

A rigorous thematic analysis showed similarities across BPGs. Thus, it was deemed appropriate to create standard *Education Statements* that would be applicable to all clinical BPGs to support evidence-based practice changes. The resultant two education statements and the associated discussion of the literature are described below. These statements can be contextually adapted within health service organizations and academic institutions to support the implementation of clinical recommendations for various guideline topic areas.

EDUCATION STATEMENT 1:

ACADEMIC INSTITUTIONS INTEGRATE EVIDENCE-BASED GUIDELINES INTO CURRICULA FOR PRE- AND POST-LICENSURE NURSES AND OTHER REGULATED HEALTH PROVIDERS.

Discussion of Literature:

The thematic analysis of the education recommendations described above, found the theme of: "academic institutions integrate evidence-based guidelines into curricula for pre- and post-licensure nurses and other regulated health providers," as foundational to evidence-based practice capacity building. The following BPGs were analyzed:

- *Assessment and Management of Pain, Third Edition* (2013).
- *Care Transitions* (2014).
- *Person- and Family-centred Care* (2015).
- *Engaging Clients who use Substances* (2015).
- *Preventing and Addressing Abuse and Neglect of Older Adults: Person-centred, Collaborative, System-wide Approaches* (2014).
- *Primary Prevention of Childhood Obesity, Second Edition* (2014).
- *Delirium, Dementia, and Depression in Older Adults: Assessment and Care, Second Edition* (2016).
- *Working with Families to Promote Safe Sleep in Infants 0–12 Months of Age* (2014).

Academic institutions should consider integrating guideline content into theoretical and practice-based courses for nurses and other regulated health providers, including social workers, physiotherapists, occupational therapists, dieticians and pharmacists in pre-licensure and post-licensure programs. Pre-licensure education establishes foundational knowledge that can be strengthened and augmented, as necessary, within health service organizations. Post-licensure education at the graduate level may include preparing nurses and other regulated health providers for advanced practice roles and functions within clinical practice, education, administration, research, and policy (79). As such, the integration of guideline content into curricula will differ in terms of educational content and complexity based on the overall educational objectives of the program. In both cases, integrating guideline content into curricula supports student learning consistent with evidence-based practices, with the ultimate goal of enhancing the health outcomes of persons and families.

To support the integration of evidence-based guidelines into curricula, the following approaches may be utilized: (a) developing multi-level guideline-related learning objectives and (b) designing guideline-related teaching and learning strategies (80). Both approaches are outlined below.

A) **Developing multi-level guideline-related learning objectives:** Guideline-related learning objectives at multiple levels of a program (pre-licensure and post-licensure) facilitate integration of guideline content into curricula. At the program level, such integration broadens student knowledge, attitude, judgment, and skills. For instance, a program-level outcome at a graduate level may include student awareness of elements of implementation science to support uptake and sustained use of guidelines in clinical settings (80). At the course level, integration of guideline content supports student learning that is consistent with evidence-based practices within academic and practice settings. For example, course-level outcomes at the undergraduate level may include students being able to gain increased knowledge about guidelines, select guidelines relevant to practice (and provide rationale for their selection), and integrate guideline recommendations into plans of care for persons and families (80).

B) **Designing guideline-related teaching and learning strategies:** Teaching strategies should be tailored to address the program-level educational objectives and needs of learners, and to equip the learner to improve practice and promote positive outcomes (81). The various guideline-related teaching and learning strategies are outlined below.

- ***Lectures:*** Educators can use lectures as a means to provide a broad understanding of guidelines, specifically the rigorous process of guideline development and their various recommendations. Lectures can provide students with an understanding of the scope and strength of evidence that inform the recommendations (80).
- ***Interactive classroom activities:*** Interactive learning activities within the classroom setting can support students to obtain additional information, participate in problem-solving, and articulate knowledge gained. Examples include (a) assigning group work to help students learn how to navigate a guideline and become familiar with its recommendations, (b) using case studies to provide students with opportunities to identify and apply guideline recommendations in care plans, and (c) using videos and role playing to promote skills in articulating the rationale for selecting specific guidelines/recommendations in care plans (80).
- ***Simulation:*** High-quality digital simulation within skills lab settings can ease the uncertainty of students related to clinical practice; it can also increase skill acquisition, self-confidence, and satisfaction. Faculty trained in pedagogy can use simulation to teach students content related to safe and effective person and family care within a standardized clinical environment (82). Educators can support students to incorporate guideline content into simulated practice sessions when teaching evidence-based practice (80).

- ***Pre- and post-clinical conference discussions:*** Focusing on a guideline at pre- and post-clinical conference discussions can support the critical thinking of students when developing care plans, consider modifications based on guideline recommendations, articulate rationale for clinical decisions, and evaluate the outcome of interventions. Students have the opportunity to evaluate if policies and procedures within the practice setting align with best evidence. Students can identify potential areas for practice change and consider how to initiate change (80).
- ***Access to BPG-related resources:*** Educators can promote and facilitate access to BPG-related links and resources. For example, providing access to the RNAO Nursing Best Practice Guidelines App (see **https://rnao.ca/bpg/pda/app**) enables students to access content from guidelines within classroom and practice settings (80).
- ***Assignments and tests:*** Students may be asked to incorporate guidelines into their learning plans or write a reflective journal related to a guideline important to their area of practice. Tests or exam questions that demonstrate critical thinking related to guidelines can also be used. Overall, guideline-related assignments and tests can assist students to reflect upon guidelines, understand their application, and critique them (80).
- ***Preceptorship or mentorship in clinical placements:*** Preceptors within clinical settings play an integral role in teaching practical skills that complement the theoretical learning of students. Preceptors are responsible for providing clinical teaching and supervision, and they perform formal student evaluation (83). Preceptors can support students to integrate guideline content into their learning objectives and clinical activities to promote evidence-based knowledge and practice.

EDUCATION STATEMENT 2:

Health service organizations use strategies to integrate evidence-based guidelines into education and training of nurses and other health providers.

Discussion of Literature:

The thematic analysis of the education recommendations in a number of BPGs found the second theme of: "health service organizations use strategies to integrate evidence-based guidelines into education and training of nurses and other health providers," as foundational to evidence-based practice capacity building. The following BPGs were analyzed:

- *Assessment and Management of Pain, Third Edition* (2013).
- *Care Transitions* (2014).
- *Person- and Family-centred Care* (2015).
- *Engaging Clients who use Substances* (2015).
- *Preventing and Addressing Abuse and Neglect of Older Adults: Person-centred, Collaborative, System-wide Approaches* (2014).
- *Primary Prevention of Childhood Obesity, Second Edition* (2014).
- *Delirium, Dementia, and Depression in Older Adults: Assessment and Care, Second Edition* (2016).
- *Working with Families to Promote Safe Sleep in Infants 0–12 Months of Age* (2014).

Nurses and other health providers should continually seek new knowledge, identify opportunities for professional growth, and pursue ongoing learning throughout their careers. Participation in education and training ensures congruence with evidence-based practices, enhances competence, and improves care quality and individual outcomes (84). Integrating guideline content into education and training programs within health service organizations can improve evidence-based knowledge and skills for post-licensure nurses and other health providers.

Education and training programs should be based on the principles of adult learning, including the following:

- Adults have an awareness of learning needs/goals.
- Adults are self-directed and autonomous.
- Adults value and utilize prior life experiences.
- Adults have readiness to learn.
- Adults are motivated to learn.
- Adults are presented knowledge and skills in the context of practical, real-life situations (85).

Furthermore, education and training should be appropriate to the health provider's scope of practice and their defined role. Education and training strategies may include the following:

- ***In-service education sessions:*** In-service education sessions can be planned by clinical experts within practice settings to support the utilization of a specific guideline or recommendations stimulating evidence-based practice among staff. The education may include one-on-one or group sessions and should address the needs of learners. It is recommended that the education sessions are followed with refresher or booster sessions to provide feedback and enhance staff learning (86, 87).
- ***Workshops/seminars:*** Highly interactive workshops/seminars help nurses and health providers maintain practice based on best evidence when they incorporate a variety of teaching–learning strategies, including pre-circulated materials, small group discussions using case studies, and multimedia such as Power Point and videos that integrate relevant guidelines/recommendations. RNAO's Best Practice Champions Workshop and BPG Learning Institutes are examples of programs that provide education on how to implement BPGs within practice settings (88).
- ***Quality improvement:*** Participating in quality improvement within workplace settings can support nurses and health workers to recognize sentinel events and examine ways to improve care. Meeting accreditation standards is an important quality improvement activity that bridges gaps between current and best practices and supports continued competence. Examples of strategies that nurses and other health providers can use to meet accreditation standards include the following:
  - Participating in a unit-based guideline implementation process to promote patient safety, reduce risks, and improve care outcomes.
  - Choosing guideline-specific recommendations to facilitate practice change.
  - Sharing knowledge and lessons learned from reviewing guidelines with the accreditation committee (89, 90).

Other quality improvement opportunities include participating in incident reporting, patient safety initiatives, and other health initiatives within areas of practice.

- ***Post-licensure mentorship:*** Post-licensure mentorship involves providing new graduates or less experienced staff with guidance for skill development and support for growth of professional roles. Research suggests that working with mentors reduces stress and improves satisfaction for new staff during the transition process (91). Mentors can support integration of guideline content while teaching evidence-based practice.

EVALUATION

All educational strategies require evaluation to (a) monitor the adoption of knowledge and (b) measure the impact on clinical outcomes. RNAO has developed the *Educator's Resource: Integration of Best Practice Guidelines* (2005) to provide strategies for educators within academia and practice settings to introduce BPGs to student nurses, faculty, nurses and other health providers. The resource provides guidance on student evaluation strategies that include self-evaluation peer-evaluation and end-of-course evaluations by the educator.

Furthermore, RNAO has developed the *Practice Education in Nursing* (2016) BPG to provide evidence-based recommendations that support with the application of knowledge to various practice settings by student nurses. The guideline also assists nurses nurse educators, preceptors and other members of the interprofessional team to understand the effective use of teaching–learning strategies in clinical settings.

The RNAO *Toolkit: Implementation of Best Practice Guidelines* (2012)* identifies the following strategies for evaluation of provider practice change and health outcomes for persons within health service organizations:

- Pre- and post-tests for staff educational sessions.
- Staff focus groups/interviews.
- Observation of patient–provider encounters.
- Chart audits to determine the impact on person and family outcomes.
- Person and family satisfaction surveys or interviews.

* The RNAO *Toolkit: Implementation of Best Practice Guidelines* (2012) is under review and the next edition is expected to be issued in 2020.

Appendix D: Guideline Development Methods

This Appendix presents an overview of the RNAO guideline development process and methods. RNAO is unwavering in its commitment that every BPG be based on the best available evidence. The GRADE and CERQual methods have been implemented to provide a rigorous framework and meet international standards for guideline development.

Scoping the Guideline

The scope sets out what an RNAO guideline will and will not cover (see **Purpose and Scope**). To determine the scope of this Guideline, the RNAO Best Practice Guideline Development and Research Team conducted the following steps:

1. Reviewed the previous RNAO BPG *Ostomy Care and Management* (2009) to understand its purpose, scope, and recommendations.
2. A guideline search and gap analysis was undertaken. Two Guideline Development Methodologists (one of them being the Guideline Development Lead) searched an established list of websites for guidelines and other relevant content published between January 2007 and August 2017. The resulting list was compiled based on knowledge of evidence-based practice websites and recommendations from the literature. RNAO expert panel members were asked to suggest additional guidelines (see **Figure 4** in **Appendix E**). The purpose of the guideline search and gap analysis was to gain an understanding of existing guidelines regarding ostomy care and support in order to identify opportunities for addressing the purpose and scope of this BPG. Detailed information about the search strategy for existing guidelines, including the list of websites searched and the inclusion criteria used, is available at https://rnao.ca/bpg/guidelines/ostomy.

   The guidelines were reviewed for content, applicability to nursing scope of practice, accessibility, and quality. The two Guideline Development Methodologists appraised three international guidelines using the AGREE II tool and came to consensus on an overall score for each guideline (92). Guidelines with a score of six or seven (on a 7-point Likert scale) were considered to be of high quality. The systematic reviews that answered research questions in high quality guidelines were considered to be beyond the scope of this guideline. The following guidelines were appraised as indicated:

   - Miller D, Pearsall E, Johnston D, et al. Executive summary: enhanced recovery after surgery: best practice guideline for care of patients with a fecal diversion. J Wound Ostomy Continence Nurs. 2017 Jan/Feb;44(1):74–7. (Score: 4 out of 7. This guideline was used as a supporting resource in this BPG)
   - Ostomy Guidelines Task Force. Management of the patient with a fecal ostomy—best practice guidelines for clinicians. J Wound Ostomy Continence Nurs. 2010 Dec;37(6):596–8. (Score: 3 out of 7. This guideline was not used as a supporting resource in this BPG because the content was not as relevant)
   - World Council of Enterostomal Therapists (WCET). WCET international ostomy guideline. Perth (Australia): WCET; 2014. (Score: 4 out of 7. This guideline was used as a supporting resource in this BPG)

3. A scoping review of the literature was performed to determine the depth of peer-reviewed studies in the area of pediatric populations (younger than 18 years) living with an ostomy.
4. Six key informant interviews took place with experts in the field including front-line health providers, researchers, and individuals with lived experiences, to understand the needs of nurses, members of the interprofessional health team, and persons with lived experience.
5. Two virtual focus groups were convened to understand the needs of nurses, members of the interprofessional health team, and persons with lived experience.

Assembly of the Expert Panel

RNAO aims for diversity in membership of an expert panel in alignment with its Organizational Statement on Diversity and Inclusivity which is part of the RNAO Mission and Values (93). RNAO also aims for persons impacted by guideline recommendations, especially persons with lived experiences and caregivers, to be included as expert panel members.

There are numerous ways in which RNAO finds and selects members of an expert panel, including searching the literature for researchers in the topic area; recommendations from key informant interviews; drawing from established professional networks such as RNAO interest groups, Champions Network©, and BPSO©; other nursing and health provider associations; topic-relevant technical associations or organizations; and advocacy bodies.

For this Guideline, the RNAO Best Practice Guideline Development and Research Team assembled a panel of experts from nursing practice, administration, research, education and policy, as well as other members of the interprofessional team representing a range of sectors and practice areas, and persons with lived experiences (see the **RNAO Expert Panel**).

The expert panel engaged in the following activities:

- Approved the scope of this BPG.
- Determined the recommendation questions and outcomes to be addressed in this BPG.
- Participated in a consensus development process to finalize recommendation statements.
- Provided feedback on the draft of this BPG.
- Participated in the development of evaluation indicators.
- Identified appropriate stakeholders to review the draft guideline prior to publication.

The expert panel co-chairs led the following activities:

- Monthly co-chair meetings with the Guideline Development Methodologists and Guideline Development Project Coordinator.
- Facilitated expert panel meetings.
- Provided in-depth guidance on clinical and/or research issues.
- Moderated and acted as tiebreakers in voting processes.

