Exam Blueprint and Specialty Competencies

Introduction – Blueprint for the Enterostomal Therapy Nursing Certification Exam

The primary function of the Blueprint for the CNA Enterostomal Therapy Nursing Certification Exam is to describe how the exam is to be developed. Specifically, this blueprint provides explicit instructions and guidelines on how the competencies are to be expressed within the exam in order for accurate decisions to be made on the candidates’ competence in enterostomal therapy nursing.

The blueprint has two major components: (1) the content area to be measured and (2) the explicit guidelines on how this content is to be measured. The content area consists of the list of competencies (i.e., the competencies expected of fully competent practising enterostomal therapy nurses with at least two years of experience), and the guidelines are expressed as structural and contextual variables. The blueprint also includes a summary chart that summarizes the exam guidelines.

Description of Domain

The CNA Enterostomal Therapy Nursing Exam is a criterion-referenced exam. A fundamental component of a criterion-referenced approach to testing is the comprehensive description of the content area being measured. In the case of the Enterostomal Therapy Nursing Certification Exam, the content consists of the competencies of a fully competent practising enterostomal therapy nurse with at least two years of experience.

This section describes the competencies, how they have been grouped and how they are to be sampled for creating an exam.

Developing the List of Competencies

A working group of highly experienced enterostomal nurses from various regions in Canada created a list of the competencies over a two-week period. The resulting list of competencies was approved by a validation committee consisting of eight enterostomal nurses. Once approved by the validation committee, the final list of competencies was distributed to members of the Canadian Association for Enterostomal Therapy (CAET) for further validation.

1 Criterion-referenced exam: An exam that measures a candidate’s command of a specified content or skills domain or list of instructional objectives. Scores are interpreted in comparison to a predetermined performance standard or as a mastery of defined domain (e.g., percentage correct and mastery scores), independently of the results obtained by other candidates (Brown, 1983).
Assumptions

The Enterostomal Therapy Client:

• is an individual of any age with an integumentary, wound, ostomy or continence issue is the focus of enterostomal therapy nursing;

• is an individual, a family, a group and/or a community. The family is defined by the client;

• is viewed within the biological, psychological, social, cultural, ethnical, developmental, environmental and spiritual dimensions of a total life experience; and

• is a health-care provider, organization or community group.

The Enterostomal Therapy Nurse:

• is a registered nurse;

• has completed an enterostomal therapy nursing education program recognized by the Canadian Association for Enterostomal Therapy;

• promotes efficient, effective and appropriate health care programs/services in a variety of settings including acute care, ambulatory care, rehabilitation, continuing care/long-term care, alternate housing options, the client’s own home and the community;

• works in collaboration with the client and those individuals whom the client identifies as being significant to his/her care, to incorporate the individual wishes, needs and experiences into the plan of care;

• applies a specialized and expanding body of knowledge of integumentary, wound, ostomy and continence care to the practice of nursing;

• applies evidence-based and best practice.

• influences administrative decision-making related to cost-effective health-care delivery and outcomes;

• pursues professional growth and development and maintains competence through continuing education, ongoing experience in the specialty of enterostomal nursing; identifying potential research topics, initiating and/or participating in nursing research; applies and disseminates research findings;

• disseminates knowledge related to enterostomal therapy nursing care and practice with others;

• participates in the professional development of enterostomal therapy nursing colleagues through mentorship and preceptorship;

• provides leadership in the specialty of enterostomal therapy nursing;

• applies technology in the specialty of enterostomal therapy nursing (e.g., electronic and telecommunications, new technologies);
Enterostomal Therapy nursing certification facilitates self-care management;
establishes age-appropriate therapeutic relationships with clients;
applies information regarding pre-existing health conditions and altered manifestation of illness;
advocates for clients by facilitating effective navigation of the health-care system;
applies critical thinking in the use of products and equipment;
advocates for health policy changes;
applies the Canadian Association for Enterostomal Therapy standards of practice for clinicians, consultants, educators, researchers and administrators;
exercises ethical and legal judgments relevant to relationships with industry;
exercises ethical and legal judgments relevant to the use of technology;
initiates and participates in continuous quality improvement programs at local, provincial, national and international levels; and
initiates and participates in activities to promote enterostomal therapy nursing.

Well-being:
• is a personal concept that includes biological, psychological, social, cultural, ethnical, developmental, environmental and spiritual dimensions; and
• is the extent to which an individual, group or community is able to realize aspirations and to function in his or her environment.

Competency Categories
The competencies are classified under a four-category classification scheme. Some of the competencies lend themselves to one or more of the categories; therefore, these four categories should be viewed simply as an organizing framework. Also, it should be recognized that the competency statements vary in scope, with some representing global behaviours and others more discrete and specific nursing behaviours.

Percentage of Competencies in Each Group
The following table presents the number and the percentage of competencies in each category.
Table 1: Percentage of Competencies in Each Group

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of competencies</th>
<th>Percentage of the total number of competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integumentary System</td>
<td>40</td>
<td>14%</td>
</tr>
<tr>
<td>Wounds</td>
<td>106</td>
<td>37%</td>
</tr>
<tr>
<td>Ostomy, Fistula, Percutaneous</td>
<td>103</td>
<td>36%</td>
</tr>
<tr>
<td>Continence</td>
<td>38</td>
<td>13%</td>
</tr>
</tbody>
</table>

Competency Sampling

Using the grouping and guidelines, the Enterostomal Therapy Nursing Certification Exam will consist of approximately 165 questions; the categories have been given the following weights in the total examination.

Table 2: Competency Sampling

<table>
<thead>
<tr>
<th>Categories</th>
<th>Approximate weights in the total examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integumentary System</td>
<td>5-10%</td>
</tr>
<tr>
<td>Wounds</td>
<td>25-35%</td>
</tr>
<tr>
<td>Ostomy, Fistula and Percutaneous</td>
<td>25-35%</td>
</tr>
<tr>
<td>Continence</td>
<td>25-35%</td>
</tr>
</tbody>
</table>

Technical Specifications

In addition to the specifications related to the competencies, other variables are considered during the development of the Enterostomal Therapy Nursing Certification Exam. This section presents the guidelines for two types of variables: structural and contextual.

