

Exam Blueprint and Specialty Competencies

Introduction – Blueprint for the Medical-Surgical Nursing Certification Exam

The primary function of the blueprint for the CNA Medical-Surgical 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 medical-surgical 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 medical-surgical 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 Medical-Surgical Nursing Exam is a criterion-referenced exam.¹ 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 Medical-Surgical Nursing Certification Exam, the content consists of the competencies of a fully competent practising medical-surgical 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

The final list of competencies was updated and approved by the Medical-Surgical Nursing Certification Exam Committee.

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

In developing the set of competencies for medical-surgical nurses, the following assumptions, based on current national standards for nursing practice, were made:

The practice environment

- The medical-surgical environment is challenging, complex, ethically demanding, culturally diverse, technological and ever-changing.
- The care of medical-surgical clients is driven by best practice standards and the efficient utilization of internal and external resources.
- The medical-surgical environment is the cornerstone for teaching, acquisition and consolidation of nursing knowledge, skills and critical thinking.
- The medical-surgical nurse practises in a variety of capacities and settings in an environment that promotes safe, efficient, effective health-care services.
- Medical-surgical care is provided at the primary, secondary and tertiary levels in community, acute, chronic and long-term/continuing care settings. Examples include inpatient and outpatient settings, day surgeries, adult medical clinics, primary health clinics, community clinics, pre-admission clinics and military assignments.
- Holistic medical-surgical care is best provided through the collaborative practice of members of an interprofessional team and community partners to meet the physical, emotional, social, spiritual and cultural needs of clients and their families.

Client

- The medical-surgical client may be an adult, a family or a community varying in race, gender, language, education, culture, socio-economic background, religion and sexual orientation.
- The medical-surgical client often has multiple, complex comorbidities of increasing acuity and chronicity and may have needs that vary from ambulatory to total care across the adult lifespan. There is an increasing representation of clients over 65 years of age and bariatric clients.
- The medical-surgical client and his/her family collaborate as part of the health-care team.

Family

- The family is defined by the client and may be a participant in care.

Nurse

- The medical-surgical nurse is a leader and pivotal member of the interprofessional health-care team who facilitates timely assessment, care, treatment, education, discharge and follow-up.
- The medical-surgical nurse has primary responsibility to prioritize, organize and coordinate the care of multiple clients with ever-changing, complex, multi-system issues.
- The medical-surgical nurse has responsibility for encouraging health promotion and illness prevention.
- The medical-surgical nurse provides evidence-informed care while maintaining professional competence through ongoing education, research and skill development.
- The medical-surgical nurse strives to achieve a smooth transition of clients and families along the health-care continuum and within the health-care system.
- The medical-surgical nurse respects the client's rights to his/her perception of the health problem and self-determination of care, while understanding the impact of the determinants of health.
- The medical-surgical nurse facilitates the client's and family's ability to cope with stressors related to illness and the environment and promotes access to appropriate and available resources.
- The medical-surgical nurse advocates for ethical, safe, quality care environments promoting the best possible client outcomes.
- The medical-surgical nurse has professional accountability to guide, mentor and share experiences with nurses, students and other health-care providers.
- The medical-surgical nurse continuously adapts in a technologically advancing health-care system.

Health

- Health is a personal concept viewed within the context of the client's personal, cultural, religious and ethical value systems.
- Health exists on a continuum from absence of disease to acute illness, chronic illness, disability, frailty, aging and end of life.
- Health behaviours are directed toward promotion, prevention, maintenance, rehabilitation, restoration or palliation.
- Vital signs include temperature, heart rate, respiratory rate, blood pressure, oxygen saturation, level of consciousness and perception of pain.
- Pain is what the client says it is, in the context of health and illness.

Competency Categories

The competencies are classified under a twelve-category scheme commonly used to organize medical-surgical nursing.

Some of the competencies lend themselves to one or more of the categories; therefore, these twelve 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.

Competency Sampling

Using the grouping and the guideline that the Medical-Surgical Nursing Certification Exam will consist of approximately 165 questions, the categories have been given the following weights in the total examination.