Declarations of Competing Interest

Declarations of competing interest that might be construed as constituting an actual, potential, or apparent conflict were made by all members of the RNAO's expert panel, and members were asked to update their disclosures throughout the guideline development process. Information was requested about financial, intellectual, personal, and other interests and documented for future reference. No limiting conflicts were identified. Declarations of competing interest are posted as a separate document on the RNAO webiste: https://rnao.ca/bpg/guidelines/ostomy.

Identifying Priority Recommendation Questions and Outcomes

In October 2017, the RNAO Best Practice Guideline Development and Research Team convened to determine the priority recommendation questions and outcomes for this Guideline. A comprehensive list of recommendation questions that the Guideline could potentially address was developed at the in-person meeting, informed by the following:

- The guideline gap analysis.
- The scoping review of the literature.
- Key informant interviews and focus groups.
- Expert panel discussion at the in-person meeting.

This comprehensive list of potential recommendation questions was presented to the expert panel for a vote. Each expert panel member was allowed four votes for preferred recommendation questions. The four recommendation questions with the most votes were deemed the final recommendation questions. Expert panel co-chairs did not participate in the vote as they functioned as tiebreakers for the fourth recommendation question.

Following this initial vote—and in alignment with GRADE standards for assessing and presenting the evidence—outcomes were identified and prioritized per recommendation question. A comprehensive list of outcomes per recommendation question was developed at the in-person meeting, informed by the following:

- The scoping review of the literature.
- Key informant interviews and focus groups.
- Expert panel discussion at the in-person meeting.

Based on the comprehensive list of outcomes, the expert panel was asked to rank order the relative importance of each outcome per recommendation question. Each panel member participated in a confidential online rank order vote. It was deemed feasible to have a total of 13 prioritized outcomes across the four recommendation questions. Expert panel co-chairs did not participate in the vote as they functioned as co-facilitators. Voting results were presented to the expert panel. Through a facilitated discussion, priority outcomes were determined per recommendation question. Each recommendation question informed a PICO research question which guided the systematic reviews. The four recommendation questions and their respective PICO research questions are presented below:

Recommendation Question 1: Should access to nurses specialized in wound, ostomy, and continence or no access to nurses specialized in wound, ostomy, and continence be recommended?

PICO Research Question 1

Population: Adults anticipating or living with an ostomy.
Intervention: Access to nurses specialized in wound, ostomy, and continence.
Comparison: No access to nurses specialized in wound, ostomy, and continence.
Outcomes: Peristomal skin breakdown*, ostomy leakage, quality of life, hospital length of stay and readmission rates to hospital.

Recommendation Question 2: Should an ostomy care program or no ostomy care program be recommended?

PICO Research Question 2

Population: Health service organizations that serve persons who anticipate or live with an ostomy.
Intervention: Ostomy care program.
Comparison: No ostomy care program.
Outcomes: Patient satisfaction, hospital length of stay, preoperative stoma site marking**, readmission rates to hospital and staff satisfaction.

Recommendation Question 3: Should access to adequate supplies or no access to adequate supplies be recommended?

PICO Research Question 3

Population: Adults who anticipate or live with an ostomy.
Intervention: Access to adequate supplies.
Comparison: No access to adequate supplies.
Outcomes: Quality of life and financial priorities.

Recommendation Question 4: Should the use of standardized assessment tool for quality of life to customize care plan (for education and referral) or no use of standardized assessment tool for quality of life to customize care plan (for education and referral) be recommended?

PICO Research Question 4

Population: Adults anticipating or living with an ostomy.
Intervention: Use of a standardized assessment tool for quality of life to customize care plan (for education and referral).
Comparison: Usual care.
Outcomes: Psychological health status and self-identity.

* The peristomal skin breakdown outcome was not found in the literature. As a result, peristomal dermatitis and peristomal irritation were chosen as surrogate outcomes after consultation with expert panel co-chairs. A surrogate outcome is one that is a similar measure to the desired outcome and reflects what would contribute to the desired outcome.

** The preoperative stoma site marking outcome was not found in the literature. A surrogate outcome was not chosen in replacement as there deemed to be a sufficient number of outcomes related to Research Question #2.

Literature regarding access to affordable ostomy supplies was not found. As access to affordable supplies was highlighted as a priority topic by the expert panel, RNAO is taking policy initiatives on universal funding for ostomy supplies to promote optimal health outcomes for all adults who anticipate or live with an ostomy.

In consultation with the co-chairs, an alternate priority research question identified by the expert panel was chosen. The respective priority outcome was also determined by the co-chairs. The revised Recommendation Question #3 is outlined below:

Recommendation Question 3: Should prevention strategies for parastomal hernia development or no prevention strategies for parastomal hernia development be recommended?

PICO Research Question 3
Population: Adults living with an ostomy.
Intervention: Prevention strategies for parastomal hernias.
Comparison: Usual care.
Outcomes: Rates of parastomal hernias.

Literature specific to the use of standardized assessment tool for quality of life to customize care plan (for education and referral) was not found. In consultation with the co-chairs, a broader recommendation question was identified that could indirectly inform the need for quality of life assessment in adults who anticipate or live with an ostomy. The revised Recommendation Question #4 is outlined below:

Recommendation Question 4: Should quality of life assessment or no quality of life assessment be recommended?

PICO Research Question 4:
Population: Adults living with an ostomy.
Intervention: Quality of life assessment.
Comparison: No quality of life assessment.
Outcomes: Psychological health status and self-identity.

Systematic Retrieval of the Evidence

RNAO BPGs are based on a comprehensive and systematic review of the literature.

For this BPG, a search strategy was developed by the Guideline Development Methodologists and a health sciences librarian for each of the aforementioned four research questions. A search for relevant research studies published in English between January 2012 and April 2018 was applied to the following databases: Cumulative Index to Nursing and Allied Health (CINAHL), MEDLINE, Cochrane Central and Embase. All study designs were included. Expert panel members were asked to review their personal libraries for key studies not found through the above search strategies (see **Figures 5**, **6**, **7**, and **8**). Detailed information on the search strategy for the systematic reviews, including the inclusion and exclusion criteria and search terms, is available at https://rnao.ca/bpg/guidelines/ostomy.

All studies were independently assessed for relevance and eligibility by the two Guideline Development Methodologists based on the inclusion and exclusion criteria. Any disagreements were resolved through consensus.

All included articles were independently assessed for risk of bias by study design using validated and reliable tools. **Randomized controlled trials**[G] were assessed using the Risk of Bias 2.0 tool (94), **quasi-experimental studies**[G] and other non-randomized studies were assessed using the ROBINS-I tool (95), systematic reviews were assessed using the AMSTAR 2 tool (96) and qualitative studies were assessed using the CASP qualitative checklist (97). Two reviewers reached consensus on all scores through discussion.

Data extraction was performed simultaneously. Reviewers completed independent data extraction for 75 per cent of the studies. The remaining studies were split between the reviewers and were cross-checked for accuracy. In total, 36 studies were included across all four systematic reviews.

In January 2019, an additional guideline search was conducted in an established list of websites for guidelines published between September 2017 and January 2019 to identity recommended resources. One guideline was found however it was for purchase, and therefore not accessible. Furthermore, searches in all databases were re-run on January 11, 2019 to capture recent research. Studies were screened for relevancy to inform values and preferences and health equity for all recommendations. Findings from one study were incorporated in the discussion of evidence for **Recommendation 2.1** and **2.2**.

Determining Certainty and Confidence of Evidence

Certainty of Evidence

The certainty of quantitative evidence (i.e., the extent to which one can be confident that an estimate of an effect is true) is determined using GRADE methods (8). First, the certainty of the evidence is rated for each prioritized outcome across studies (i.e., for a body of evidence) per research question (8). This process begins with the study design and then requires an examination of five domains—risk of bias, inconsistency, imprecision, indirectness, and publication bias—to potentially **downgrade**[G] the certainty of evidence for each outcome. Following the initial consideration for rating down, the following three factors that permit rating up the certainty of evidence are assessed: large magnitude of effect, dose-response gradient, and effect of plausible confounding. See **Table 11** for a definition of each of these certainty criteria.

Table 11: GRADE Certainty Criteria

CERTAINTY CRITERIA	DEFINITION
Risk of bias	Limitations in the study design and execution that may bias study results. Valid and reliable quality appraisal tools are used to assess the risk of bias. First, risk of bias is examined for each individual study and then examined across all studies per defined outcome.
Inconsistency	Unexplained differences (heterogeneity) of results across studies. Inconsistency is assessed by exploring the magnitude of difference, and possible explanations, in the direction and size of effects reported across studies for a defined outcome.
Indirectness	Variability between the research and review question and context within which the recommendations would be applied (applicability). There are four sources of indirectness which are assessed: ■ Differences in population. ■ Differences in interventions. ■ Differences in outcomes measured. ■ Differences in comparators.
Imprecision	The degree of uncertainty around the estimate of effect. This is usually related to sample size and number of events. Studies are examined for sample size, number of events, and confidence intervals.
Publication bias	Selective publication of studies based on study results. If publication bias is strongly suspected, downgrading is considered.

Source: The GRADE Working Group. Handbook for grading the quality of evidence and the strength of recommendations using the GRADE approach 2013. Available from: http://gdt.guidelinedevelopment.org/app/handbook/handbook.html#h.svwngs6pm0f2.

Following the initial consideration for rating down the certainty of quantitative evidence, there are three factors assessed that permit rating up the certainty of evidence for observational studies:

1. **Large magnitude of effect:** If the body of evidence has not been rated down for any of the five criteria and a large estimate of the magnitude of intervention effect is present, there is consideration for rating up (8).
2. **Dose-response gradient:** If the body of evidence has not been rated down for any of the five criteria and a dose–response gradient is present, there is consideration for rating up (8).
3. **Effect of plausible confounding:** If the body of evidence has not been rated down for any of the five criteria and all residual confounders would result in an underestimation of treatment effect, there is consideration for rating up (8).

The overall certainty of evidence is the combined rating of the certainty of evidence across all prioritized outcomes per recommendation question. GRADE categorizes the overall certainty of evidence as high, moderate, low, or very low. See **Table 12** for the definitions of these categories.

For this Guideline, the five GRADE certainty criteria for potentially rating down and the three GRADE certainty criteria for potentially rating up were independently assessed by the two Guideline Development Methodologists. Any discrepancies were resolved through consensus. An overall certainty of evidence per recommendation question was assigned based on these assessments. Recommendations that were derived from the recommendation questions were accordingly assigned this certainty of evidence.

Table 12: Certainty of Evidence

OVERALL CERTAINTY OF EVIDENCE	DEFINITION
High	We are very confident that the true effect lies close to that of the estimate of the effect.
Moderate	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
Low	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.
Very Low	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

Source: Reprinted from The GRADE Working Group. Quality of evidence. In Schunemann H, Brozek J, Guyatt G, et al., editors. Handbook for grading the quality of evidence and the strength of recommendations using the GRADE approach [Internet]. [place unknown: publisher unknown]; 2013 [cited 2018 Aug 31]. Table 5.1, Quality of evidence grades. Available from: https://gdt.gradepro.org/app/handbook/handbook.html#h.wsfivfhuxv4r. Reprinted with permission.

Confidence in Evidence

Similar to GRADE, there are four **CERQual criteria**[G] to assess the confidence in qualitative findings related to a phenomenon of interest:

1. Methodological limitations.
2. Relevance.
3. Coherence.
4. Adequacy.

See **Table 13** for a definition of each of these criteria.

Table 13: CERQual Quality Criteria

CRITERIA	DEFINITION
Methodological limitations	The extent to which there are concerns about the design or conduct of the primary studies that contributed evidence to an individual review finding.
Coherence	An assessment of how clear and cogent the fit is between the data from the primary studies and a review finding that synthesises that data. By "cogent," we mean well supported or compelling.
Adequacy of data	An overall determination of the degree of richness and quantity of data supporting a review finding.
Relevance	The extent to which the body of evidence from the primary studies supporting a review finding is applicable to the context (perspective or population, phenomenon of interest, setting) specified in the review question.

Source: Reprinted from Lewin S, Booth A, Glenton C, et al. Applying GRADE-CERQUAL to qualitative evidence synthesis findings: introduction to the series. Implement Sci. 2018;13(Suppl 1):1–10. Table 2, Definitions of the components of the CERQual approach; p. 5. Reprinted with permission.

For qualitative findings related to one of the prioritized outcomes, these four criteria were independently assessed by the two Guideline Development Methodologists. Discrepancies were resolved through consensus. An overall judgment of the confidence in each review finding was made based on these assessments above (see **Table 14** for the confidence of evidence judgments). Recommendations that included qualitative evidence were assigned an overall confidence in evidence based on the corresponding review finding.

Table 14: Confidence in Evidence

OVERALL CONFIDENCE OF EVIDENCE	DEFINITION
High	It is highly likely that the finding is a reasonable representation of the phenomenon of interest.
Moderate	It is likely that the finding is a reasonable representation of the phenomenon of interest.
Low	It is possible that the review finding is a reasonable representation of the phenomenon of interest.
Very Low	It is not clear whether the review finding is a reasonable representation of the phenomenon of interest.

Source: Reprinted from Lewin S, Booth A, Glenton C, et al. Applying GRADE-CERQUAL to qualitative evidence synthesis findings: introduction to the series. Implement Sci. 2018;13(Suppl 1):1–10. Table 3, Description of level of confidence in a review finding in the CERQual approach; p. 6. Reprinted with permission.

Summarizing the Evidence

GRADE and GRADE CERQual evidence profiles are used to present decisions on determining the certainty and confidence of evidence, as well as general information about the body of research evidence, including key statistical or narrative results. Evidence profiles summarize the body of evidence for each systematic review per outcome and are developed by the two Guideline Development Methodologists.

Evidence profiles for the body of quantitative studies present the decisions made by the two reviewers on the five key GRADE certainty domains for rating down and the three GRADE certainty domains for rating up. The evidence profiles present general information about the body of evidence, including a description of the intervention, key results, and transparent judgments about the certainty underlying the evidence for each outcome (8). For this Guideline, **meta-analyses**[G] were not performed; results were therefore synthesized in narrative format in the evidence profiles.

CERQual evidence profiles were created for the body of qualitative evidence for each systematic review per outcome. Similar to the GRADE evidence profiles used for quantitative research, the CERQual evidence profiles present the body of evidence supporting each theme related to outcomes for every recommendation question. These evidence profiles presented the decisions made by the two Guideline Development Methodologists on the four key CERQual criteria and transparent judgements about the confidence underlying the evidence for each theme.

The GRADE and CERQual evidence profiles for each systematic review, organized per outcome, can be accessed online at https://rnao.ca/bpg/guidelines/ostomy.

Formulating Recommendations

Evidence-to-Decision Frameworks

Evidence-to-Decision (EtD) frameworks[G] outline proposed recommendations and summarize all necessary factors and considerations based on available evidence and expert panel judgement for formulating the recommendation statements. EtD frameworks are used to help ensure that all important factors required to formulate recommendations are considered by an expert panel (8). Both quantitative and qualitative evidence are incorporated into the frameworks. The Guideline Development Methodologists draft the frameworks with available evidence from the systematic reviews.