**Structural variables:** Structural variables include those characteristics that determine the general appearance and design of the exam. They define the length of the exam, the format and presentation of the exam questions (e.g., multiple-choice) and any special functions of exam questions (e.g., independent questions).

**Contextual variables:** Contextual variables specify the nursing contexts in which the exam questions will be set (e.g., client culture, client health situation or health-care environment).
Structural Variables

Exam Length: The exam consists of approximately 165 multiple-choice questions.

Question Presentation: The multiple-choice questions are presented in one of two formats: case-based or independent. Case-based questions are a set of approximately 4 questions associated with a brief health-care scenario (i.e., a description of the client’s health-care situation). Independent questions stand alone. In the Enterostomal Therapy Nursing Certification Exam, 50 to 60 per cent of the questions are presented as independent questions and 40 to 50 per cent are presented within cases.

Taxonomy for Questions: To ensure that competencies are measured at different levels of cognitive ability, each question on the Enterostomal Therapy Nursing Certification Exam is aimed at one of three levels: knowledge/comprehension, application or critical thinking.  

1. Knowledge/Comprehension

This level combines the ability to recall previously learned material and to understand its meaning. It includes such mental abilities as knowing and understanding definitions, facts and principles, and interpreting data (e.g., knowing the effects of certain drugs or interpreting data appearing on a client’s record).

2. Application

This level refers to the ability to apply knowledge and learning to new or practical situation. It includes applying rules, methods, principles and theories while providing care to clients (e.g., applying nursing principles to the care of clients).

3. Critical Thinking

The third level of the taxonomy deals with higher-level thinking processes. It includes the abilities to judge the relevance of data, to deal with abstraction and to solve problems (e.g., identifying priorities of care or evaluating the effectiveness of interventions). The enterostomal therapy nurse with at least two years of experience should be able to identify cause-and-effect relationships, distinguish between relevant and irrelevant data, formulate valid conclusions and make judgments about the needs of clients.

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2 These levels are adapted from the taxonomy of cognitive abilities developed in Bloom, 1956.
The following table presents the distribution of questions for each level of cognitive ability.

**Table 3: Distribution of Questions for Each Level of Cognitive Ability**

<table>
<thead>
<tr>
<th>Cognitive Ability Level</th>
<th>Percentage of Questions to Appear on the Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge/Comprehension</td>
<td>15-25%</td>
</tr>
<tr>
<td>Application</td>
<td>45-55%</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>25-35%</td>
</tr>
</tbody>
</table>

**Contextual Variables**

**Client Age and Gender:** Two of the contextual variables specified for the Enterostomal Therapy Nursing Exam are the age and gender of the clients. Providing specifications for use of these variables ensures that the clients described in the exam represent the demographic characteristics of the population encountered by the nephrology nurse. These specifications, listed in Table 4 as percentage ranges, serve as guidelines for test development.

**Table 4: Specification for Client Age and Gender**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage of questions on the Enterostomal Therapy Nursing Certification Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Child &amp; Adolescent</td>
<td>15-20%</td>
</tr>
<tr>
<td>(0-18 years old)</td>
<td></td>
</tr>
<tr>
<td>Adult</td>
<td>40-50%</td>
</tr>
<tr>
<td>(19-64 years old)</td>
<td></td>
</tr>
<tr>
<td>Older Adult</td>
<td>30-40%</td>
</tr>
<tr>
<td>(65+ years old)</td>
<td></td>
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</tbody>
</table>
Client Culture: The Enterostomal Therapy Nursing Exam is designed to include questions representing the variety of cultural backgrounds encountered while providing enterostomal therapy nursing care in Canada. While the exam does not test candidates' knowledge of specific values, beliefs, and practices linked to individual cultures, it is intended to measure awareness of, sensitivity to, and respect for diverse cultural values, beliefs and practices. Cultural issues are integrated within the exam without introducing cultural stereotypes.

Client Health Situation: In the development of the Enterostomal Therapy Nursing Exam, the client is viewed holistically. The health situations reflected in the exam focus on the client with an integumentary wound, ostomy or continence issue. The client health situations presented reflect a cross-section of health promotion, protection, active treatment, long-term care, rehabilitation care and palliative care. It is recognized that the enterostomal therapy nurse practices within subspecialties but possesses general knowledge of all treatment modalities.

Health-Care Environment: It is recognized that enterostomal therapy nursing is practiced in a variety of settings and for the purposes of the Enterostomal Therapy Nursing Exam, the health-care environment is only specified where it is required for clarity or in order to provide guidance to the candidate.

Conclusions
The Blueprint for the Enterostomal Therapy Nursing Certification Exam is the product of a collaborative effort between CNA, Assessment Strategies Inc. (ASI), Canadian Association of Enterostomal Therapy (CAET) and a number of enterostomal therapy nurses across Canada. Their work has resulted in a compilation of the competencies required of practicing enterostomal therapy nurses and has helped determine how those competencies will be measured on the Enterostomal Therapy Nursing Certification Exam. A summary of these guidelines can be found in the summary chart: Enterostomal Therapy Nursing Certification Development Guidelines.

It is recognized that enterostomal therapy nursing practice will continue to evolve. As this occurs, the blueprint may require revision so that it accurately reflects current practices. CNA will ensure that such revision takes place in a timely manner and will communicate any changes in updated editions of this document.
## Summary Chart

### Enterostomal Therapy Nursing Certification Exam Development Guidelines

#### Competencies

<table>
<thead>
<tr>
<th>Group 1: 85-90% Very Important</th>
<th>Group 2: 10-15% Important</th>
<th>Group 0: 0% Not tested</th>
</tr>
</thead>
</table>

#### Structural Variables

<table>
<thead>
<tr>
<th>Exam Length and Format</th>
<th>Approximately 165 objective questions (e.g., multiple choice)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question Presentation</td>
<td>50-60% independent questions 40-50% case-based questions</td>
</tr>
<tr>
<td>Cognitive Ability Levels of Questions</td>
<td>Knowledge/Comprehension: 15-25% of questions Application: 45-55% of questions Critical Thinking: 25-35% of questions</td>
</tr>
<tr>
<td>Competency Categories</td>
<td>Integumentary System 5-10% of questions Wounds 25-35% of questions Ostomy, Fistula, Percutaneous 25-35% of questions Continence 25-35% of questions</td>
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#### Contextual Variables