Table 1: Competency Sampling

Categories	Approximate weights in the total examination
Neurological System	7-11%
Eye, Ear, Nose and Throat (EENT) System	3-7%
Cardiovascular System	10-14%
Respiratory System	10-14%
Gastrointestinal System	6-10%
Genitourinary and Reproductive systems	4-8%
Musculoskeletal and Integumentary Systems	5-9%
Immunological, Hematological and Endocrinological Systems	6-10%
Infectious Diseases	5-9%
Pain	9-13%
Mental Health	5-9%
Professional, Legal and Ethical Issues	5-9%

Technical Specifications

In addition to the specifications related to the competencies, other variables are considered during the development of the Medical-Surgical 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 format) and special functions of exam questions (e.g., case-based or 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 and 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 four 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 Medical-Surgical Nursing Certification Exam, 60 to 75 per cent of the questions are presented as independent questions and 25 to 40 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 Medical-Surgical Nursing Certification Exam is aimed at one of three levels: knowledge/comprehension, application and critical thinking.²

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 in 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 medical-surgical 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 concerning the needs of clients.

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 2: Distribution of Questions for Each Level of Cognitive Ability

Cognitive Ability Level	Percentage of questions on Medical-Surgical Nursing Exam
Knowledge/Comprehension	10-25%
Application	50-65%
Critical Thinking	20-35%

Contextual Variables

Client Culture: Questions are included that measure awareness, sensitivity and respect for different cultural values, beliefs and practices, without introducing stereotypes.

Client Health Situation: In the development of the Medical-Surgical Nursing Exam, the client is viewed holistically. The client health situations presented also reflect a cross-section of health situations encountered by medical surgical nurses.

Health-Care Environment: Medical-surgical nursing is practised in the primary, secondary and tertiary levels in community, acute, chronic and long-term/continuing care settings. However, medical-surgical nursing can also be practised in other settings. Therefore, for the purposes of the Medical-Surgical Certification Exam, the health-care environment is specified only where it is required for clarity or in order to provide guidance to the examinee.

Conclusions

The blueprint for the Medical-Surgical Nursing Certification Exam is the product of a collaborative effort between CNA, ASI and a number of medical-surgical nurses across Canada. Their work has resulted in a compilation of the competencies required of practising medical-surgical nurses and has helped determine how those competencies will be measured on the Medical-Surgical Nursing Certification Exam. A summary of these guidelines can be found in the summary chart Medical-Surgical Nursing Certification Development Guidelines.

Medical-surgical 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

Medical-Surgical Nursing Exam Development Guidelines

Structural Variables	
Exam Length and Format	Approximately 165 objective questions
Question Presentation	60-75% independent questions 25-40% case-based questions
Cognitive Ability Levels of Questions	Knowledge/Comprehension 10-25% of questions Application 50-65% of questions Critical Thinking 20-35% of questions
Competency Categories	Neurological System 7-11% of questions Eye, Ear, Nose and Throat (EENT) System 3-7% of questions Cardiovascular System 10-14% of questions Respiratory System 10-14% of questions Gastrointestinal System 6-10% of questions Genitourinary and Reproductive Systems 4-8% of questions Musculoskeletal and Integumentary Systems 5-9% of questions Immunological, Hematological and Endocrinological Systems 6-10% of questions Infectious Diseases 5-9% of questions Pain 9-13% of questions Mental Health 5-9% of questions Professional, Legal and Ethical Issues 5-9% of questions
Contextual Variables	
Client Age and Gender	In the development of the Medical-Surgical Nursing Certification Exam, questions will include only adult clients (i.e., 18 years and older). The age of the client will be determined by the presented health situations. The questions will represent both genders.
Client Culture	Questions are included that measure awareness, sensitivity and respect for different cultural values, beliefs and practices, without introducing stereotypes.
Client Health Situation	In the development of the Medical-Surgical Nursing Exam, the client is viewed holistically. The client health situations presented also reflect a cross-section of health situations encountered by medical surgical nurses.
Health-Care Environment	Medical-surgical nursing is practised in the primary, secondary and tertiary levels in community, acute, chronic and long-term/continuing care settings. However, medical-surgical nursing can also be practised in other settings. Therefore, for the purposes of the Medical-Surgical Certification Exam, the health-care environment is specified only where it is required for clarity or in order to provide guidance to the examinee.