For this Guideline, the EtD frameworks included the following areas of consideration for each drafted recommendation statement (see **Table 15**):

- Background information on the magnitude of the problem.
  - Includes the PICO question and general context related to the research question.
- The balance of benefits and harms of an intervention.
- Certainty and/or confidence of the evidence.
- Values and preferences.
- Health equity.

Decision Making: Determining the Direction and Strength of Recommendations

Expert panel members are provided with the EtD frameworks to review prior to a scheduled two-day in-person meeting to determine the direction (i.e., to provide a recommendation for or against an intervention) and the strength of the recommendations in the guideline. Expert panel members also are given access to the complete evidence profiles and full-text articles.

Using the EtD frameworks as a guiding document, the expert panel members participated in an online vote from May 15th to May 30th, 2018. The following questions were posed to all expert panel members for each draft recommendation:

- Is there important uncertainty about or variability in how much people value the main outcomes?
- Does the balance between desirable and undesirable effects favor the intervention or the comparison?
- What would be the impact on health equity?

The Likert scales created by the GRADEpro software were used for voting on each factor (98). There also was the opportunity for expert panel members to provide written comments related to each of the judgement criteria.

The results of the online vote were calculated and presented to the expert panel at the two-day in-person meeting held June 21–22, 2018. The online vote results were used to help guide discussion. The expert panel co-chairs and the Guideline Development Lead facilitated the meeting to allow for adequate discussion for each proposed recommendation.

The decision on direction and strength of each recommendation statement was determined by discussion and a consensus vote of 70 per cent. The voting process was moderated by the expert panel co-chairs and Guideline Development Lead. In determining the strength of a recommendation statement, the expert panel was asked to consider the following (see **Table 15**):

- The balance of benefits and harms.
- Certainty and confidence of the evidence.
- Values and preferences.
- Potential impact on health equity.

Following the in-person meeting, the final decisions made on all recommendations were summarized and sent to the full expert panel electronically.

Table 15: Key Considerations for Determining the Strength of Recommendations

FACTOR	DEFINITION	SOURCES
Benefits and harms	Potential desirable and undesirable outcomes reported in the literature when the recommended practice or intervention is used. "The larger the difference between the desirable and undesirable effects, the higher the likelihood that a strong recommendation is warranted. The narrower the gradient, the higher the likelihood that a conditional recommendation is warranted" (99).	Includes research exclusively from the systematic review.
Certainty and confidence of evidence	The extent of confidence that the estimates of an effect are adequate to support a recommendation. The extent of confidence that a review finding is a reasonable representation of the phenomenon of interest (100). Recommendations are made with different levels of certainty or confidence; the higher the certainty or confidence, the higher the likelihood that a strong recommendation is warranted (99).	Includes research exclusively from the systematic review.

FACTOR	DEFINITION	SOURCES
Values and preferences	The relative importance or worth of the health outcomes of following a particular clinical action from a person-centred perspective. "The more values and preferences vary or the greater the uncertainty in values and preferences the higher the likelihood that a conditional recommendation is warranted" (99).	Includes evidence from the systematic review (when available) and other sources, such as insights from the expert panel.
Health equity	Represents the potential impact of the recommended practice or intervention on health outcomes or health quality across different populations. The greater the potential for increasing health inequity, the higher the likelihood that a conditional recommendation is warranted.	Includes evidence from the systematic review (when available) and other sources, such as insights from the expert panel.

Source: Adapted by the RNAO expert panel from The GRADE Working Group. Handbook for grading the quality of evidence and the strength of recommendations using the GRADE approach 2013. Available from: http://gdt.guidelinedevelopment.org/app/handbook/handbook.html#h.svwngs6pm0f2.

Drafting the Guideline

The Guideline Development Methodologists wrote the draft of this Guideline. The expert panel reviewed the draft and provided written feedback. A teleconference was held October 2nd, 2018, to review panel feedback and incorporate changes, as necessary. The Guideline then proceeded to external stakeholder review.

Stakeholder Review

RNAO is committed to obtaining feedback from (a) nurses and other health providers from a wide range of practice settings and roles, (b) knowledgeable administrators and funders of health services, and (c) stakeholder associations as part of the guideline development process.

Stakeholder reviewers for RNAO BPGs are identified in two ways. First, stakeholders are recruited through a public call issued on the RNAO website (RNAO.ca/bpg/get-involved/stakeholder). Second, individuals and organizations with expertise in the guideline topic area are identified by the RNAO Best Practice Guidelines Development and Research Team and the expert panel, and are directly invited to participate in the review.

Stakeholder reviewers are individuals with subject matter expertise in the guideline topic or those who may be affected by its implementation. Reviewers may be nurses, members of the interprofessional team, nurse executives, administrators, research experts, educators, nursing students, or persons with lived experience and family members.

Reviewers are asked to read a full draft of the BPG and participate in the review of it prior to its publication. Stakeholder feedback is submitted online by completing a survey questionnaire. The stakeholders are asked the following questions:

- Is the guideline title appropriate?
- Is the guideline development process description clear?

In addition, the stakeholders are asked the following questions about each recommendation:

- Is this recommendation clear?
- Do you agree with this recommendation?
- Is the discussion of evidence thorough and does the evidence support the recommendation?

The survey also provides an opportunity to include comments and feedback for each section of the BPG. Survey submissions are compiled and feedback is summarized by the RNAO Best Practice Guidelines Development and Research Team. The survey results are reviewed and discussed with the expert panel. If necessary, the guideline content and recommendations are modified prior to publication to reflect the feedback received.

For this Guideline, the stakeholder review process was completed from October 19th to November 2nd, 2018 and diverse perspectives provided feedback (see **Stakeholder Acknowledgment**).

Procedure for Updating the Guideline

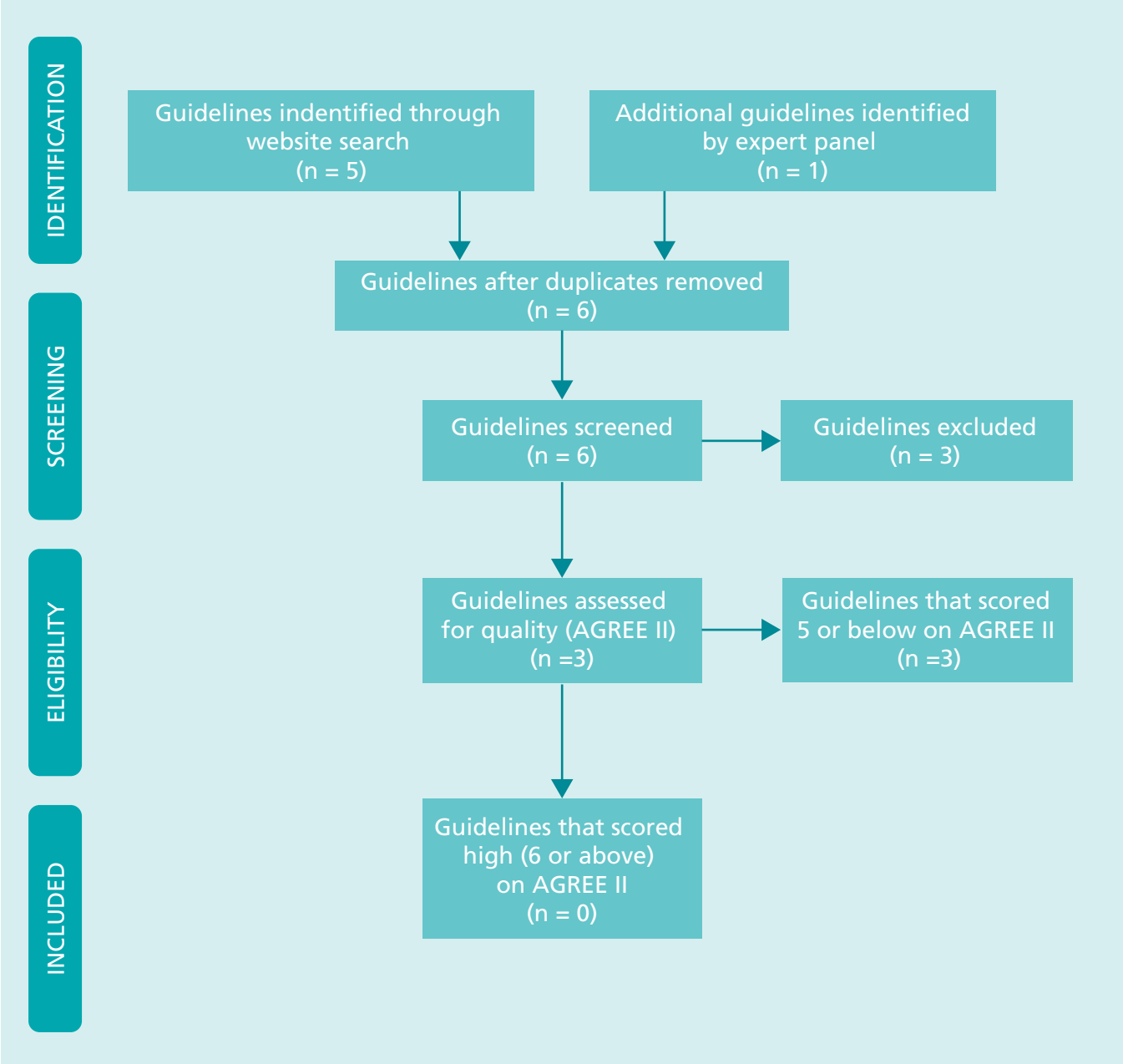
The RNAO commits to updating all BPGs, as follows:

1. Each BPG will be reviewed by a team of specialists in the topic area every five years following publication of the previous edition.
2. RNAO International Affairs and Best Practice Guidelines Centre staff regularly monitor for new systematic reviews, randomized controlled trials, and other relevant literature in the field.
3. Based on that monitoring, staff may recommend an earlier revision period for a particular BPG. Appropriate consultation with members of the original expert panel and other specialists and experts in the field will help inform the decision to review and revise the BPG earlier than planned.
4. Three months prior to the review milestone, the staff commences planning of the review as follows:
   a) Compiling feedback received and questions encountered during the implementation, including comments and experiences of BPSOs® and other implementation sites regarding their experiences.
   b) Compiling a list of new clinical practice guidelines in the field and refining the purpose and scope.
   c) Developing a detailed work plan with target dates and deliverables for developing a new edition of the BPG.
   d) Identifying with RNAO's CEO the potential BPG expert panel co-chairs.
   e) Compiling a list of specialists and experts in the field for potential participation on the expert panel. The expert panel will be comprised of members from the original expert panel and new ones.
5. New editions of BPGs will be disseminated based on established structures and processes.

Appendix E: Process for Guideline and Systematic Review

Guideline Review

Figure 4: Guidelines Review Process Flow Diagram



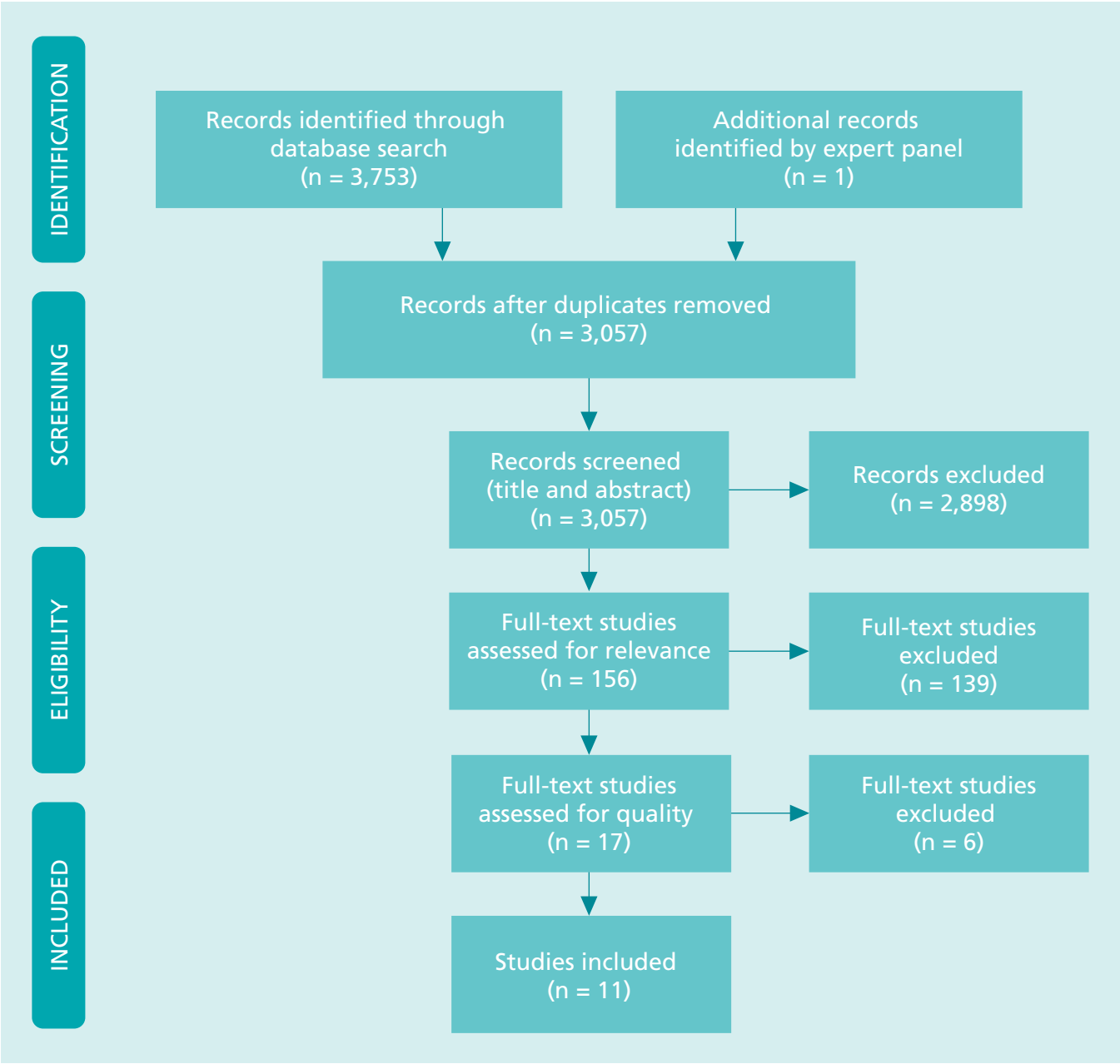
The systematic reviews that answered research questions in existing high quality guidelines (scoring six and above on AGREE II) were considered to be beyond the scope of this guideline. In this case, no guidelines scored six or above on the AGREE II.

Source: Adapted by the RNAO expert panel from: Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. BMJ. 2009;339:b2535. doi: 10.1136/bmj.b2535.