<table>
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<th>Client Age and Gender</th>
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<td></td>
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<tr>
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<td>40-50%</td>
<td>40-50%</td>
<td></td>
</tr>
<tr>
<td>Older Adult (65+ years old)</td>
<td>30-40%</td>
<td>30-40%</td>
<td></td>
</tr>
<tr>
<td>Client Culture</td>
<td>Questions are included that measure awareness, sensitivity and respect for different cultural values, beliefs and practices, without introducing stereotype.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Health Situation</td>
<td>The client is viewed holistically within the context of stable and unstable health situations across the client’s life cycle. The client health situations presented also reflect a cross-section of health situations encountered by enterostomal therapy nurses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health-Care Environment</td>
<td>The practice environment of the enterostomal therapy nurse can be any setting or circumstance within which nursing is practiced. Most of the competencies are not setting dependent. The health-care environment will be specified where necessary.</td>
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</tr>
</tbody>
</table>

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List of Competencies for Enterostomal Therapy Nursing

INTEGUMENTARY SYSTEM

General Principles of the Integumentary System

The enterostomal therapy nurse:

01.01 Understands the anatomy, physiology and function of the integumentary system including:
   01.01a epidermis;
   01.01b dermis;
   01.01c subcutaneous tissue;
   01.01d accessory organs;
   01.01e protection;
   01.01f immune response;
   01.01g thermoregulation;
   01.01h sensation;
   01.01i metabolism;
   01.01j communication;
   01.01k identification; and
   01.01l age-related factors

01.02 Understands factors affecting integumentary integrity (e.g., age, medications, nutrition, hydration, infection, comorbidities, trauma, contamination, tissue perfusion, stress, activity, mobility, cognitive and sensory status).

01.03 Understands the indications for and use of integumentary products and applications (e.g., moisturizers, creams, no-rinse cleansers, protective barriers).
Assessment of the Integumentary System

The enterostomal therapy nurse:

01.04 Performs a focused assessment of the integumentary system including:
   01.04a history and physical (e.g., presenting symptoms, integumentary, wound, health, medications, allergies, lifestyle factors, self-care ability, height and weight, comorbidities, smoking, substance use, nutrition, hydration, pain, tissue perfusion, mobility, age, assistive devices, immune status, diagnostic and laboratory tests); and
   01.04b biopsychosocial (e.g., cognitive status, safety factors, quality of life, socio-economic status, motivation, education level, living arrangements, body image, cause/effect of injury, family support, lifestyle, culture, ethncial, spirituality, language, coping skills, resource availability, social impact of integumentary alteration, functional impact of integumentary alteration, conservation of energy, impact of disease on self and family dynamics, adherence to treatment plan, gestational age).

01.05 Identifies integumentary system risk factors (e.g., continence, friction, shear, falls, moisture, sensitivities, sensory perception, external contributing factors, activity level, mobility).

01.06 Performs an initial and ongoing integumentary assessment for potential or actual impairment:
   01.06a etiology (e.g., bruising, ecchymosis, candidiasis, dermatitis);
   01.06b location;
   01.06c extent of epidermal damage (e.g., erythema, hematoma);
   01.06d exudate (e.g., weeping dermatitis);
   01.06e odour;
   01.06f colour;
   01.06g pain; and
   01.06h induration.

Principles of Integumentary Management

The enterostomal therapy nurse:

01.07 Determines healability of the integumentary impairment (e.g., symptom control, maintenance, palliation).

01.08 Controls or eliminates factors causing or contributing to integumentary alteration (e.g., effects of medication, chemotherapy, radiation therapy, nutrition).
01.09 Optimizes integumentary environment:
  01.09a prevents and eliminates infection;
  01.09b cleanses skin;
  01.09c maintains and restores moisture balance (e.g., absorb exudate, add moisture);
  01.09d maintains and restores pH;
  01.09e controls odour;
  01.09f protects integumentary from trauma and contamination (e.g., pressure, shear, friction);
  01.09g maintains thermal environment (e.g., internal, external);
  01.09h teaches avoidance of ultraviolet radiation;
  01.09i teaches avoidance of soaps; and
  01.09j manages pain.

01.10 Evaluates integumentary assessment data to adjust treatment plan.

01.11 Collaborates with other health-care professionals about clients with integumentary alterations (e.g., vascular surgeons, dermatologists, plastic surgeons).

01.12 Educates clients, caregivers and health-care providers regarding prevention and treatment of integumentary alterations.

WOUNDS

General Principles of Wounds

The enterostomal therapy nurse:

02.01 Understands the physiology of wound healing including:
  02.01a repair (e.g., partial thickness);
  02.01b regeneration (e.g., full-thickness);
    02.01b.i hemostasis (e.g., platelet aggregation);
    02.01b.ii inflammatory (e.g., phagocytosis);
    02.01b.iii proliferative (e.g., granulation, fibroplasia, angiogenesis, contraction, re-epithelialization); and
    02.01b.iv remodeling (e.g., maturation).
  02.02 Identifies factors affecting wound healing (e.g., age, medications, nutrition, infection, comorbidities, trauma, contamination, tissue perfusion, stress).
Assessment of Wounds

The enterostomal therapy nurse:

02.03 Performs a focused assessment of a client with a wound including:
   02.03a history and physical (e.g., presenting symptoms, wound, health, medications, allergies, lifestyle factors, self-care ability, height and weight, comorbidities, smoking, substance use, nutrition, hydration, pain, tissue perfusion, mobility, age, assistive devices, immune status, diagnostic and laboratory tests); and
   02.03b biopsychosocial (e.g., cognitive status, safety factors, quality of life, socio-economic status, motivation, education level, living arrangements, body image, cause/effect of injury, family support, lifestyle, culture, ethnical, spirituality, language, coping skills, resource availability, social impact of wound, functional impact of wound, conservation of energy, impact of disease on self and family dynamics, adherence to treatment plan, compression techniques, gestational age, birth history, sexuality).

02.04 Identifies wound risk factors (e.g., continence, friction, shear, falls, moisture, sensitivities, sensory perception, external contributing factors, activity level, mobility, foreign bodies).