The Medical-Surgical Nursing Exam List of Competencies

Neurological System

The medical-surgical nurse:

- 1.1 Recognizes clinical presentation and cares for clients with:
 - a) neuromuscular diseases (e.g., Parkinson's, ALS, MS);
 - b) altered levels of consciousness;
 - c) cerebrovascular incidences (e.g., transient ischemic attacks, cerebrovascular accidents);
 - d) with seizures/status epilepticus;
 - e) spinal cord injuries;
 - f) head injuries (e.g., concussions, hematomas);
 - g) headaches (e.g., cluster, tension, migraines); and
 - h) cancers (e.g., brain, spinal cord, non-malignant).
- 1.2 Cares for clients undergoing the following neurological procedures:
 - a) lumbar punctures;
 - b) diagnostics (e.g., MRI, CT, angiograms, EEG); and
 - c) neurological surgeries (e.g., craniotomies, discectomies).
- 1.3 Assesses the neurological system for subtle changes using:
 - a) trending of vital signs and neurological vital signs;
 - b) motor sensory assessments;
 - c) cognitive screenings;
 - d) laboratory results; and
 - e) information obtained from the client and family.
- 1.4 Determines the appropriate nursing diagnosis for clients with neurological needs.
- 1.5 Plans appropriate interventions to manage and monitor neurological status by:
 - a) monitoring fluid and electrolyte balance;
 - b) administering and monitoring pharmacological agents;
 - c) implementing non-pharmacological strategies;
 - d) providing safe client environment (e.g., fall risk prevention, seizure precautions, behavioural management); and
 - e) addressing client's/family's psychosocial needs (e.g., body image, sexuality).
- 1.6 Recognizes and manages potential neurological complications (e.g., bleeding/hemorrhage, headaches, seizures, anxiety, depression).
- 1.7 Evaluates interventions for clients with neurological care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).
- 1.8 Develops an individualized teaching plan for clients with neurological care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, safety, health promotion, community resources).

Eye, Ear, Nose and Throat (EENT) System

The medical-surgical nurse:

- 2.1 Recognizes clinical presentation and cares for clients with:
 - a) inflammatory and infectious processes (e.g., stomatitis, pharyngitis, epiglottitis sinusitis);
 - b) hearing impairment (e.g., sensorineural, conductive);
 - c) visual impairment (e.g., macular degeneration, cataracts, glaucoma);
 - d) facial trauma (e.g., fractures, reconstructions);
 - e) epistaxis; and
 - f) cancers (e.g., oral-pharyngeal, thyroid, esophageal).
- 2.2 Cares for clients undergoing the following EENT procedures:
 - a) incision and drainage;
 - b) nasal packing;
 - c) swallowing assessments;
 - d) eye surgery (e.g., cataracts, glaucoma); and
 - e) neck and throat surgery (e.g., tonsillectomy, thyroidectomy, tracheotomy).
- 2.3 Assesses the EENT system using:
 - a) trending of vital signs;
 - b) assessment of the respiratory system and airway patency; and
 - c) laboratory results.
- 2.4 Determines the appropriate nursing diagnosis for clients with EENT needs.
- 2.5 Plans appropriate interventions to manage and monitor EENT status by:
 - a) maintaining adequate airway;
 - b) optimizing ventilation;
 - c) monitoring fluid and electrolyte balance;
 - d) providing nutritional support and monitoring;
 - e) administering and monitoring pharmacological agents;
 - f) implementing non-pharmacological strategies;
 - g) providing safe client environment (e.g., wire cutters, tracheostomy tray, fall risk prevention);
 - h) addressing impaired communication (e.g., oral, visual, auditory); and
 - i) addressing client's/family's psychosocial needs (e.g., body image, sexuality).
- 2.6 Recognizes and manages EENT complications (e.g., bleeding/hemorrhage, airway patency).
- 2.7 Evaluates interventions for clients with EENT care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).
- 2.8 Develops an individualized teaching plan for clients with EENT care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, health promotion, community resources).

Cardiovascular System

The medical-surgical nurse:

- 3.1 Recognizes clinical presentation and cares for clients with:
 - a) heart failure (e.g., pulmonary edema);
 - b) venous thromboembolism;
 - c) acute coronary syndromes;
 - d) heart conduction disturbances;
 - e) infectious and inflammatory processes (e.g., endocarditis, pericarditis, systemic sepsis);
 - f) hypertension/hypotension;
 - g) shock;
 - h) peripheral vascular disease; and
 - i) cardiac arrest.
- 3.2 Cares for clients with or undergoing the following cardiovascular procedures:
 - a) vascular access devices;
 - b) diagnostic tests (e.g., exercise tolerance test, non-stress test, electrocardiograms);
 - c) pacemaker;
 - d) angiograms/angioplasty; and
 - e) surgery (e.g., femoral popliteal bypass, stenting, CABG).
- 3.3 Assesses the cardiovascular system using:
 - a) trending of vital signs;
 - b) cardiac and peripheral vascular assessments; and
 - c) laboratory results.
- 3.4 Determines the appropriate nursing diagnosis for clients with cardiovascular needs.
- 3.5 Plans appropriate interventions to manage and monitor cardiovascular status by:
 - a) monitoring fluid and electrolyte balance;
 - b) administering and monitoring pharmacological agents (e.g., high alert medications);
 - c) implementing non-pharmacological strategies;
 - d) providing safe client environment (e.g., fall risk prevention, hypotension); and
 - e) addressing client's/family's psychosocial needs.
- 3.6 Recognizes and manages actual or potential cardiovascular complications (e.g., embolisms, bleeding/hemorrhage, shock).
- 3.7 Evaluates interventions for clients with cardiovascular care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).
- 3.8 Develops an individualized teaching plan for clients with cardiovascular care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, safety, health promotion, community resources).

Respiratory System

The medical-surgical nurse:

- 4.1 Recognizes clinical presentation and cares for clients with:
 - a) partial or complete airway obstruction (e.g., foreign bodies, mucus plugs);
 - b) restrictive lung diseases (e.g., pneumonia);
 - c) obstructive lung diseases (e.g., COPD, emphysema, asthma);
 - d) interstitial lung diseases (e.g., cystic fibrosis);
 - e) pulmonary emboli;
 - f) empyema/pleural effusion;
 - g) sleep apnea;
 - h) hemo/pneumothorax and atelectasis; and
 - i) cancer (e.g., lung, esophageal).

- 4.2 Cares for clients with or undergoing the following procedures:
 - a) chest tube (e.g., insertion, removal);
 - b) pleurocentesis;
 - c) pleurodesis;
 - d) diagnostic tests (e.g., bronchoscopy, pulmonary function test); and
 - e) surgery (e.g., lobectomy, tracheostomy, pneumonectomy, thoracotomy).

- 4.3 Assesses the respiratory system using:
 - a) trending of vital signs;
 - b) arterial blood gases;
 - c) respiratory assessments; and
 - d) laboratory results.

- 4.4 Determines the appropriate nursing diagnosis for clients with respiratory needs.

- 4.5 Plans appropriate interventions to manage and monitor respiratory status by:
 - a) maintaining adequate airway including non-invasive positive pressure ventilation devices (e.g., CPAP, Bi-PAP);
 - b) optimizing gaseous exchange (e.g., positioning, mobilizing, pain management, oxygen, incentive spirometry);
 - c) administering and monitoring pharmacological agents;
 - d) monitoring fluid and electrolyte balance;
 - e) implementing non-pharmacological strategies;
 - f) providing safe client environment (e.g., fall risk prevention, isolation precautions); and
 - g) addressing client's/family's psychosocial needs.

- 4.6 Recognizes and manages actual or potential respiratory complications (e.g., embolisms, bleeding/hemorrhage, infection).

- 4.7 Evaluates interventions for clients with respiratory care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).

- 4.8 Develops an individualized teaching plan for clients with respiratory care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, safety, health promotion, community resources).

Gastrointestinal System

The medical-surgical nurse:

- 5.1 Recognizes clinical presentation and cares for clients with:
 - a) mechanical gastrointestinal disorders (e.g., bowel obstruction, constipation/diarrhea, hernia, dysphagia);
 - b) gastrointestinal/dietary disorders (e.g., pancreatitis, GERD, appendicitis, pernicious anemia);
 - c) liver diseases (e.g., cirrhosis, hepatic failure);
 - d) inflammatory bowel diseases (e.g., Crohn's disease, ulcerative colitis, diverticulitis);
 - e) gallbladder diseases (e.g., cholelithiasis, cholecystitis);
 - f) gastrointestinal bleeds (e.g., esophageal varices, peptic ulcers, upper and lower bleeds); and
 - g) cancer (e.g., bowel, pancreatic).
- 5.2 Cares for clients undergoing the following gastrointestinal procedures:
 - a) diagnostic imaging (e.g., upper and lower GI series);
 - b) scopes (e.g., gastroscopes, sigmoidoscopes, colonoscopes, ERCP);
 - c) insertion of enteral feeding tubes (e.g., PEG);
 - d) paracentesis; and
 - e) surgery (e.g., ostomies, resections, bariatric).
- 5.3 Assesses the gastrointestinal system using:
 - a) trending of vital signs;
 - b) weight gain/loss;
 - c) abdominal assessments;
 - d) nutritional assessments; and
 - e) laboratory results.
- 5.4 Determines the appropriate nursing diagnosis for clients with gastrointestinal needs.
- 5.5 Plans appropriate interventions to manage and monitor gastrointestinal health by:
 - a) optimizing gastrointestinal function;
 - b) managing nasogastric tubes, enteral feeding, drains and ostomies;
 - c) performing abdominal assessment (e.g., rigidity, distention, tenderness);
 - d) administering and monitoring pharmacological agents;
 - e) implementing non-pharmacological strategies;
 - f) providing and monitoring nutritional support (e.g., total parenteral nutrition, therapeutic diets);
 - g) monitoring fluid and electrolyte balance;
 - h) providing safe client environment (e.g., fall risk prevention, safe patient handling); and
 - i) addressing client's/family's psychosocial needs.
- 5.6 Recognizes and manages actual or potential gastrointestinal complications (e.g., obstructions, paralytic ileus, wound dehiscence/evisceration, perforation).
- 5.7 Evaluates interventions for clients with gastrointestinal care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).
- 5.8 Develops an individualized teaching plan for clients with gastrointestinal care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, safety, health promotion, community resources).

Genitourinary and Reproductive Systems

The medical-surgical nurse:

- 6.1 Recognizes clinical presentation and cares for clients with:
 - a) acute/chronic renal failure (e.g., rhabdomyolysis);
 - b) infections (e.g., UTI, glomerulonephritis, pyelonephritis, prostatitis, cystitis);
 - c) incontinence, urinary retention and obstruction;
 - d) benign prostatic hypertrophy;
 - e) prolapse;
 - f) urolithiasis; and
 - g) cancer (e.g., renal, prostate, ovarian, breast).
- 6.2 Cares for clients undergoing the following procedures:
 - a) diagnostic imaging/procedure (e.g., IVP, cystoscopy);
 - b) urinary diversions (e.g., neobladder, ileal conduit);
 - c) continuous bladder irrigation (CBI);
 - d) tubes and drains (e.g., nephrostomy, suprapubic, urethral);
 - e) dialysis (e.g., peritoneal, hemodialysis);
 - f) nephrectomy;
 - g) male-specific surgical procedures (e.g., TURP, radical prostatectomy, orchiectomy);
 - h) female-specific surgical procedures (e.g., mastectomy, lumpectomy, hysterectomy, transvaginal taping, uterine artery embolization); and
 - i) reconstructions (e.g., breast, urologic).
- 6.3 Assesses the genitourinary and/or reproductive systems using:
 - a) trending of vital signs;
 - b) intake/output;
 - c) urine/vaginal flow characteristics;
 - d) voiding patterns; and
 - e) laboratory results.
- 6.4 Determines the appropriate nursing diagnosis for clients with genitourinary and reproductive needs.
- 6.5 Plans appropriate interventions to manage and monitor genitourinary and/or reproductive status by:
 - a) optimizing genitourinary function (e.g., early catheter removal, bladder training);
 - b) assessing the effects of nephrotoxic agents or delayed clearance (e.g., diuretics, vasopressors, antibiotics, radiographic dyes);
 - c) administering and monitoring pharmacological agents;
 - d) implementing non-pharmacological strategies;
 - e) monitoring fluid and electrolyte balance;
 - f) providing safe client environment (e.g., fall risk prevention, infection control); and
 - g) addressing client's/family's psychosocial needs (e.g., body image, sexuality, impotence issues).
- 6.6 Recognizes and manages actual or potential genitourinary and/or reproductive complications (e.g., bleeding/hemorrhage, shock, infection).
- 6.7 Evaluates interventions for clients with genitourinary and/or reproductive care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).

- 6.8 Develops an individualized teaching plan for clients with genitourinary and/or reproductive care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, safety, health promotion, community resources).