Figure 5: Recommendation Question #1 Article Review Process Flow Diagram

Should access to nurses specialized in wound, ostomy, and continence or no access to nurses specialized in wound, ostomy, and continence be recommended?

Outcomes: Peristomal dermatitis, peristomal irritation, ostomy leakage, quality of life, hospital length of stay and readmission rates to hospital.

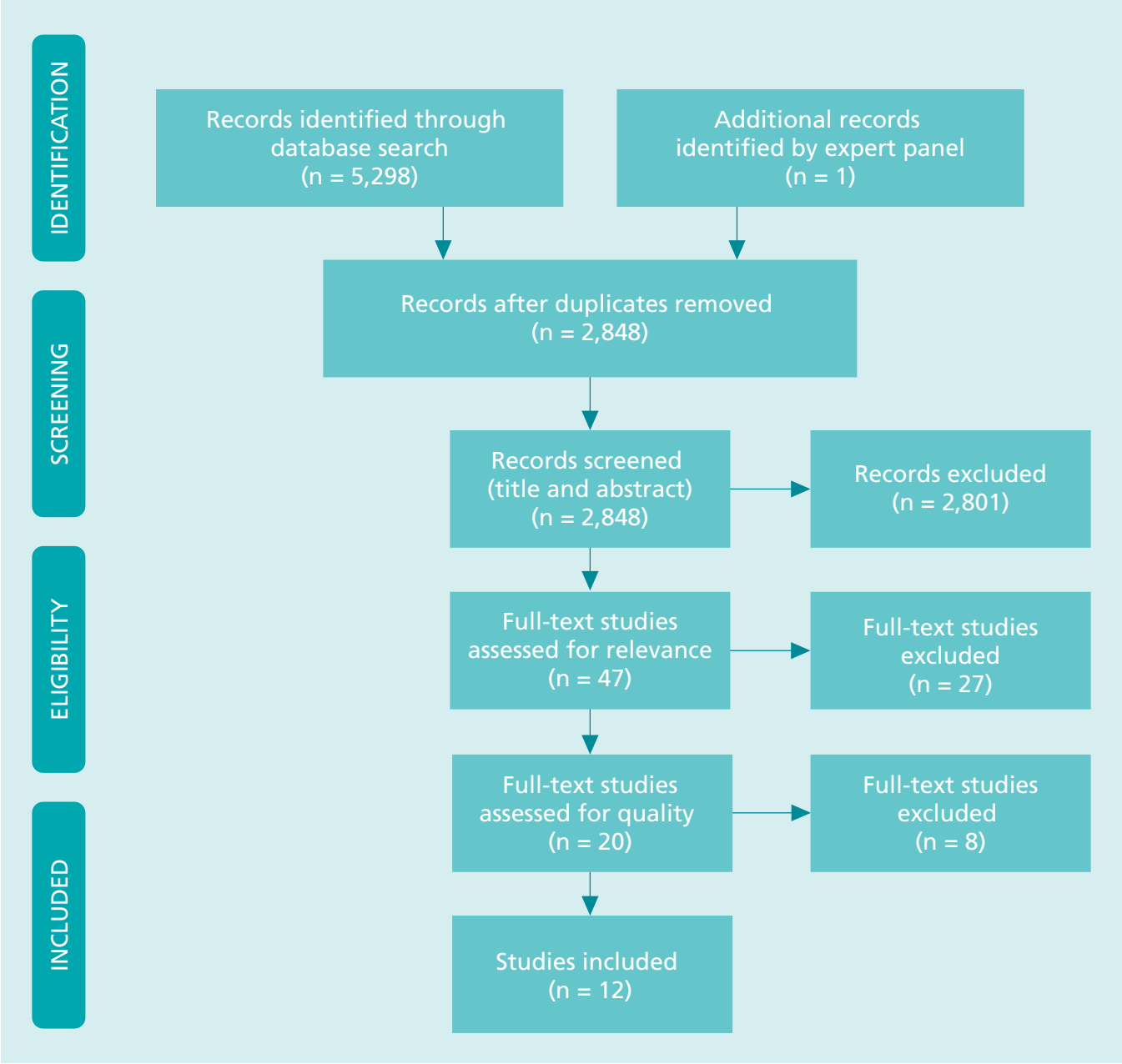


Source: Adapted by the RNAO expert panel from Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. BMJ. 2009;339:b2535. doi: 10.1136/bmj.b2535.

Figure 6: Recommendation Question #2 Article Review Process Flow Diagram

Should an ostomy care program or no ostomy care program be recommended?

Outcomes: Patient satisfaction, hospital length of stay, readmission rates to hospital and staff satisfaction.

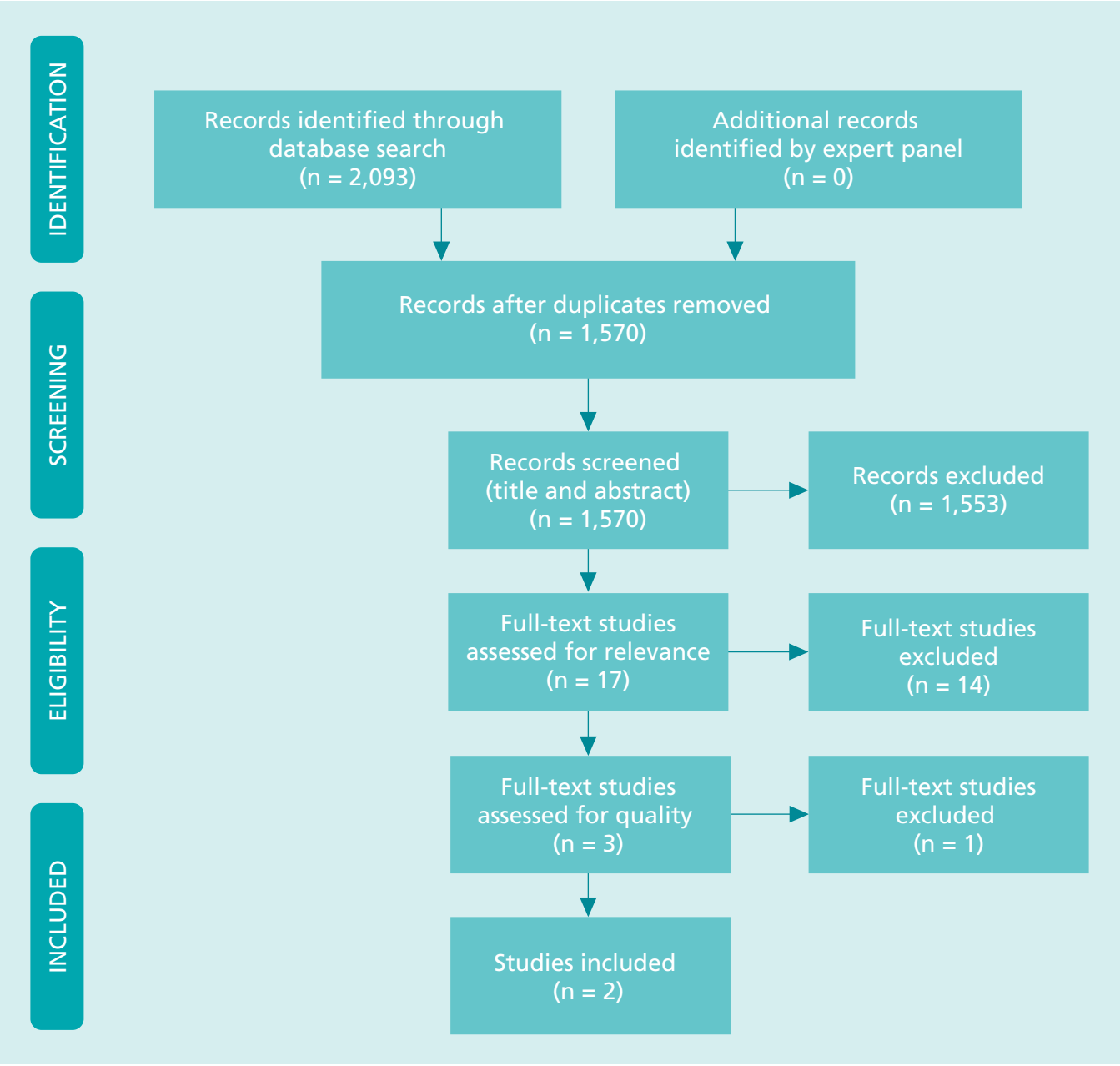


Source: Adapted by the RNAO expert panel from Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. BMJ. 2009;339:b2535. doi: 10.1136/bmj.b2535

Figure 7: Research Question #3 Article Review Process Flow Diagram

Should prevention strategies for parastomal hernia development or no prevention strategies for parastomal hernia development be recommended?

Outcomes: Rates of parastomal hernias.

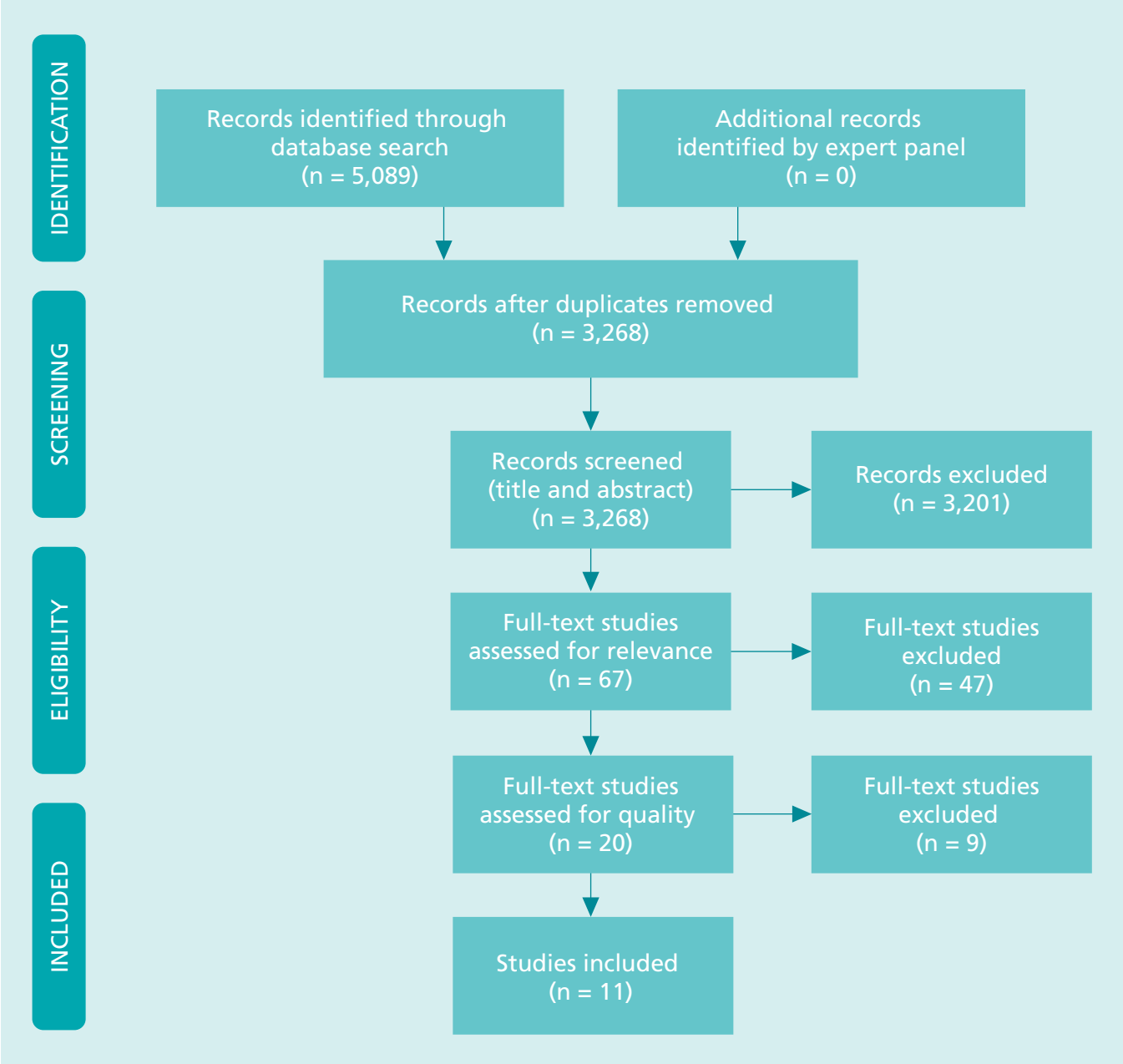


Source: Adapted by the RNAO expert panel from Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. BMJ. 2009;339:b2535. doi: 10.1136/bmj.b2535.

Figure 8: Research Question #4 Article Review Process Flow Diagram

Should quality of life assessment or no quality of life assessment be recommended?

Outcomes: Psychological health status and self-identity.



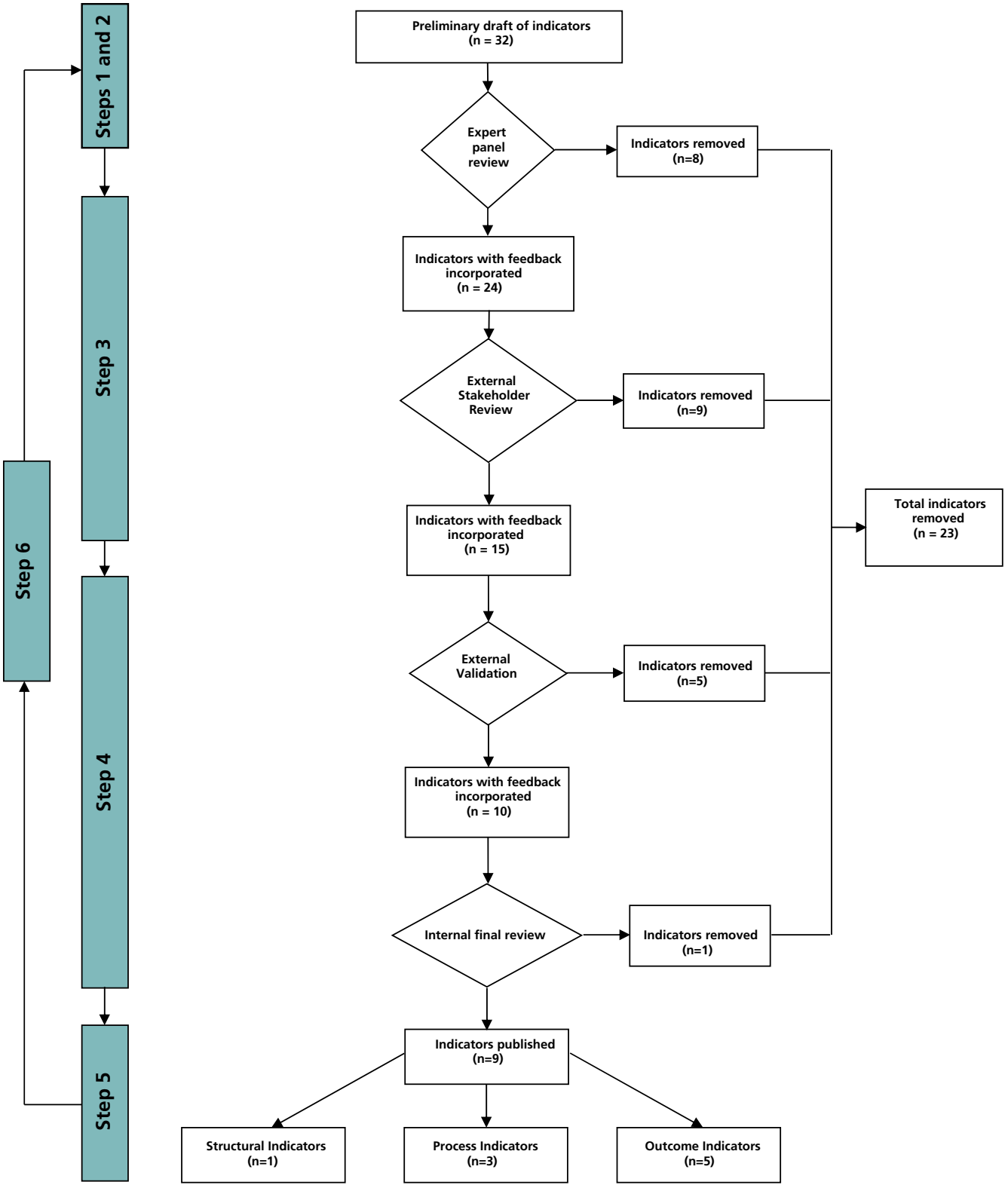
Source: Adapted by the RNAO expert panel from Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. BMJ. 2009;339:b2535. doi: 10.1136/bmj.b2535.