02.05 Performs an initial and ongoing wound assessment including:
   02.05a etiology;
   02.05b location;
   02.05c extent of tissue damage (e.g., classification, staging);
   02.05d phase of healing;
   02.05e wound size;
   02.05f undermining, sinus tracts, tunnels;
   02.05g wound bed;
   02.05h wound edges;
   02.05i exudate;
   02.05j periwound skin (e.g., induration, edema, colour);
   02.05k infection;
   02.05l odour;
   02.05m pain;
   02.05n wound duration;
   02.05o functional impact; and
   02.05p wound history.
**Principles of Wound Management**

The enterostomal therapy nurse:

02.06 Determines wound healability (e.g., symptom control, maintenance, palliation).

02.07 Controls or eliminates causative/contributing factors related to wounds (e.g., nutrition).

02.08 Optimizes wound environment:
   - 02.08a prevents and manages infection;
   - 02.08b cleanses wound and periwound;
   - 02.08c removes nonviable tissue (debridement);
   - 02.08d maintains moisture balance (e.g., absorb exudate, add moisture);
   - 02.08e maintains and restores pH;
   - 02.08f eliminates dead space (e.g., cavity packing);
   - 02.08g controls odour;
   - 02.08h protects wound from trauma and contamination (e.g., pressure, shear, friction);
   - 02.08i protects periwound skin;
   - 02.08j maintains thermal environment (e.g., internal); and
   - 02.08k manages pain.

02.09 Evaluates wound assessment data to adjust treatment plan.

02.10 Collaborates with other health-care professionals about clients with wounds (e.g., vascular surgeons, dermatologists, plastic surgeons).

02.11 Educates clients, caregivers and health-care providers regarding wound prevention and treatment.

02.12 Understands the indications for and use of advanced wound care products and applications (e.g., hydrocolloid, alginates, foams, hydrofibres).

**Wound Types**

**Integumentary alteration** (e.g., skin tears, adhesive stripping, chemical, infectious factors, allergic factors, radiation, extravasation)

The enterostomal therapy nurse:

02.13 Interprets data related to a client presenting with integumentary alteration including:
   - 02.13a history and physical (e.g., topical agent, purpose of adhesive, technique of adhesive removal, gestational age, duration of reaction);
02.13b integumentary assessment (e.g., appearance, location, extent, exudate, odour, surrounding skin, infection, pruritus, moisture balance, hygiene, diaphoresis, rash, lesions, tears, blisters, skin fragility, senile purpura, bruising); and

02.13c wound assessment (e.g., Payne-Martin Classification System for skin tears).

02.14 Establishes a plan of care for a client with integumentary alteration.

02.15 Implements nursing interventions to prevent and manage integumentary alteration (e.g., eliminate or minimize risk factors, refer to other health-care professionals, monitor extent of rash or lesions, hygiene, hemostasis).

Pressure ulcers

The enterostomal therapy nurse:

02.16 Interprets data related to a client presenting with a pressure ulcer including:

02.16a history and physical (e.g., previous skin breakdown);

02.16b wound assessment (e.g., Shea staging, NPUAP staging, Red-Yellow-Black classification); and

02.16c risk assessment (e.g., seating, pressure off-loading devices, intensity and duration of pressure, tissue tolerance, client turning schedule, previous surgery).

02.17 Establishes a plan of care for a client with a pressure ulcer.

02.18 Implements nursing interventions to prevent and manage pressure ulceration based on potential to heal (e.g., pressure reduction and relief, support surfaces, lifestyle modification, positioning, moisture management, control of shear and friction).

Venous leg ulcers

The enterostomal therapy nurse:

02.19 Interprets data related to a client presenting with venous leg ulcers including:

02.19a history and physical (e.g., family history of venous disease, deep vein thrombosis, major leg injury, vein surgery, leg surgery, prior leg ulceration, use of compression stockings, activity level and occupation, number of pregnancies, sleeping position, pulmonary embolism, congestive heart failure, renal failure, neuropathy, claudication, activity tolerance, vascular studies, past treatment);

02.19b lower limb assessment (e.g., Ankle Brachial Pressure Index (ABPI), toe pressure, edema, eczema, ankle flare, ankle joint mobility, calf muscle pump, lipodermatosclerosis, varicose veins, colour, temperature, hyperpigmentation, atrophic blanche, gait, pulses, capillary refill, toenails, protective sensation testing, pain); and

02.19c wound assessment (e.g., location, edges, shallow, exudate).
02.20 Establishes a plan of care for a client with venous leg ulcers.

02.21 Implements nursing interventions to prevent recurrence of venous leg ulcers (e.g., avoid trauma, avoid prolonged sitting/standing, compression for life, moisturize skin, avoid products that cause sensitivity, elevate limbs, leg exercise, weight-reduction strategies, annual assessment).

02.22 Implements nursing interventions to manage venous leg ulcers (e.g., compression therapy, pruritus and xerosis management, exercise, elevate limbs).

Arterial wounds

The enterostomal therapy nurse:

02.23 Interprets data related to a client presenting with arterial wound including:

02.23a history and physical (e.g., smoking, sleeping position, trauma, comorbidity such as diabetes, dyslipidemia, hypertension, obesity, cardiovascular disease or surgeries, sickle cell disease, age, renal disease, COPD);

02.23b lower limb assessment (e.g., skin appearance, pain, claudication, edema, sensation, temperature, bony deformity, pulses, ABPI, perfusion status, toe pressure, ischemic changes, capillary refill, venous return, pallor on elevation, dependent rubor, toes, nails, gait, muscle atrophy);

02.23c wound assessment (e.g., necrotic, pale, desiccated, punched-out, location); and

02.23d skin assessment (e.g., shiny, taut, hairless, dry).