Musculoskeletal and Integumentary Systems

The medical-surgical nurse:

- 7.1 Recognizes clinical presentation and cares for clients with:
- osteoarthritis;
 - pathological/traumatic fractures (e.g., osteoporosis, falls);
 - muscle, soft tissue and/or ligament injuries;
 - infections (e.g., necrotizing fasciitis, cellulitis, osteomyelitis, abscesses);
 - skin conditions (e.g., psoriasis, dermatitis, eczema);
 - ulcers (e.g., pressure, venous, arterial); and
 - cancers (e.g., skin, bone).
- 7.2 Cares for clients with or undergoing the following:
- joint replacements;
 - casts/braces (e.g., backslabs, splints);
 - internal/external fixations (e.g., traction, pinning, plating, fusions);
 - amputations;
 - wounds (e.g., surgical wounds, skin grafts, pressure ulcers, burns); and
 - biopsies.
- 7.3 Assesses the musculoskeletal/integumentary system using:
- rending of vital signs;
 - neuro/peripheral vascular assessments;
 - skin assessments;
 - mobility assessments; and
 - laboratory results.
- 7.4 Determines the appropriate nursing diagnosis for clients with musculoskeletal and integumentary needs.
- 7.5 Plans appropriate interventions to manage and monitor musculoskeletal or integumentary status by:
- administering and monitoring pharmacological agents;
 - implementing non-pharmacological strategies;
 - monitoring fluid and electrolytes balance;
 - managing changes in neurovascular assessment;
 - managing assistive devices (e.g., braces, walkers, prostheses);
 - promoting healthy skin (e.g., pressure redistribution strategies);
 - managing wounds (e.g., negative pressure therapy, wound care protocol);
 - promoting optimal nutrition;
 - providing safe client environment (e.g., fall risk prevention, use of Braden Scale, safe patient handling); and
 - addressing client's/family's psychosocial needs (e.g., body image).
- 7.6 Manages actual or potential musculoskeletal/integumentary complications (e.g., embolisms, bleeding/hemorrhage, infection, compartment syndrome).

- 7.7 Evaluates interventions for clients with musculoskeletal/integumentary care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).
- 7.8 Develops an individualized teaching plan for clients with musculoskeletal/integumentary care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, safety, health promotion, community resources).

Immunological, Hematological and Endocrinological Systems

The medical-surgical nurse:

- 8.1 Recognizes clinical presentation and cares for clients with:
 - a) diabetes;
 - b) thyroid conditions;
 - c) adrenal gland conditions (e.g., Addison's disease, Cushing's syndrome, syndrome of inappropriate antidiuretic hormone (SIADH), diabetes insipidus);
 - d) blood dyscrasia (e.g., multiple myeloma, hemophilia, anemia, sickle cell crisis, polycythemia, thrombocytopenia);
 - e) immunosuppression;
 - f) autoimmune disorder (e.g., rheumatoid arthritis, systemic lupus erythematosus, gout); and
 - g) cancers (e.g., leukemia, lymphoma).
- 8.2 Cares for clients with or undergoing the following:
 - a) thyroidectomy;
 - b) anti-neoplastic agents;
 - c) bone marrow aspirate; and
 - d) blood and blood product transfusion.
- 8.3 Assesses the immunological, hematological or endocrinological systems using:
 - a) trending of vital signs;
 - b) skin inspection;
 - c) weight gain/loss;
 - d) nutritional assessments;
 - e) neuro/peripheral vascular assessments; and
 - f) laboratory results.
- 8.4 Determines the appropriate nursing diagnosis for clients with immunological, hematological or endocrinological needs.
- 8.5 Plans appropriate interventions to manage and monitor hematological or endocrinological status by:
 - a) managing blood glucose levels;
 - b) administering blood and blood products;
 - c) administering and monitoring pharmacological agents (e.g., cytotoxic agents, insulin pumps);
 - d) implementing non-pharmacological strategies;
 - e) initiating precautions (e.g., isolation);
 - f) promoting optimal nutrition;
 - g) providing and promoting safe client environment (e.g., infection prevention and control, fall risk prevention, personal protective equipment (PPE)); and
 - h) addressing client's/family's psychosocial needs.

- 8.6 Recognizes and manages actual or potential immunological, hematological or endocrinological complications (e.g., allergies, bleeding/hemorrhage, septic shock, infection).
- 8.7 Evaluates interventions for clients with immunological, hematological or endocrinological care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).
- 8.8 Develops an individualized teaching plan for clients with immunological, hematological or endocrinological care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, medication regimens, health promotion, community resources).