Appendix F: Indicator Development Process

The RNAO indicator development process steps are summarized below (see **Figure 9**):

1. Guideline selection – Indicators are developed for guidelines focused on health system priorities, with an emphasis to fill gaps in measurement while reducing reporting burden.
2. Extraction of recommendations – Practice recommendations, overall guideline outcomes and BPG Order Sets™ (if applicable) are reviewed to extract potential measures for indicator development.
3. Indicator selection and development – Indicators are selected and developed through established methodology, including alignment with external data repositories and health information data libraries.
4. Practice test and validation – Proposed indicators are internally validated through face and content validity, and externally validated by national and international organization representatives.
5. Implementation – Indicators are published in the Evaluation and Monitoring chart, and data dictionaries are published on the NQuIRE website.
6. Data quality assessment and evaluation – Data quality assessment and evaluation, as well as ongoing feedback from BPSOs, ensure purposeful evolution of NQuIRE indicators.

Figure 9: Indicator Development Flow Diagram



Appendix G: Ostomy Assessment Terms

TYPE OF OSTOMY	
Brooke method	Surgical maturation of the bowel where the distal bowel is everted and sutured to the skin, thus exposing the mucosal surface eliminating the "natural maturation" process.
Cecostomy	Rarely performed, the patient's cecum is brought through the abdomen. Often a temporary measure to allow decompression of the colon. May be performed as a bowel management program allowing irrigation of the colon with tap water or saline.
Colostomy	Portion of patient's colon is brought through the abdomen and everted to create a stoma. Can be permanent or temporary and allows the passage of stool into an external pouch or appliance. **Ascending colostomy:** The ascending portion of the colon is used. **Transverse colostomy:** The transverse portion of the colon is used. **Descending colostomy:** The descending portion of the colon is used. **Sigmoid colostomy:** The sigmoid portion of the colon is used.
Continent cutaneous diversion fecal (e.g., Koch pouch)	Rarely performed, an internal continent cutaneous diversion is created using a portion of the ileum. The proximal portion is used to create an internal pouch with the distal end brought through the abdominal wall to create a one way valve and a stoma. After several weeks of healing, the patient will perform intermittent intubation and drain the pouch of the fecal contents.
Continent cutaneous diversion urinary (e.g., Indiana pouch)	An internal continent cutaneous diversion is created from the ileum and cecum, and another segment of bowel, either colon or ileum, is used as a pouch. The ureters are brought through the back of the cecum. The cecum and bowel segment are each opened and then sewn together to create a reservoir for urine. The attached ileal segment is brought through the abdominal wall to create a stoma. Intermittent catheterization will be required.
Ileal conduit (urostomy)	Portion of patient's ileum is brought through the abdomen and everted to create a stoma. Can be permanent or temporary and allows the passage of urine into an external pouching system.
Ileostomy	Portion of patient's ileum is brought through the abdomen and everted to create a stoma. Can be permanent or temporary and allows the passage of stool into an external pouching system.
Os flush	Opening of the bowel at skin level.

TYPE OF OSTOMY	
Os off-centered	Opening of bowel is off-centered in stoma.
Os tilted	Opening of bowel is tilted from center of stoma.
Prolapsed	The telescoping of the bowel through the stoma, making the stoma longer.
Raised	Stoma is sitting above level of the skin.
Retracted	Disappearance of the normal stoma opening below skin level.
Black (necrosis)	Ischemia of the stoma from inadequate blood supply.
Dusky	Purple to a deep wine-coloured hue from altered blood supply.
Edematous	Interstitial collection of fluid.
Friable	Fragile tissue that bleeds easily.
STOMA APPEARANCE	
Moist	Mucosal tissue is damp.
Pale	Diminished colour.
Pink	Pink in colour.
Red	Red in colour.
Red (Dark)	Stoma has a deep/dark red hue.
Slough	Dry or wet, loose or firmly attached, yellow to brown dead tissue.
Turgor	Ability to change shape and return to normal appearance after lightly touching stoma (elasticity).
Trauma	Injury to surface of stoma like a cut, abrasion, or bruise.
Cancerous lesion	Able to visualize cancerous lesion/tumor on or attached to stoma.
Pseudoverrucous lesions	Wart-like lesions from chronic moisture irritation on or directly around stoma.

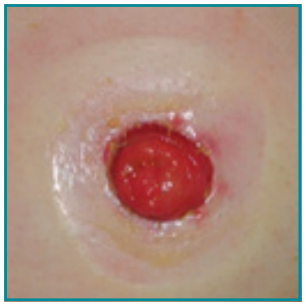
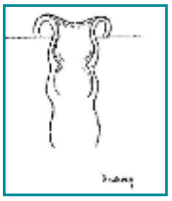
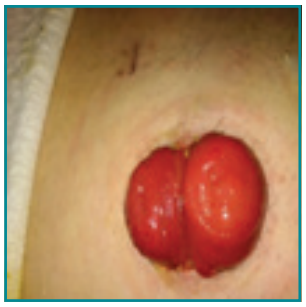
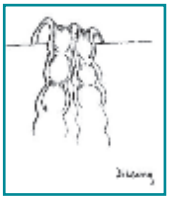
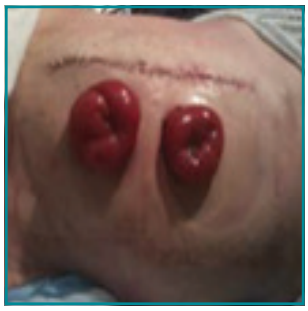
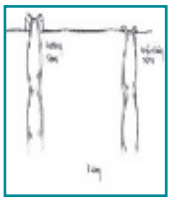
STOMA DEVICES	
Bridge	Short-term device that sits on the surface of the skin to support a loop stoma. Resembles two half-moons back-to-back.
Catheter	Rubber or plastic tube that sits in the stoma to act as a diversion.
Rod	Short-term device that sits on the surface of the skin to support a loop stoma.
Stent	Short-term small plastic tube that sits in the ureter and exits through the stoma. Used acutely to divert urine while surgical area recovers.
ABDOMINAL CONTOURS (creases, fold, hollows, and/or distension on the abdomen that effect the fit of a pouching system)	
Distended	Abnormal to patient; protruding of abdomen.
Flabby	Normal to patient; protruding and folding of abdomen.
Flat	Abdominal plane is flat.
Hernia	Deficit in the fascia that allows loops of the intestine to protrude in areas of weakness. Can present as abnormal bumps on the abdomen.
Loose/wrinkly	Abdomen has folds of loose skin.
Rounded	Normal to patient; abdominal plane is rounded.
Pendulous	Abdominal tissue hanging loosely.
Soft	Abdomen is soft with palpation.
Hard	Abdomen is firm or hard with palpation.
Approximated	Margin where the skin and stoma meet is well adhered.
Dissolvable sutures	A stitch that is made of a material that will dissolve with the body's fluids and disappear.
Fistula	An abnormal track connecting an organ to the skin surface, wound bed, ostomy, or to another organ.
Full epithelialized	Covered completely with new epithelial tissue.
Removable sutures	A stitch that is made of a material that will need to be removed at some point in time.

MUCOCUTANEOUS MARGIN (point where the epidermis and mucosa merge)	
Separated	Area of detachment(s) from the stoma to the skin.
Suture granuloma	Red, friable tissue and skin in the stoma margin where there are areas of retained or reactive suture material.
Tenuous	Thin or fragile connection between the skin and stoma.
PERIOSTOMY SKIN	
Allergic contact dermatitis	Hypersensitivity to area where product was applied resulting in an inflammatory reaction. Area affected mirrors the shape of the product used.
Bruised	Dark red, purplish, or blue tissue that fades to yellow, green, or grey depending on the skin colour.
Cancerous lesion	Cancerous lesion/tumor on or protruding through the periostomy skin.
Caput medusae (peristomal varices)	A purple hue caused by dilation of blood vessels noted around the stoma. Intermittent, spontaneous, or profuse bleeding may be noted by the patient and is often caused by portal hypertension.
Denuded	Superficial smooth loss of epithelium.
Erythema	Redness of the skin may be intense bright red to dark red.
Excoriated	Superficial loss of tissue that presents irregular with areas of erythema and rash.
Eczema	Superficial inflammation of the skin, often causing red papules that itch and weep, and can leave crusting and scaling.
Folliculitis	Seen as red pustules and papules that are from bacterial inflammation of hair follicles.
Fungal rash	Overgrowth of fungal organisms that present as pustules on the skin. Satellite lesions (small red pustules) are often seen advancing from the edge of affected area.
Indurated	Abnormal firmness of the tissues with palpable margins.
Inflammatory process	The periostomy skin has/is currently in an inflammatory process.
Intact	Unbroken skin.
Irritant contact dermatitis	Skin damage, often from contact with fecal or urine drainage.

PERIOSTOMY SKIN	
Macerated	Wet, white.
Mucosal transplant	Seeding of viable intestinal mucosa along suture line and onto peristomal skin.
Parastomal hernia	A deficit in the fascia that allows loops of the intestine to protrude in areas of weakness. Can present as abnormal bumps on the abdomen around the stoma.
Pseudo-verrucous lesions	Wart-like lesions from chronic moisture irritation around stoma.
Psoriasis	Chronic disease characterized by proliferation of epidermis that often appears as an erythematic, thick, silvery-white, and scaling plaque.
Pyoderma gangrenosum	Ulcerative inflammatory skin condition of unknown etiology that starts as pustules and break open to form full thickness ulcers often with undermining, ragged edges, and overhanging margins.
Trauma	Loss of epidermis around stoma.
Ulceration	Ulcer located around stoma.

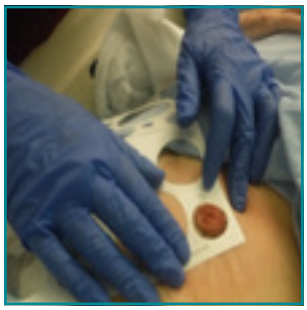
Source: Reprinted from Interior Health. Ostomy assessment parameters: definitions and descriptions. [place unknown: publisher unknown]; 2015. Reprinted with permission.

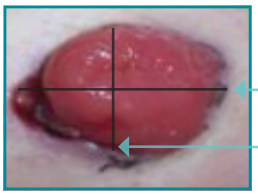
Appendix H: Ostomy Assessment Parameters and Definitions

STOMA CONSTRUCTION: Refers to how a stoma is surgically created. The stoma may be created from either the small or large bowel.		
End 		An end stoma is created by incising the intestine and bringing the proximal end of the intestine through an opening in the abdominal wall to just above skin level.
Loop 		A loop stoma is created by mobilizing the side of the intestine up through an opening in the abdominal wall and making a transverse incision on the intestine. This stoma will have two openings, proximal and distal. A temporary supporting rod may be placed under the stoma to prevent stoma retraction.
Double barrel 		A resection of the bowel is done; both the proximal end and the distal end are brought up through openings in the abdominal wall, creating two end stomas. The proximal will be functioning stoma and the distal is the non-functioning stoma - also known as a mucous fistula. The stomas can be positioned side by side or some distance apart.

STOMA SIZE: Stomas may vary in size due to many different factors including location in the bowel, body habitus, edema, etc. It is important to know the size of the stoma when choosing the appropriate appliance.