02.24 Establishes a plan of care for a client with an arterial wound.

02.25 Implements nursing interventions to prevent arterial wounds.

02.26 Implements nursing interventions to manage arterial wounds based on potential for healing (e.g., dry or moist).

Mixed venous/arterial leg ulcers

The enterostomal therapy nurse:

02.27 Interprets data related to a client presenting with mixed venous/arterial leg ulcer:

02.27a history and physical (e.g., family history of venous disease, deep vein thrombosis, major leg injury, vein surgery, leg surgery, prior leg ulceration, use of compression stockings, activity level and occupation, number of pregnancies, sleeping position, congestive heart failure, renal failure, neuropathy, activity tolerance, diabetes mellitus, smoking, hypercholesterolemia, ischemic heart disease, PVD, intermittent claudication, diagnostic tests such as vascular studies);

02.27b mixed venous/arterial leg ulcer assessment (may be a combination of the following symptoms of venous and arterial disease) (e.g., Ankle Brachial Pressure Index 0.5 – 0.8 (ABPI), segmental compression studies, toe pressure, edema, eczema,
ankle flare, ankle joint mobility, lipodermatosclerosis, varicose veins, colour, temperature, hyperpigmentation, atrophic blanche, gait, pulses, capillary refill, toenails, protective sensation testing, pain with elevation (rest pain) plus pain with dependency, ulcers with "punched-out" appearance, base of wound poorly perfused and pale, cold legs/feet (in a warm environment), shiny, taut skin, dependent rubor and pallor with elevation, pale or blue feet, gangrenous toes); and

02.27c wound assessment (e.g., edges, shallow, exudate ulcer may be circumferential, pale in colour with punched-out edges, may contain necrotic tissue and eschar). 1

02.28 Establishes a plan of care for a client with mixed venous/arterial leg ulcer. 1

02.29 Implements nursing interventions to prevent mixed venous/arterial leg ulcer (e.g., avoid trauma, avoid prolonged sitting/standing, ensure effective, mild level of compression, moisturize skin, avoid products that cause sensitivity, elevate limbs, promote leg exercise, weight-reduction strategies, decrease blood glucose levels, stop smoking, decrease cholesterol). 1

02.30 Implements nursing interventions to manage mixed venous/arterial leg ulcer based on potential for healing (e.g., initiate light compression therapy, manage pruritus, exercise, elevate limbs, decrease blood glucose levels, stop smoking, decrease cholesterol, provide adequate analgesia to allow sleeping in bed at night). 1

Neuropathic

The enterostomal therapy nurse:

02.31 Interprets data related to a client presenting with a neuropathic ulcer:

02.31a history and physical (e.g., presence and duration of diabetes, previous ulceration, coexisting lower-extremity arterial disease, past treatment, ulcer duration, diagnostic tests such as plethysmography, ABPI, Doppler exam, Arterial Duplex Scan, transcutaneous oxygen (TcpO2), x-ray, bone/gallium scan, CAT scan, MRI, ESR, blood glucose, HgbA1C, Serum B12, TSH); 1

02.31b lower limb assessment (e.g., pain, sensation, bony deformity, nails, musculoskeletal/biomechanical status, gait, pressure mapping, neurological assessment, foot and nail care, footwear, pulses, callus, anhydrosis, fissures/cracks, tinea pedis, inflammation, temperature, hair, edema); and 1

02.31c wound assessment (e.g., callus, sinus tract probing, bone exposure). 1

02.32 Identifies risk/wound classification for ulceration and amputation (e.g., Wagner, University of Texas, Lower Extremity Amputation Prevention). 1

02.33 Establishes a plan of care for a client with a neuropathic ulcer. 1

02.34 Implements nursing interventions to prevent neuropathic ulceration. 1

02.35 Implements nursing interventions to manage neuropathic ulceration based on healability (e.g., pressure off-loading, glucose levels, callus removal, lifestyle modification). 1
Lymphedema

The enterostomal therapy nurse:

02.36 Interprets data related to a client presenting with primary and secondary lymphedema:
  02.36a history and physical (e.g., lymphatic obstruction, previous vascular and orthopedic surgery, congestive heart failure, renal failure, previous skin breakdown, vascular studies, pain and symptom management, latex allergies, duration of lymphedema, impact on mobility, hygiene and continence, travel to tropical climates, lymphedema treatments such as compression garments and bandages, sequential compression therapy, decongestive therapy);
  02.36b assessment of affected body part (e.g., location, limb circumference, skin appearance, edema, ankle joint mobility); and
  02.36c wound assessment.

02.37 Establishes a plan of care for a client with primary and secondary lymphedema.

02.38 Implements nursing interventions to prevent primary and secondary lymphedema (e.g., hygiene, skin care, exercise, foot care, footwear, sequential compression, complex decongestive therapy, compression bandaging, limb elevation, diet).

02.39 Implements nursing interventions to manage primary and secondary lymphedema (e.g., compression garments).

Surgical wounds

The enterostomal therapy nurse:

02.40 Interprets data related to a client presenting with surgical wounds including:
  02.40a history and physical (e.g., diagnosis, date, length and type of surgery, malignancy, postoperative edema, length of hospitalization, tension on suture line, obesity, medications such as corticosteroids, preoperative status); and
  02.40b wound assessment (e.g., healing ridge, seroma, hematoma, drains, fistula, abscess, necrosis).

02.41 Establishes a plan of care for a client with surgical wounds.

02.42 Implements nursing interventions to manage surgical wounds and prevent complications.

Traumatic wounds

The enterostomal therapy nurse:

02.43 Interprets data related to a client presenting with a traumatic wound including:
  02.43a history and physical (e.g., date and time of trauma, mechanism of injury, past trauma, immunization such as tetanus and rabies); and
  02.43b wound assessment (e.g., hematoma).
02.44 Establishes a plan of care for a client with a traumatic wound. 1
02.45 Implements nursing interventions to prevent recurrence of traumatic wounds (e.g., self-inflicted). 1
02.46 Implements nursing interventions to manage traumatic wounds. 1

**Thermal wounds**

The enterostomal therapy nurse:

02.47 Interprets data related to a client presenting with a thermal wound including:
   02.47a history and physical (e.g., sensation, circumstances, exposure to chemical agents, electricity and extreme temperatures); and 2
   02.47b wound assessment (e.g., infection, classification system, calculation of area). 2
02.48 Establishes a plan of care for a client with a thermal wound. 2
02.49 Implements nursing interventions to prevent recurrence of thermal injury (e.g., care of vulnerable populations, scar and contracture prevention). 2
02.50 Implements nursing interventions to manage thermal injury (e.g., manage fluid and electrolyte balance, optimize nutrition, manage pruritus). 2