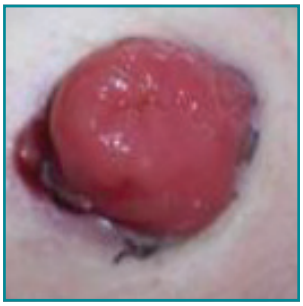
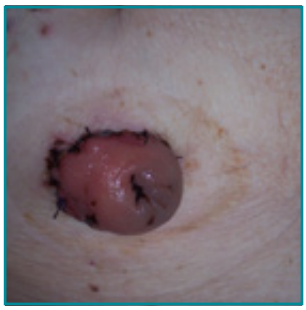
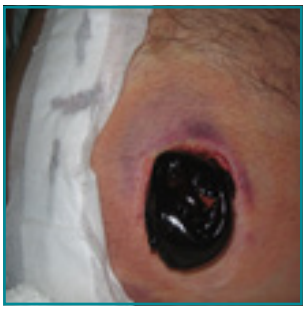
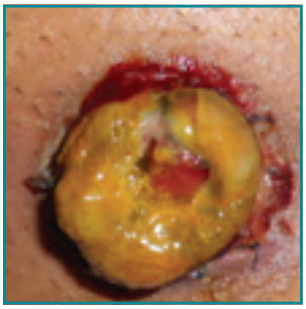
Length & Width

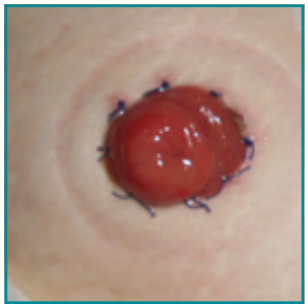
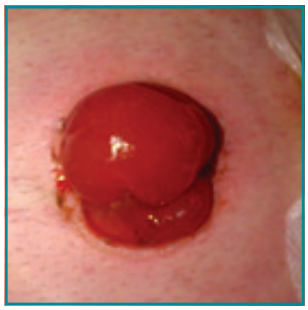
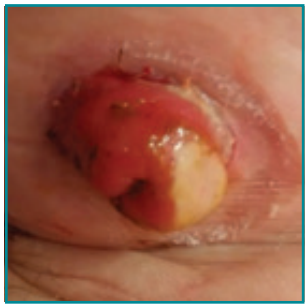
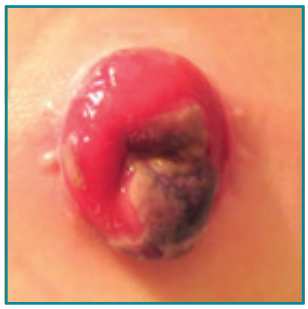


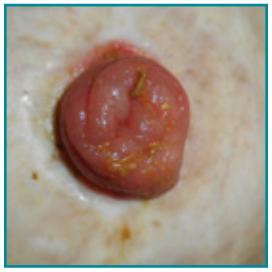
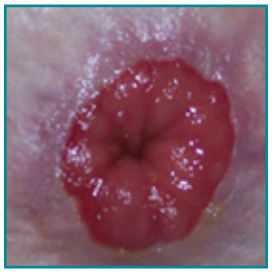
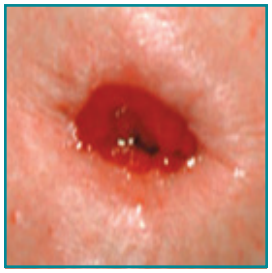
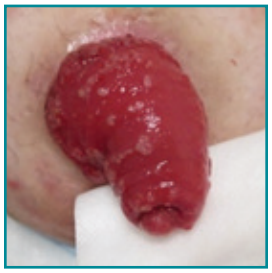
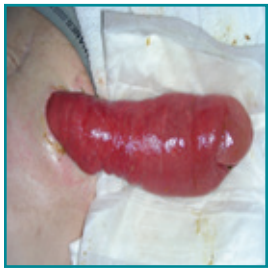


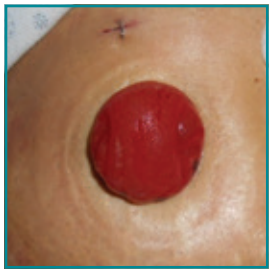
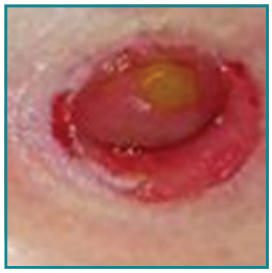
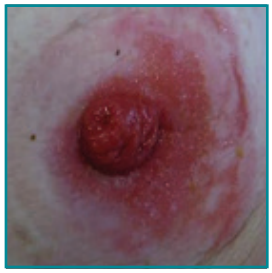
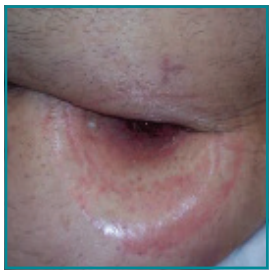
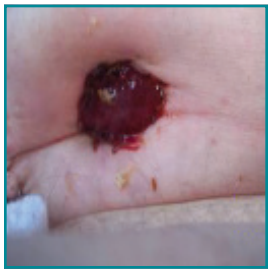
Length: Longest measurement.

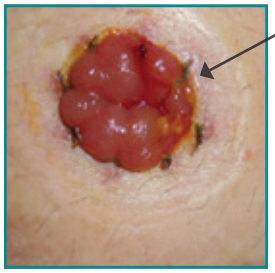
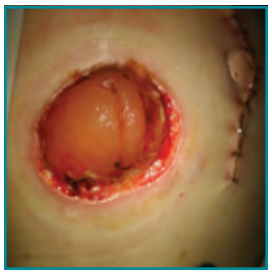
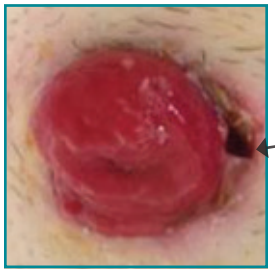
Width: Measured at widest area perpendicular to length.

STOMA COLOUR: Stoma colour is usually pink or red but may vary depending on blood supply.	
Pink/red 	Pink or red: ealthy with normal/adequate blood supply.
Dusky 	Bluish hue due to altered blood supply.
Necrotic  	Purple to a deep wine coloured hue due to ischemia of the stoma. The stomal tissue may turn to yellow slough and can progress to black dry tissue (eschar).

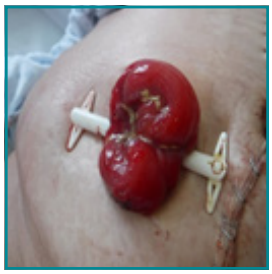
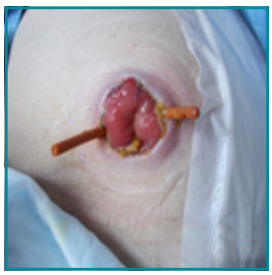
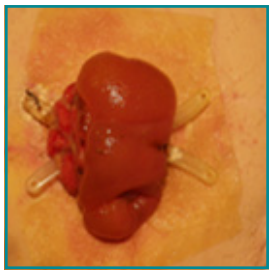
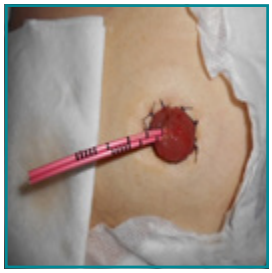
STOMA TISSUE: Stoma tissue is usually moist and damp. The tissue can vary depending on blood supply, damage, trauma, etc.	
Moist 	Mucosal tissue is damp.
Edematous 	Shiny, swollen, translucent, smooth appearance; due to interstitial collection of fluid.
Slough  	Soft, moist, devitalized tissue; may be white, yellow, tan or green. May be loose or firmly adherent.
Friable **(no image available)**	Stoma tissue is fragile and bleeds easily with minimal contact.

STOMA HEIGHT: An elevation above skin level of approximately 2cm is ideally for a good fit of the appliance. Due to surgical complication of body habitus, stomas can be either retracted or prolapsed.	
Protruding 	Stoma protrudes above level of the skin by approximately 2cms.
Flush 	Stoma sits at the same level of the skin.
Retracted 	The stoma is pulled down below the level of the skin.
Prolapsed  	A prolapsed sttoma is a stoma that develops a length longer than what was created at the time of surgery. The prolapse is created by the outward telescoping of the bowel. The length of the prolapse can vary.

PERISTOMAL SKIN: the skin surrounding the stoma.	
Intact 	Unbroken skin.
Excoriated 	Superficial loss of tissue that presents irregular with areas of erythema, and rash.
Red 	Intact skin with redness that may have varying degrees of intensity from bright red to dark red; redness may be due to chemical effluent, fungal or sensitivity/allergy.
Creases  	A dip or fold in the abdomen. The depth may vary from shallow to very deep.

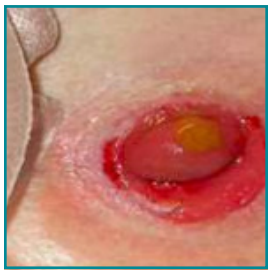
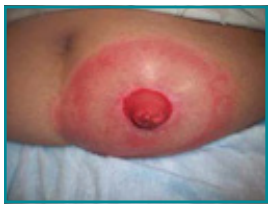
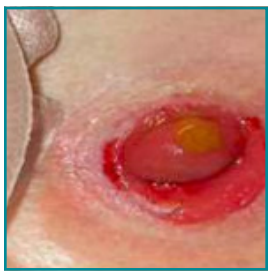
MUCOCUTANEOUS JUNCTION: The point where the epidermis and the mucosa merge	
Intact 	Mucocutaneous junction is well approximated.
Separated  	Area of detachment(s) from the stoma to the skin (dehiscence). The separated area may be circumferential or partial.

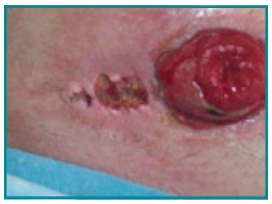
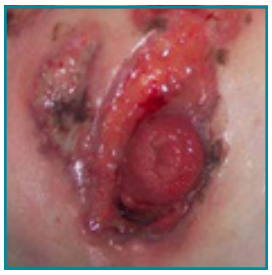
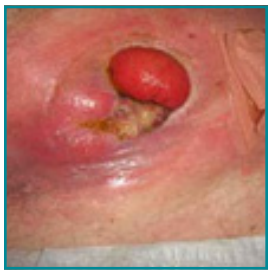
OUTPUT	
Feces:	■ Gas ■ Liquid ■ Pasty ■ Formed
Urine:	■ Clear ■ Concentrated ■ Mucousy ■ Cloudy

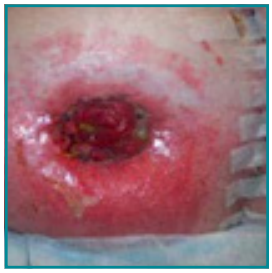
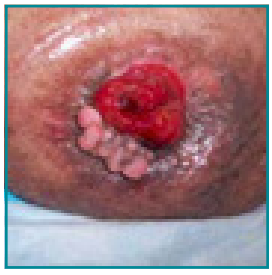
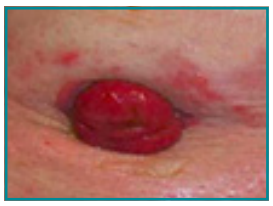
DEVICES IN SITU: For those stomas constructed as a loop, a device is place under the loop of intestine to provide support in order to prevent retraction of the stoma during the early stage of stoma maturation (approximately first seven days).	
Rod/ bridge   	This device may be a commercially available rod, a Penrose drain or red rubber catheter. It may, or may not, be sutured.
Stents 	A short-term small plastic tube which sits in each of the ureters and exits through the stoma; used to divert urine while the surgical area recovers.

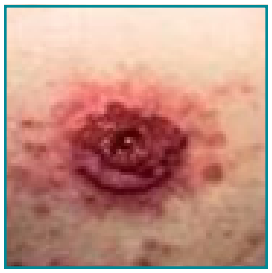
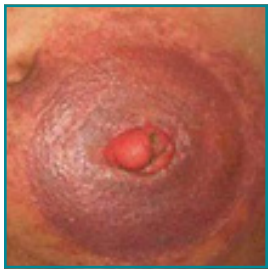
Source: Reprinted from British Columbia Provincial Nursing Ostomy Committee and Nurses Specialized in Wound Ostomy Continence from all Health Authorities. Ostomy assessment parameters and definitions. [place unknown: publisher unknown]; 2018. Reprinted with permission.

Appendix I: Sample Assessment and Management Form—Peristomal Skin Breakdown

DESCRIPTION	CLINICAL PRESENTATION	TREATMENT OBJECTIVE	TOPICAL TREATMENT OPTIONS
Denudation related to incorrect opening 	Peristomal denudation, characterized by redness, burning, and itching. **Flange** opening cut too large.	Resize flange opening	■ Measure stoma using measuring guide. ■ Crusting procedure. ■ Cut pouching system according to new size. ■ If stoma oval, measure width and length and cut oval template to ensure correct size.
Allergic contact dermatitis  	Peristomal erythema that mirrors the image of the allergen. May be moist and pruritic.	Remove allergen. Allergen may be a tape border or the barrier or both.	■ Medicated cortisone spray to relieve itch. ■ Crusting if moist. ■ If tape allergy use no tape product. ■ If barrier allergy, consider a different company. ■ May consider barrier between skin and pouch (e.g., skin protectant, transparent film, or hydrocolloid. ■ Consider patch testing.

DESCRIPTION	CLINICAL PRESENTATION	TREATMENT OBJECTIVE	TOPICAL TREATMENT OPTIONS
Wound to peristomal skin 	Wound to peristomal skin.	Identify cause of wound. Heal the wound. Prevent pouching system leakage.	■ Moisture balance to wound, follow wound treatment plan. ■ If using convexity, consider wider convexity or barrier ring instead to offload pressure.
Pyoderma gangrenosum 	Wound to peristomal skin. Very painful purple borders. Usually a history of autoimmune disease (e.g., inflammatory bowel disease, rheumatoid arthritis).	Identify cause of wound. Manage pain. Heal the wound. Prevent pouching system leakage	■ Physician/NP and CPCET referral required. ■ Prescription for steroids (steroid cream to be avoided as prevents pouch adherence). ■ Moisture balance to wound. ■ If using convexity, consider wider convexity or barrier ring instead to offload pressure. ■ Sharp debridement is contraindicated.
Stoma with fungating tumour 	Cancerous tumour protrudes beyond the epidermis causing pouching challenges. May be dry or moist, have odour and is painful.	Prevent pouching system leakage. Prevent bleeding. Provide psychosocial support.	■ Flexible pouching system. ■ Cut wide to avoid tumour if needed to obtain a seal. ■ Consider closed pouching system. ■ Lubricate inside of pouch if friction causes bleeding (pouch rubbing against tumour).

DESCRIPTION	CLINICAL PRESENTATION	TREATMENT OBJECTIVE	TOPICAL TREATMENT OPTIONS
Peristomal skin denudation due to leakage 	Superficial erythema that is moist. May be painful and pruritic. Usually occurs where pouching system is leaking.	Treat and prevent leakage. Change pouching system immediately if leaking.	■ Identify cause of leak. ■ Crusting procedure. ■ Correct leakage, fill in crevices/creases, or add a barrier ring/paste. ■ Change to a convex appliance if stoma located in a fold or crease, or if stoma is flushed or mobile.
Peristomal growths 	Growths protruding from the mucocutaneous junction. Are painful and present a pouching challenge.	Refer to CPCET and physician/NP. Prevent pouching system leakage.	■ Consult with physician/NP and CPCET. ■ Use paste or ring to create an even pouching surface.
Trauma/ skin tear 	Erythema/partial thickness wound or skin tear. Characterized by moist, painful open areas. May have bleeding.	Prevent trauma.	■ Use an adhesive remover when removing flange. ■ Consider a no-tape appliance/flange. ■ Assess frequency and appropriate pouch change technique.

DESCRIPTION	CLINICAL PRESENTATION	TREATMENT OBJECTIVE	TOPICAL TREATMENT OPTIONS
Folliculitis 	Infected hair follicle. Base of the hair follicles appear erythematic or maybe a pustule.	Treat inflammation and localized infection. Prevent recurrence.	■ Crusting procedure as needed. ■ Clip hair to remove. ■ Use adhesive remover to remove pouching system.
Yeast/candidiasis 	Fungal infection of the skin usually related to leakage. Area is denuded, red and has satellite lesions. Can be pruritic.	Treat and prevent leakage. Change pouching system immediately if leaking. Treat fungal rash (i.e., crust with antifungal powder).	■ Identify cause of leak. ■ Crusting procedure using antifungal powder. ■ Correct leakage, fill in crevices/creases, or add a barrier ring/paste. ■ Change to a convex pouching system if stoma located in a fold or crease, or flush or mobile stoma.

Source: Reprinted from Interior Health. Peristomal skin breakdown: assessment and management. [place unknown: publisher unknown]; 2015. Reprinted with permission.

Appendix J: Sample Ostomy Teaching Record

Client: _____

Address: _____

BEFORE SURGERY: TEACHING COMPLETED	DATE AND INITIAL
Date of surgery	
Type of surgery	
NSWOC visit	
Explain expected preoperative interventions	
Stoma site selection and marking	
Stoma location and appearance	
Information about surgical procedure	
Describe routines after surgery	
Review supplies	
Give samples of pouching system	
Review purpose of pouch and skin barrier	
Describe impact of stoma on daily life	
Information on how to manage common complications	
Review changes to diet and hydration	

AFTER SURGERY: WHILE IN HOSPITAL TEACHING COMPLETED	DATE AND INITIAL
Stoma (size, swelling, shrinkage, and appearance)	
Type of drainage while in hospital	
Observe/assist with pouch emptying	
Independent with pouch emptying	
Observe/assist with release of gas from pouch	
Independent with release of gas from pouch	
Observe/assist with pouch and skin barrier change	
Discuss odour control options	
Signs of ostomy leakage (prevention and treatment)	
Viewed ostomy video and given teaching booklet (if not done preoperatively)	
Who to call if problems occur after discharge from hospital	

AFTER SURGERY: DISCHARGED HOME TEACHING COMPLETED	DATE AND INITIAL
Type of drainage at home	
Stoma (size, swelling, shrinkage, and appearance)	
Independent with pouch emptying	
Observe/assist with pouch and skin barrier change	
Independent with pouch and skin barrier change	
Signs of ostomy leakage (prevention and treatment)	
Skin breakdown (prevention and treatment)	
Overview of signs and symptoms of dehydration and other common complications	
Hernia prevention strategies	
Application instructions	
Supply list/where to buy	
Care of supplies/emergency kit	
Discuss odour control options	
Nutrition/dietary instructions (including hydration)	
Bathing	
Activity/travel	
Clothing modifications	
Sexual function concerns	
Financial assistance (assistive devices program, private insurance, social assistance or disability tax credit)	
Ostomy Canada Society	
Ostomy visitor	
Discharge instructions	

COLOSTOMY: TEACHING COMPLETED	DATE AND INITIAL
Care of perineal wound (if present)	
Mucous drainage per rectum (if rectum left in place)	
Care of a mucous fistula (if present)	
Colostomy irrigation information	
Trial of a colostomy irrigation (optional)	
Constipation/diarrhea/gas	
Hernia prevention strategies	

ILEOSTOMY: TEACHING COMPLETED	DATE AND INITIAL
Care of perineal wound (if present)	
Mucous drainage per rectum (if rectum left in place)	
How to monitor for intake and output	
Strategies to avoid dehydration	
Sodium loss and replacement	
Potassium loss and replacement	
Obstruction and management	
Fluid imbalance and treatment	
Medication	
Hernia prevention strategies	

UROSTOMY: TEACHING COMPLETED	DATE AND INITIAL
Connecting pouch to additional leg bag (optional)	
Connecting pouch to bedside drainage (optional)	
Care of bedside drainage container and/or leg bag	
Mucous in urine	
Fluid intake/cranberry juice	
Urinary tract infection	
Urine sample from stoma	

Nurse's Signature: _____

Initials: _____

Nurse's Signature: _____

Initials: _____

Source: Adapted by the RNAO expert panel from Registered Nurses' Association of Ontario. Ostomy care and management. Toronto (ON): Registered Nurses' Association of Ontario; 2009.

Appendix K: Charter of Ostomates Rights

This Charter of Ostomates Rights presents the special needs of this particular group and the care they require. They have to receive the information and care which will enable them to live a self-determined and independent life and to participate in all decision-making processes.

It is the declared objective of the International Ostomy Association that this CHARTER shall be realized in all Countries of the World.

The Ostomate shall:

- Receive preoperative counseling to ensure that they are fully aware of the benefits of the operation and the essential facts about living with a stoma.
- Have a well-constructed stoma placed at an appropriate site, and with full and proper consideration to the comfort of the patient.
- Receive experienced and professional medical support and stoma nursing care in the preoperative and postoperative period both in hospital and in their community.
- Receive support and information for the benefit of the family, personal caregivers and friends to increase their understanding of the conditions and adjustments which are necessary for achieving a satisfactory standard of life with a stoma.
- Receive full and impartial information about all relevant supplies and products available in their Country.
- Have unrestricted access to a variety of affordable ostomy products.
- Be given information about their National Ostomy Association and the services and support which can be provided.
- Be protected against all forms of discrimination.
- Receive assurance that personal information regarding their ostomy surgery will be treated with discretion and confidentiality to maintain privacy; and that no information about their medical condition will be disclosed by anyone possessing this information, to an entity that engages in the manufacture, sales or distribution of ostomy or related products; nor shall it be disclosed to any person that will benefit, directly or indirectly, because of their relation to the commercial ostomy market without the expressed consent of the ostomate.

Source: Reprinted from Ostomy Canada Society. Charter of Ostomates Rights [Internet]. [place unknown]: Ostomy Canada Society; [date unknown]. Available from: https://www.ostomycanada.ca/charter-of-ostomates-rights/ . Reprinted with permission.

Appendix L: Enhancing Your Recovery after Ostomy Surgery: Your Personal Checklist

PRE-OPERATIVE	
MINIMUM 3 WEEKS BEFORE SURGERY	
Complete	Skill/Knowledge
	Have your stoma site marking explained & completed
	Receive ostomy education ■ Basic review of normal bowel function ■ Planned surgical procedure ■ Type of stoma ■ Normal stoma function ■ Pouching system options ■ Potential complications: dehydration, bowel obstruction, stoma and peristomal skin problems, parastomal hernia, pouch wear-times ■ Industry sponsored programs ■ Ostomy Buddy/Journey Coach ■ Ostomy supplies: where to buy, cost, financial support
	Receive & review preoperative ostomy practice pack
	Practice wearing a pouching system, opening & closing the pouch
	Review life style changes

POST-OPERATIVE	
DURING PLANNED 4 DAY HOSPITAL STAY	
Complete	Skill/Knowledge
	Day of Surgery: ■ Look at your stoma
	Day 1 After Surgery: ■ Empty your pouch with the nurse
	Day 2 After Surgery: ■ Empty your pouch on your own ■ Participate in your pouching system change
	Day 3/4 After Surgery: Fully participate in your pouching system change
	Discuss and understand any diet changes
	Ensure you are referred to community care services
	Receive your discharge ostomy supplies
	Review information given to you pre-operatively ■ Potential complications ■ Products ■ Financial supports
	Ask about enrolling in an industry sponsored program
	Have your family and/or caregiver participate in ostomy care

POST-DISCHARGE	
DURING PLANNED 4 DAY HOSPITAL STAY	
Complete	Skill/Knowledge
	Meet with your community care nurse for support
	Demonstrate your independence with pouching system changes 2 weeks after discharge
	Receive follow up care from hospital or community Enterostomal Therapy Nurse 7-10 days and 2, 4 & 6 weeks after discharge
	Receive continuing information about potential ostomy related complications ■ Dehydration ■ Bowel obstruction ■ Stoma and peristomal skin problems ■ Parastomal hernia
	Receive continuing information about ostomy related lifestyle considerations ■ Pouch wear-times ■ Lifestyle adjustment ■ Ostomy support groups & resources ■ Industry programs
	Know who to call & what to do in an emergency

Enhancing Your Recovery After Ostomy Surgery: Your Personal Checklist

QUESTIONS I HAVE.....														

There are many milestones as you prepare for and have your ostomy surgery.

Use this guide to help you track your progress and to communicate to the health care team what resources and supports you need.

Developed by the Ontario Enterostomal Therapy Nurses ERAS Network
2016

Source: Reprinted from Ontario Enterostomal Therapy Nurses' ERAS Network. Enhancing your recovery after ostomy surgery: your personal checklist. [place unknown: publisher unknown; date unknown]. Reprinted with permission.

Appendix M: Nutritional Management Tips in Ostomy Care

Signs and symptoms of dehydration:

- Dizziness.
- Light-headedness.
- Feelings of thirst.
- Dry mouth and tongue.
- Reduced urine output.
- Dark yellow urine.
- Feeling of agitation or restlessness.

Foods that may thicken stool:

- Applesauce
- Oatbran.
- Oatmeal.
- Potatoes.
- Marshmallows.
- Peanut butter.
- Soda crackers.
- Rice.
- Tapioca.
- Bananas.
- Pasta.
- Bread.
- Cheese.

Foods that may loosen stool:

- Alcohol (beer, wine, and liquor).
- Prune juice.
- Legumes.
- Black licorice.
- Chocolate.
- Spicy foods.
- Caffeine containing beverages (tea, coffee, and colas).

Source: American Dietetic Association and Dietitians of Canada, (2000)

ITEM	AMOUNT	SODIUM CONTENT
FOODS RICH IN SODIUM (WITH APPROXIMATE SODIUM CONTENT)		
Table salt	1 tsp	2373 mg
Broth	250 ml	1217 mg
Vegetable cocktail	250 ml	690 mg
Bacon	1 slice	178 mg
Cheddar cheese	2 oz (50 gm)	310 mg
Ham	1 slice	436 mg
Canned soup	250 ml	1660 mg
Pickle	1 medium	833 mg
Frozen pizza	100 gm	555 mg
Hot dog	1	670 mg
Pancake	1 medium	368 mg
Cottage cheese (2% M.F.)	125 ml	485 mg
FOODS RICH IN POTASSIUM (WITH APPROXIMATE POTASSIUM CONTENT)		
Banana	1 large	487 mg
Apricots (dried)	1/2 cup	930 mg
Buttermilk	250 ml	466 mg
Milk (2% M.F.)	250 ml	473 mg
Orange juice	250 ml	500 mg
Peach (raw)	1 medium	186 mg
Tomato (raw)	1 medium	292 mg
Baked potato	1 medium	926 mg
French fries	medium portion	923 mg
All Bran cereal	1/2 cup	408 mg
SODIUM AND POTASSIUM CONTENT OF SPORTS BEVERAGE		
Gatorade 250 ml	Sodium: 102 mg	Potassium: 28mg

SIGNS AND SYMPTOMS OF ILEOSTOMY AND COLOSTOMY BLOCKAGE:

- Cramping abdominal pain with watery or no stool output.
- High output liquid stool to no stool output.
- Reduced-to-no flatus.
- Nausea and vomiting.
- Abdominal distention.
- Stomal swelling.

Source: Adapted by the RNAO expert panel from Registered Nurses' Association of Ontario. Ostomy care and management. Toronto (ON): Registered Nurses' Association of Ontario; 2009.

For more information on nutritional management, please refer to: United Ostomy Associations of America, Inc. Ostomy Nutrition Guide [Internet]. [place unknown]: United Ostomy Associations of America; c2017. Available from: https://www.ostomy.org/wp-content/uploads/2018/01/OstomyNutritionGuide.pdf

Appendix N: Additional Ostomy Resources

RESOURCES TO PROMOTE PATIENT EDUCATION AND SELF-MANAGEMENT	
RESOURCE	**DESCRIPTION**
Vancouver United Ostomy Chapter, Inc. A handbook for new ostomy patients. 7th ed [Internet]. Vancouver (BC): Vancouver United Ostomy Association Chapter; 2017. Available from: http://www.uoavancouver.com/uploads/2/6/8/9/26894454/final_new_patients_edition_7th_printing_web_2017.pdf	■ Patient-geared handbook covering essential topics such as choosing the right pouching system, general management, potential problems and how to avoid them, sports and exercise, emotional issues for the patient and their family, and more.
VeganOstomy. Vegan Ostomy: helping to create happy ostomates [Internet]. [place unknown]: YouTube; c2018. [cited 2018 Jul 24]. Available from: https://www.youtube.com/user/Veganostomy	■ Videos from the perspective of persons living with an ostomy who also have Crohn's disease. ■ Includes product reviews, clothing guide, personal insights/experiences, ostomy care tips, and more.
United Ostomy Associations of America, Inc. Home [Internet]. [place unknown]: United Ostomy Associations of America; c2018 [cited 2018 Jul 24]. Available from: https://www.ostomy.org/#top	■ Comprehensive website geared for persons who anticipate or live with an ostomy. ■ Includes information on living with an ostomy, finding support, undertaking advocacy, and more.
Hollister Incorporated. Hollister secure start services [Internet]. [place unknown]: Hollister Incorporated; c2018 [cited 2018 Nov 30]. Available from: http://www.hollister.ca/en-ca/securestartconsumer	■ Industry program providing customized support to Hollister customers free of charge. ■ Support team includes a consumer service advisor, but no clinical or medical support. ■ Secure start is offered in English through email or telephone. ■ Services include assistance with finding the right product, identifying product supplier options, providing product-related information, and accessing local support.

RESOURCE	DESCRIPTION
Coloplast. Coloplast care: Your guide to a better life with an ostomy [Internet]. [place unknown]: Coloplast; [date unknown] [cited 2018 Jul 24]. Available from: https://www.coloplastcare.com/en-ca/ostomy	■ Industry program providing customized support to Coloplast customers three months post-surgery free of charge. Persons with an ostomy of more than three months can still get support through Coloplast, free of charge. ■ Coloplast care is offered in English and French through email or telephone. ■ Support team includes a product support specialist, but no clinical or medical support. ■ Services include: assistance with finding the right product and fit; providing product-related information, news, guides, and other educational materials; and assisting in navigating reimbursement support.
Convatec Inc. Me+ services and care [Internet]. [place unknown; publisher unknown]: 2018 [cited 2018 Jul 24] Available from: https://www.convatec.ca/ostomy/meplus-services-and-care/	■ Industry program providing customized support to any Convatec customers free of charge. ■ Me+ is offered in English and French through email or telephone. ■ Support teams includes a product specialist and three nurses (one NSWOC). ■ Services include support through the ostomy care continuum, online resources (on subjects such as caring for your stoma, pouch application guide, nutrition and diet, and lifestyle), and being able to connect with other ostomates online.
Crohn's and Colitis Canada. Ostomy 101 – Everything you Need to Know about Ostomies and Pelvic Pouches [Video]. [place unknown]: YouTube; 2017 May 25 [cited 2018 Jul 24]. Available from: https://www.youtube.com/watch?v=O0qCj00NGH8&index=4&list=PLvx9WjkKbU4NcKihWEVDU3cTj4Gv3RQ1B	■ Video of an NSWOC explaining the basics of ostomies and pelvic pouches. ■ Also covers living well with an ostomy or pelvic pouch.
Ostomy Canada Society. Ostomy Information [Internet]. [place unknown]: Ostomy Canada Society; [date unknown] [cited 2018 Oct 4]. Available from: https://www.ostomycanada.ca/ostomy-information/	■ Overview of types of ostomies from a non-profit volunteer organization dedicated to all people with an ostomy and their families. ■ Website includes variety of information including, but not limited to, ostomy products, living life to the fullest, ostomy products, and healthy living.

OSTOMY MANUFACTURERS

- Multiple resources are available for nurses and persons who anticipate or live with an ostomy. They include videos/DVDs, magazines, booklets, literature, and ostomy products.
- Samples can be obtained by calling the manufacturers.