**Autoimmune wounds**

The enterostomal therapy nurse:

02.51 Interprets data related to a client presenting with a wound of autoimmune etiology including:
   02.51a history and physical (e.g., pyoderma gangrenosum, vasculitis, comorbidities such as rheumatoid arthritis, inflammatory bowel disease, scleroderma, systemic lupus, bullous pemphigoid, epidermolysis bullosa); and 1
   02.51b wound assessment (e.g., pain). 1
02.52 Establishes a plan of care for a client with a wound of autoimmune etiology. 1
02.53 Implements nursing interventions to manage a client with a wound of autoimmune etiology. 1

**Malignant wounds**

The enterostomal therapy nurse:

02.54 Interprets data related to a client presenting with a malignant wound including:
   02.54a history and physical (e.g., pain and symptom management, oncology treatment); and 1
   02.54b wound assessment (e.g., location and relation to underlying structures, odour, extent of tissue erosion, bleeding, pain, satellite lesions). 1
02.55 Establishes a plan of care for a client with a malignant wound.  

02.56 Implements nursing interventions to manage malignant wounds (e.g., control bleeding, bioburden/infection, protect periwound skin, cosmetic appearance, symptom management).  

OSTOMY, FISTULA AND PERCUTANEOUS SITES

General Principles of Ostomy, Fistula and Percutaneous Sites

Gastrointestinal

The enterostomal therapy nurse:

03.01 Understands the anatomy of the gastrointestinal system including:

03.01a upper gastrointestinal tract (e.g., mouth, esophagus, stomach); 0
03.01b small intestine (e.g., duodenum, jejunum, ileum); 0
03.01c large intestine (e.g., cecum, ascending colon, transverse colon, descending colon, sigmoid colon, rectum, anal canal); and 0
03.01d accessory organs (e.g., biliary system, pancreas, liver). 0

03.02 Understands the physiology of the gastrointestinal system including:

03.02a motility (e.g., esophagus, stomach, small intestine, colon); 0
03.02b absorption (e.g., stomach, small intestine, colon); 0
03.02c secretion (e.g., small intestine, biliary system, pancreas, liver); and 0
03.02d elimination and storage (e.g., liver, colon, rectum, anus). 0

03.03 Understands the pathophysiology of the gastrointestinal system including:

03.03a inflammatory (e.g., ulcerative colitis, Crohn’s disease, radiation enteritis, diverticular disease); 1
03.03b infectious (e.g., enteritis, pseudo membranous colitis); 1
03.03c ischemic (e.g., necrotizing enterocolitis, mesenteric thrombosis); 1
03.03d obstructive (e.g., volvulus, intussusception, Hirschsprung’s disease, Ogilvie’s syndrome, meconium ileus, motility disorder); 1
03.03e malignant (e.g., bowel, rectal, anal, metastatic disease of prostate, uterus, cervical, ovarian, vaginal); 1
03.03f other (e.g., familial adenomatous polyposis, intestinal trauma); and 1
03.03g congenital (e.g., imperforate anus). 1
03.04 Understands surgical procedures involving the gastrointestinal system (e.g., abdominoperineal resection, low anterior resection, Hartmann's procedure, subtotal colectomy, ileorectal anastomosis, total proctocolectomy with end ileostomy, ileoanal anastomosis, colectomy bowel decompression, Bishop-Koop procedure, jejunostomy, esophagostomy):

03.04a types of continent diversions (e.g., Kock continent ileostomy, ileoanal reservoir performed as a one-, two- or three-step procedure); and
03.04b types of stoma construction (e.g., end stoma, loop stoma, double-barrel stoma, end-loop stoma, mucous fistula, non-mature stoma).

Genitourinary

The enterostomal therapy nurse:

03.05 Understands the anatomy of the urinary system including:
03.05a upper urinary tract (e.g., kidneys, ureters); and
03.05b lower urinary tract (e.g., urinary bladder, urethra, pelvic floor support structures).

03.06 Understands the physiology of the urinary system including:
03.06a urine formation and elimination; and
03.06b homeostasis (e.g., water and hydration, sodium, potassium, calcium, phosphate and magnesium).

03.07 Understands the pathophysiology of the urinary system including:
03.07a congenital (e.g., cloacal exstrophy, cloacal anomaly, bladder exstrophy, prune belly syndrome, myelomeningocele, ureteropelvic junction obstruction, gasterohis, ommhalocele, atresias, posterior urethral valves); and
03.07b malignant (e.g., bladder, ureters, urethral, prostate, uterus, cervical, ovarian, vaginal); and
03.07c other (e.g., trauma).

03.08 Understands surgical procedures involving the urinary system (e.g., radical cystectomy and ileal conduit, ileal conduit, colon conduit, nephrostomy, vescostomy, cystostomy, ureterostomy, continent diversions):
03.08a types of stoma construction (e.g., end stoma, loop stoma); and
03.08b indications and types of urinary diversions (e.g., continent cutaneous diversions, orthotopic neobladder).
Reproductive

The enterostomal therapy nurse:

03.09 Understands the anatomy of the reproductive system:
  03.09a male (e.g., testes, epididymis, vas deferens, spermatic cord, seminal vesicles, prostate, penis, scrotum); and 0
  03.09b female (e.g., ovaries, fallopian tubes, uterus, vagina, mons pubis, labia majora, labia minora, clitoris, vestibular glands, hymen).

03.10 Understands the physiology of the reproductive system:
  03.10a male (e.g., vasculature, neurology, impotence, erectile dysfunction); and 0
  03.10b female (e.g., dyspareunia, scar tissue, fertility, pregnancy).

Containment Products and Applications

The enterostomal therapy nurse:

03.11 Understands the indications for and use of containment products and applications (e.g., convexity, paste, powder, belt, type of closure, extended wear barrier, transparent pouches such as one piece, two piece, closed-end, drainable).

Assessment of Ostomy, Fistula, Percutaneous Sites

The enterostomal therapy nurse:

03.12 Performs a focused assessment of a client with an ostomy, fistula or percutaneous site including:
  03.12a history and physical (e.g., presenting symptoms, health history, family history, medications, allergies, nutrition, height and weight, comorbidities, smoking, substance use, pain, mobility, pregnancy, age, assistive devices, immune status, sensorimotor impairment, intake and output, visual impairment, diagnostic and laboratory tests); 1
  03.12b biopsychosocial (e.g., cognitive status, safety factors, quality of life, socio-economic status, motivation, education level, living arrangements, body image, cause/effect of injury, family support, lifestyle, culture, ethnic, spirituality, language, coping skills, resource availability, social impact of ostomy, functional impact of ostomy, conservation of energy, impact of disease on self and family dynamics, adherence to treatment plan, gestational age, birth history, sexuality); 1
  03.12c stoma (e.g., type, colour, moisture, turgor, profile, location, mucocutaneous junction, function, output, edema, size, shape, friability, perfusion, devices such as rods, catheters, stents, retraction, prolapse, lacerations, necrosis/ischemia, bleeding, stenosis, polyps); 1

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03.12d peristomal skin (e.g., intact, maceration, denuded, irritant contact dermatitis, pseudoverrucous lesions, encrustations, pressure ulcers, stripping injury, mucocutaneous separation, mucosal transplantation, candidiasis, folliculitis, allergic contact dermatitis, caput medusae, pyoderma gangrenosum, malignancy, psoriasis, bacterial infections, viral infections, hypergranulation, hernia); and

03.12e abdomen (e.g., contours, incisions, scars, folds, creases, bony prominences, belt line, drains, distension, bowel sounds, hernia).

Principles of Ostomy, Fistula and Percutaneous Site Management

The enterostomal therapy nurse:

03.13 Establishes a plan of care for a client with an ostomy fistula or percutaneous site.

03.14 Facilitates understanding of diagnosis and surgical procedures for a client with an ostomy, fistula or percutaneous site.

03.15 Implements interventions including:

03.15a teaching and counselling (e.g., perioperative, preoperative, long-term, diet, emergency identification, troubleshooting, product use and care, providing information to resume optimal lifestyle, sexual counselling, skin breakdown, prolapse, hernia, pouch leakage, obstruction);

03.15b assessing and determining stoma site location;

03.15c selecting products;

03.15d managing complications (e.g., stomal, peristomal); and

03.15e referrals to community resources and other health-care professionals (e.g., funding programs, support groups, retail outlets).

Fecal and Urinary Diversions (Colostomy, Ileostomy, Urostomy)

Colostomy

The enterostomal therapy nurse:

03.16 Differentiates locations of colostomies and expected output.

03.17 Identifies a plan of care based on location of colostomy and a client’s preferences and needs.

03.18 Teaches management of retained distal segment of bowel (e.g., mucous fistula, rectal stump).

03.19 Instructs in dietary modifications (e.g. to prevent constipation or reduce gas).

03.20 Prepares for closure or permanent colostomy.

03.21 Teaches irrigation to a client with a colostomy.
Ileostomy

The enterostomal therapy nurse:

03.22 Differentiates location of ileostomy and expected output. 1
03.23 Teaches strategies to prevent and correct fluid and electrolyte imbalances. 1
03.24 Teaches about changes in absorption (e.g., medications, diet, B12). 1
03.25 Teaches management of retained distal segment of bowel (e.g., mucous fistula, rectal stump). 1
03.26 Teaches a client with an ileostomy about the signs and symptoms of:
   03.26a obstruction; 1
   03.26b fluid and electrolyte imbalance; and 1
   03.26c B12 deficiency. 1
03.27 Teaches strategies to prevent and manage food blockage to a client with an ileostomy. 1
03.28 Performs ileostomy lavage. 2
03.29 Prepares for closure or permanent ileostomy. 1

Urostomy

The enterostomal therapy nurse:

03.30 Differentiates location of urostomy and expected output. 1
03.31 Teaches a client with a urostomy about:
   03.31a adequate fluid intake; 1
   03.31b dietary considerations; 1
   03.31c use of night drainage system (e.g., blue bag syndrome); and 1
   03.31d mucous management. 1
03.32 Recognizes and manages peristomal complications related to prolonged contact with urine (e.g., alkaline encrustations, pseudoverrucous lesions). 1
03.33 Manages stents and catheters. 1
03.34 Teaches a client with a urostomy about sign and symptoms of urinary tract infections. 1
03.35 Teaches a client with a urostomy about the proper method to obtain urine specimens. 1
Continent Diversions

Fecal Diversions

The enterostomal therapy nurse:

03.36 Instructs a client regarding expected outcomes of fecal diversions (e.g., number of bowel movements per day, continence, dietary modifications). 1

03.37 Instructs a client regarding complications (e.g., pouchitis, valve failure, stricture, incontinence, pouch failure). 1

03.38 Implements nursing interventions in the immediate postoperative period following fecal diversions (e.g., perianal skin protection, intubation, irrigation, dietary modifications). 1

03.39 Teaches a client how to integrate the management of a continent fecal diversion into daily care (e.g., skin protection, dietary modifications, intubation, irrigation, medication). 1

Urinary Diversions

The enterostomal therapy nurse:

03.40 Instructs a client regarding expected outcomes with urinary diversions (e.g., continence, fluid intake, mucous management). 1

03.41 Instructs a client regarding complications (e.g., valve failure, pouchitis, stricture, infection, pouch failure, incontinence). 1

03.42 Implements nursing interventions in the immediate postoperative period (e.g., managing drains and tubes, skin protection, intubation, irrigation). 1

03.43 Teaches a client how to integrate management of continent urinary diversion into daily care (e.g., skin protection, fluid intake, managing drains and tubes, intubation, irrigation, mucus management, urine specimens). 1

Fistula and Percutaneous Sites

Fistula

The enterostomal therapy nurse:

03.44 Identifies etiologic factors and manifestations of a fistula 1

03.45 Performs an assessment of a client with a fistula including:

03.45a source (e.g., bowel, bladder); 1

03.45b location; 1

03.45c size (e.g., cutaneous opening, length of tract); 1
03.45d topography (e.g., number of sites, proximity to bony prominences, scars, creases, incisions, drain, stoma, below, at, or above skin level, muscle tone surrounding opening);
03.45e characteristics of output (e.g., type, source, volume, odour, consistency, gas, pH, colour);
03.45f perifistular skin (e.g., intact, macerated, erythematous, denuded, eroded, ulcerated, infected);
03.45g fluid and electrolyte, dietary and nutritional considerations; and
03.45h factors that delay spontaneous closure (e.g., presence of foreign body, cancer, irradiated area, Crohn’s disease, abscess).