Coloplast Canada
2401 Bristol Circle, Unit A205
Oakville, Ontario, L6H 5S9

p. 1-866-293-6349

https://www.coloplast.ca/

For ostomy products & accessories:
https://www.coloplast.ca/Products/Stoma-bags--accesories/

Convatec
1425 Trans-Canada Highway
Suite 100
Dorval, Québec, H9P 2V3
p. 1-800-465-6302

https://www.convatec.ca/

For ostomy products & accessories:

https://www.convatec.ca/products/pc-stoma

Hollister Limited
95 Mary Street
Aurora, Ontario, L4G 1G3
p. 1-800-263-7400

http://www.hollister.ca/en-ca/

For ostomy products & accessories:

http://www.hollister.ca/en-ca/products/ostomy-care-products

Nu-Hope Laboratories, Inc.
12640 Branford St
Pacoima, CA 91331
1-800-899-5017
www.nu-hope.com

- hernia belts, ostomy products, and accessories

Argyle Medical & Salts Ostomy Products
642 Rue de Courcelle, Ste 302
Montreal, QC, H4C 3C5
p. 1-877-927-4953
http://argylemedical.com/

BBraun Canada
6711 Mississauga Road, Suite 504
Mississauga, Ontario, L5N 2W3
p.1-800-624-2920
https://www.bbraun.ca/en.html

Marlen Canada
126-408 East Kent Avenue South
Vancouver, BC, V5X 2X7
p.1-844-379-9101
https://www.marlencanada.ca/

EXAMPLES OF OSTOMY SUPPLIERS

Nightingale Medical Supplies Ltd.
126-408 East Kent Avenue South
Vancouver, BC V5X 2X7
p. 1-800-663-5111
https://nightingalemedical.ca/

Ostomy Care & Supply Centre
2004 Eighth Avenue
New Westminster, BC, V3M 2T5
p. 1-888-290-6313
https://www.myostomycare.com

FINANCIAL RESOURCES

- If you have private insurance, contact your insurer to determine if your supplies are covered under your plan.

RESOURCE	DESCRIPTION
Government of Ontario. Enteral feeding and ostomy [Internet]. Toronto (ON): Queen's Printer for Ontario; c2018 [cited 2018 Jul 25]. Available from: https://www.ontario.ca/page/enteral-feeding-and-ostomy Phone: 1-800-268-6021	■ Provides information about ostomy supplies costs coverage through the Assistive Devices Program. ■ Persons living with a permanent ostomy (or temporary stoma for longer than six months) who reside in Ontario are eligible. ■ Includes links to forms online.
Government of Canada. Welcome to the Benefits Finder [Internet]. Ottawa (ON): Government of Canada; [date unknown] [updated 2018 Nov 23; cited 2018 Jul 25]. Available from: http://www.canadabenefits.gc.ca/f.1.2c.6.3z.1rdq.5.2st.3.4ns@.jsp?lang=en	■ Survey that determines eligibility for benefits from federal, provincial, or territorial governments.
Government of Canada. Non-insured health benefits for First Nations and Inuit [Internet]. Ottawa (ON): Government of Canada; [date unknown] [updated 2018 Apr 9; cited 2018 Jul 25]. Available from: https://www.canada.ca/en/indigenous-services-canada/services/non-insured-health-benefits-first-nations-inuit.html	■ Provides information regarding the Non-insured Health Benefits (NIHB) Program and how to access it. ■ Provides avenues to search for important health-related resources, contact information, and the drug benefit list.
Veterans Affairs Canada. Services [Internet]. Ottawa (ON): Government of Canada; [date unknown] [updated 2018 May 17; cited 2018 Jul 25]. Available from: http://www.veterans.gc.ca/eng/services/ p. 1-866-522-2122	■ Provides coverage to veterans for ostomy pouching systems and accessories.

RESOURCE	DESCRIPTION
Government of Canada. Lines 330 and 331 – Eligible medical expenses you can claim on your tax return [Internet]. Ottawa (ON): Government of Canada; [date unknown] [updated 2018 Jan 3; cited 2018 Jul 25]. Available from: https://www.canada.ca/en/revenue-agency/services/tax/individuals/topics/about-your-tax-return/tax-return/completing-a-tax-return/deductions-credits-expenses/lines-330-331-eligible-medical-expenses-you-claim-on-your-tax-return.html	■ Provides information and form to claim ileostomy and colostomy pouches and adhesives as a medical expense on tax returns.
Government of Canada. Disability tax credit [Internet]. Ottawa (ON): Government of Canada; [date unknown] [updated 2018 Jan 3; cited 2108 Oct 4]. Available from: https://www.canada.ca/en/revenue-agency/services/tax/individuals/segments/tax-credits-deductions-persons-disabilities/disability-tax-credit.html	■ Provides information and form for the disability tax credit (a non-refundable tax credit that helps persons with disabilities or their supporting persons reduce the amount of income tax they may have to pay).

OSTOMY-RELATED ORGANIZATIONS	
ORGANIZATIONS	**DESCRIPTION**
Bladder Cancer Canada https://bladdercancercanada.org/en/	■ National organization helping bladder care patients and their support team.
Canadian Cancer Society http://www.cancer.ca/en/?region=on Specific to ostomy: http://www.cancer.ca/en/cancer-information/diagnosis-and-treatment/rehabilitation/living-with-an-ostomy/?region=on	■ Includes educational material online (e.g., information on types of cancer). ■ Available in numerous languages.

ORGANIZATIONS	DESCRIPTION
Cancer Care Ontario https://www.cancercareontario.ca/en	■ Includes educational material online (e.g., prevention and screening for various types of cancer). ■ Services available in Ontario.
Colorectal Cancer Canada https://www.colorectalcancercanada.com/	■ Includes educational material online (e.g., screening, treating, nutrition and research).
Crohn's and Colitis Foundation of Canada http://www.crohnsandcolitis.ca/	■ Includes educational material online (e.g., Crohn's Disease, Colitis, nutrition, and intimacy).
Friends of Ostomates Worldwide Canada http://www.fowc.ca/	■ Non-profit organization operated by volunteers that sends ostomy supplies and literature to countries around the world.
International Ostomy Association http://www.ostomyinternational.org/	■ An international association run by ostomates to provide information and management guidelines to member associations, to help form new ostomy associations, and to advocate on all ostomy-related matters and policies. ■ The association also coordinates World Ostomy Day annually.
Nurses Specialized in Wound, Ostomy, Continence Canada (NSWOCC) http://nswoc.ca/	■ Not-for-profit association of over 350 nurses specializing in the nursing care of patients with challenges in wound, ostomy, and continence. ■ Website includes multiple resources on the standards of practice, how to become an NSWOC, and resources for patient education.
Ostomy Canada Society https://www.ostomycanada.ca/	■ Ostomy Canada Society is a non-profit volunteer organization dedicated to all people with an ostomy and their families, helping them to live life to the fullest. ■ The organization includes monthly meetings, resources for support, education, and opportunities for collaboration and advocacy. ■ The website includes outline of chapters, satellites, and peer support groups of Ostomy Canada Society by province. It also includes a search engine to find the nearest chapter, satellite, or peer support group by postal code.

ORGANIZATIONS	DESCRIPTION
Ostomy Toronto http://www.ostomytoronto.ca/	■ Ostomy Toronto is a volunteer-run, not-for-profit charity and a chapter of Ostomy Society Canada. ■ Services include informative monthly meetings, publications, a resource centre filled with information, and up-to-date news for people who anticipate or live with ostomies, their families, caregivers, and friends living in the Greater Toronto area. ■ In addition, Ostomy Toronto offers patients a visiting service.
United Ostomy Associations of America, Inc. https://www.ostomy.org/	■ A non-profit organization dedicated to people living with an ostomy and their families. ■ The site includes many resources, including educational material (e.g., a continent urostomy guide, information regarding intimacy/sexuality and ostomy, and more).
World Council of Enterostomal Therapists (WCET®) www.wcetn.org	■ An international association for those concerned with the care of people with stomas. ■ Provides the opportunity for members to meet for the purpose of discussing common interests related to enterostomal therapy. ■ Promotes activities that will assist members engaged in enterostomal therapy to increase their knowledge and enhance their contribution to the subject of stoma therapy. ■ Promotes increased awareness in others of the role and contribution of the WCET®.

ADDITIONAL EXPERT PANEL RECOMMENDED PEER-REVIEWED LITERATURE	
SOURCE	**DESCRIPTION**
Journal of Wound, Ostomy and Continence Nursing [Internet]. [place unknown]: Wound, Ostomy and Continence Nurses Society; c. 2018 [cited 2018 Jul 16]. Available from: https://journals.lww.com/jwocnonline/pages/default.aspx	■ Peer-reviewed journal publishing articles related to current ostomy practice.
Ostomy Wound Management (OWM) [Internet]. [place unknown]: HMP; c2018 [cited 2018 Jul 16]. Available from: https://www.o-wm.com/	■ Peer-reviewed journal publishing articles related to current ostomy practice.
Goodey A, Colman S. Safe management of ileostomates with high-output stomas. Br J Nurs. 2016;25(22):S4–9.	■ Journal article with overview of safe management of ileostomates with high-output stomas.

Appendix O: Description of the *Toolkit*

BPGs can only be successfully implemented if planning, resources, and organizational and administrative supports are adequate, and if there is appropriate facilitation. To encourage successful implementation, an RNAO expert panel of nurses, researchers, and administrators has developed the *Toolkit: Implementation of Best Practice Guidelines* (2012). The *Toolkit* is based on available evidence, theoretical perspectives, and consensus. We recommend the *Toolkit* for guiding the implementation of any clinical practice guideline in a health organization.

The *Toolkit* provides step-by-step directions for the individuals and groups involved in planning, coordinating, and facilitating the guideline implementation. These steps reflect a process that is dynamic and iterative rather than linear. Therefore, at each phase, preparation for the next phases and reflection on the previous phase is essential. Specifically, the *Toolkit* addresses the following key steps, as illustrated in the Knowledge-to-Action framework (58).

1. Identify the problem: identify, review, and select knowledge (e.g., BPG).
2. Adapt knowledge to the local context.
   - Assess barriers and facilitators to knowledge use.
   - Identify resources.
3. Select, tailor, and implement interventions.
4. Monitor knowledge use.
5. Evaluate outcomes.
6. Sustain knowledge use.

Implementing guidelines to effect successful practice changes and positive clinical impact is a complex undertaking. The *Toolkit* is one key resource for managing this process. It can be downloaded at www.RNAO.ca/bpg/resources/toolkit-implementation-best-practice-guidelines-second-edition

Endorsements

Ostomy Canada Society | Société Canadienne des Personnes Stomisées

January 4, 2019

Doris Grinspun, RN, MSN, PhD, LLD(hon), Dr. (hc), FAAN, O.ONT
Chief Executive Officer
Registered Nurses' Association of Ontario (RNAO)
158 Pearl Street, Toronto, Ontario M5H 1L3

Dear Doris,

On behalf of Ostomy Canada Society, I am pleased to endorse the Registered Nurses' Association of Ontario's (RNAO) best practice guideline *Supporting Adults Who Anticipate or Live with an Ostomy, 2nd Edition*. One of the features of the guideline that most interested me was the research questions and resulting recommendations. I commend RNAO on this very important work to improve the lives of persons with an ostomy, nationally and internationally. We appreciate RNAO's emphasis on patient engagement, collaboration and considerations of health equity throughout the guideline.

As you know, Ostomy Canada Society offers dedicated support for each and every person who anticipates or lives with an ostomy along the continuum of care. I am confident that RNAO's *Supporting Adults Who Anticipate or Live with an Ostomy, 2nd Edition* BPG will enable nurses and the inter-professional team to provide collaborative, evidence-based and person-centred care to adults who anticipate or live with an ostomy.

Congratulations on this excellent work!

Yours sincerely,

Ann Ivol

Ann Ivol, President

Live Life to the Fullest | Vivre pleinement sa vie

5800 Ambler Drive, Suite 210, Mississauga, ON L4W 4J4
Telephone: 1.905.212.7111 Toll Free: 1.888.969.9698 Fax: 1.905.212.9002 E-mail: info1@ostomycanada.ca

Sigma
GLOBAL NURSING EXCELLENCE

25 January 2019

Doris Grinspun, RN, MSN, PhD, LLD (hon), Dr (hc), FAAN, O.ONT
Chief Executive Officer
Registered Nurses' Association of Ontario
158 Pearl Street
Toronto, Ontario M5H 1L3
CANADA

Dear Doris,

The Sigma Theta Tau International (Sigma) Honor Society of Nursing is delighted to endorse the Registered Nurses' Association of Ontario's (RNAO) best practice guideline *Supporting Adults Who Anticipate or Live with an Ostomy*. I congratulate RNAO on this very important work to enhance the leadership capacity of nurses and other health-care providers to effectively support adults who anticipate or live with an ostomy.

As you know, Sigma is dedicated to advancing world health and celebrating nursing excellence in scholarship, leadership, and service. With more than 135,000 active members from over 90 countries, we promote products and services that focus on education, leadership, career development, evidence-based nursing, research, and scholarship.

I am confident that RNAO's *Adults who Anticipate or Live with an Ostomy* BPG will enable nurses at all levels to deliver evidence-based, person-centered care to people across all sectors, nationally and internationally.

Thank you for your leadership in developing this impressive work.

Sincerely,

Beth Baldwin Tigges

Beth Baldwin Tigges, PhD, RN, PNP, BC
2017-2019 President
Sigma Theta Tau International

SigmaNursing.org 550 W. North Street, Indianapolis, IN 46202

World Council of Enterostomal Therapists (WCET®)
A world of expert professional nursing care for people with ostomy, wound or continence needs

(Registered Charity 1057749) www.wcetn.org

28 November 2018

2018-2020

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Chief Executive Officer
Registered Nurses' Association of Ontario (RNAO)
158 Pearl Street, Toronto, Ontario M5H 1L3

Dear Doris,

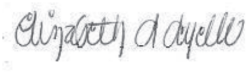
On behalf of the *World Council of Enterostomal Therapists* (WCET®), the Executive Board is pleased to endorse the Registered Nurses' Association of Ontario's (RNAO) best practice guideline *Supporting Adults Living with an Ostomy, 2nd Edition*. WCET® commends RNAO on this very important work to enhance the leadership capacity of nurses and other health-care workers to effectively promote health equity for persons living with an Ostomy.

As you know, the WCET® provides an international forum for Enterostomal Therapy Nurses and a global vehicle for discussion, communication, research, advice and support in the field of Enterostomal Therapy Nursing. The WCET® is focused on leading the global advancement of specialized professional ostomy, wound and continence nursing care.

WCET® believes that RNAO's *Supporting Adults Living with an Ostomy, 2nd Edition* BPG will empower nurses at all levels to deliver evidence-based, person-centred care to people across all sectors, nationally and internationally.

Congratulations on this excellent work!

Sincerely,



Elizabeth A. Ayello, PhD, RN, CWON, ETN, MAPWCA, FAAN
WCET® President, 2018-2020

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INTERNATIONAL
AFFAIRS & BEST PRACTICE
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Best Practice Guideline

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