03.46 Establishes a plan of care for a client with a fistula.

03.47 Implements measures to manage a fistula (e.g., contain output, odour control, comfort measures, measurement of output, perifistular skin protection, optimize mobility, pouching system, dressing, suction, topical negative pressure therapy).

03.48 Suggests pharmacological management for a client with a fistula.

**Percutaneous Sites**

The enterostomal therapy nurse:

03.49 Identifies type and purpose of percutaneous tubes and drains (e.g., enteral, urinary).

03.50 Assesses patency and placement of percutaneous tubes and drains.

03.51 Recommends stabilization method for percutaneous tubes and drains.

03.52 Initiates measures to prevent and manage complications for clients with percutaneous tubes and drains (e.g., tube migration, dislodgement, obstruction, leakage).

03.53 Initiates measures to prevent and manage peritube skin damage (e.g., infection, hypergranulation, chemical, mechanical, perform chemical cauterization).

03.54 Teaches a client with a percutaneous tube or drain about the care and use of equipment (e.g., hygiene).

**CONTINENCE**

**General Principles of Continence**

The enterostomal therapy nurse:

04.01 Identifies goals and factors affecting outcomes for a client with incontinence.

04.02 Understands the anatomy of micturition and defecation.
04.03 Understands the physiology of micturition and defecation and age-related changes. 0
04.04 Understands the pathophysiology of bladder and bowel dysfunction. 1
04.05 Understands the surgical procedures that result in urinary and fecal incontinence. 1
04.06 Understands the indications for and use of continence management products and applications. 1

Assessment of Continence

The enterostomal therapy nurse

04.07 Performs a focused assessment of a client with incontinence including:

04.07a history and physical (e.g., risk factors, psychosocial, cognitive impairment, environmental barriers, functional impairment, caregiver availability, motivation, obstetrical history, previous surgeries, neuromuscular disorders, age, medical comorbidities, bladder and bowel habits, diagnostic and laboratory tests); and 1

04.07b biopsychosocial (e.g., cognitive status, safety factors, quality of life, socio-economic status, motivation, education level, living arrangements, body image, cause/effect of injury, family support, lifestyle, culture, ethnical, spirituality, language, coping skills, resource availability, social impact of incontinence, conservation of energy, impact of disease on self and family dynamics, adherence to treatment plan, gestational age, birth history, sexual health/trauma). 1

04.08 Identifies risk factors for a client with incontinence (e.g., smoking, obesity, exercise, sexual health, obstetrical history, environmental factors, diet and hydration, radiation, UTIs). 1

04.09 Performs an initial and ongoing assessment of a client with incontinence including:

04.09a abdomen; 1
04.09b skin; 1
04.09c urogenital exam – external; 1
04.09d pelvic exam: visual/digital exam; 1
04.09e rectal exam; 1
04.09f neuromuscular testing (e.g., anal wink, bulbocavernosus reflex); and 1
04.09g external sphincter assessment.
**Principles of Continence Management**

**General Principles of Continence Management**

The enterostomal therapy nurse:

04.10 Teaches measures for bladder and bowel habits:
   - 04.10a dietary and fluid management; 1
   - 04.10b toileting schedule; 1
   - 04.10c emptying techniques (e.g., Credé manoeuvre, double voiding, abdominal massage); 1
   - 04.10d bowel and bladder training programs; 1
   - 04.10e skin care; and 1
   - 04.10f pelvic muscle re-education. 1

04.11 Selects containment products and devices (e.g., briefs, pouches, condom catheter). 1

04.12 Identifies pharmacological treatment. 2

04.13 Understands surgical options related to bowel and urinary incontinence. 1

04.14 Initiates referrals to health-care professionals (e.g., sexual health counselling, dietitian). 2

04.15 Refers to community resources and other health-care professionals. 2

**Urinary Continence**

The enterostomal therapy nurse:

04.16 Interprets data for a client presenting with urinary incontinence including:
   - 04.16a history and physical (e.g., associated conditions such as UTI, vaginitis, pelvic organ prolapse, prostatic abnormalities, interstitial cystitis, fistula, pelvic pain syndrome, malignancies, neuromuscular conditions, trauma, obstructions, diabetes, Paget’s disease); and 1
   - 04.16b assessment of incontinence (e.g., diagnostic tests such as post-void residual urine measurement, EMG studies, bladder diary, urodynamics). 1

04.17 Identifies classification of urinary incontinence (e.g., stress, urge, overflow, functional, reflex). 1

04.18 Establishes a plan of care for a client with urinary incontinence. 1

04.19 Implements nursing interventions to prevent urinary incontinence (e.g., behavioural management techniques such as bladder retraining, urge suppression techniques, environmental modifications, pelvic floor muscle exercises, bladder emptying, clean intermittent catheterization, scheduled or timed voiding). 1
04.20 Implements nursing interventions to manage urinary incontinence (e.g., bladder emptying techniques such as double void, intermittent catheterization, indwelling urethral catheterization, suprapubic catheterization, catheter management).

**Bowel Continence**

The enterostomal therapy nurse:

04.21 Interprets data for a client presenting with bowel incontinence including:

- **04.21a** history and physical (e.g., bowel diary, associated conditions such as infection, pelvic organ prolapse, fistula, pelvic pain syndrome, malignancies, neuromuscular conditions, trauma, obstructions, diabetes, hyperthyroidism, encopresis, congenital abnormalities); and

- **04.21b** assessment of incontinence (e.g., diagnostic tests such as wink test, motility studies, anal-rectal manometry, endoscopic procedures).

04.22 Identifies classification of bowel incontinence (e.g., constipation, fecal impaction, neurogenic).

04.23 Establishes a plan of care for a client with bowel incontinence.

04.24 Implements nursing interventions to prevent and manage bowel incontinence (e.g., behavioural techniques such as bowel retraining, scheduled bowel evacuation, dietary management, pelvic floor muscle exercises, skin protection, containment devices, bowel cleansing, fluid and electrolyte management, antegrade colonic procedures, training and management follow-up).