Infectious Diseases

The medical-surgical nurse:

- 9.1 Recognizes clinical presentation and cares for clients with:
 - a) drug-resistant organisms (e.g., MRSA, VRE, *C. difficile*, ESBL);
 - b) non-communicable infections (e.g., necrotizing fasciitis, cellulitis);
 - c) communicable infections (e.g., hepatitis, HIV/AIDS);
 - d) severe respiratory infection (e.g., SARS, TB, influenza);
 - e) systemic inflammatory response syndrome (e.g., sepsis);
 - f) emerging infections (e.g., hemorrhagic fevers, bioterrorism agents); and
 - g) sexually transmitted infections (e.g., chlamydia, gonorrhea, syphilis).
- 9.2 Cares for clients with or undergoing the following:
 - a) diagnostic tests (e.g., swabs, blood cultures);
 - b) wounds (e.g., grafts, surgical debridements); and
 - c) infection control precautions (e.g., isolation, condoms, hand hygiene).
- 9.3 Assesses client risk factors related to infectious diseases (e.g., lifestyle, previous hospitalization, laboratory results).
- 9.4 Determines the appropriate nursing diagnosis for clients with infectious disease care needs.
- 9.5 Plans appropriate interventions to manage and monitor clients with infectious disease by:
 - a) initiating and maintaining isolation precautions for nurse and/or family;
 - b) notifies appropriate infection prevention and control practitioner and/or public health agency;
 - c) specimen collection;
 - d) administering and monitoring pharmacological agents;
 - e) implementing non-pharmacological strategies;
 - f) providing safe client environment (e.g., personal protective equipment (PPE), fall risk prevention); and
 - g) managing psychosocial implications of living with communicable disease.
- 9.6 Recognizes and manages actual or potential complications related to infectious diseases (e.g., allergies, systemic complications, shock).
- 9.7 Evaluates interventions for clients with infectious disease care needs (e.g., recognizing subtle changes, adapting plan, communicating/documenting plan).

- 9.8 Develops an individualized teaching plan for clients with infectious disease care needs (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, medication regimens, health promotion, community resources).

Pain

The medical-surgical nurse:

- 10.1 Recognizes clinical presentation and cares for clients with acute or chronic:
- neuropathic pain (e.g., trigeminal pain, phantom limb);
 - visceral pain (e.g., referred pain);
 - somatic pain (e.g., sprains, lacerations); and
 - psychogenic pain (e.g., emotional distress).
- 10.2 Cares for clients with or undergoing the following:
- patient-controlled analgesia (PCA);
 - nerve blocks;
 - epidurals; and
 - intrathecal.
- 10.3 Assesses pain (e.g., functional limitations, physical examinations, psychosocial evaluations, pain scales, vital signs, pain history, pain management, subjective health status).
- 10.4 Determines the appropriate nursing diagnosis for clients with pain care needs.
- 10.5 Plans appropriate interventions to manage and monitor clients dealing with pain by:
- implementing and reassessing pain management regimens (e.g., breakthrough, mode of delivery);
 - administering adjuvant therapies (e.g., tricyclic antidepressants, anticonvulsants, sedatives);
 - implementing non-pharmacological therapies (e.g., relaxation, deep breathing, massage);
 - managing and monitoring side effects (e.g., constipation, nausea); and
 - addressing client's/family's psychosocial needs (e.g., palliative/end-of-life care, cultural care, spiritual care).
- 10.6 Recognizes and manages actual or potential complications related to pain (e.g., allergies/sensitivities, respiratory distress).
- 10.7 Evaluates interventions for clients with pain care needs (e.g., age-related medication considerations, recognizing subtle changes, adapting plan, communicating/documenting plan).
- 10.8 Develops an individualized teaching plan for clients experiencing pain (e.g., client's readiness to learn, evaluating client's understanding, discharge planning, elimination, medication regimens, end-of-life care, health promotion, community resources).

Mental Health

The medical-surgical nurse:

- 11.1 Recognizes clinical presentation of and cares for clients with:
 - a) delirium;
 - b) dementia;
 - c) depression; and
 - d) substance dependency (e.g., alcohol, illicit drugs, prescription drugs, cigarettes).

- 11.2 Assesses the mental health of clients using:
 - a) trending of vital signs;
 - b) screening tools (e.g., neurocognitive, affective, psychosocial);
 - c) medication history; and
 - d) laboratory results.

- 11.3 Determines the appropriate nursing diagnosis for clients with mental health care needs.

- 11.4 Plans appropriate interventions to manage and monitor mental health status by:
 - a) utilizing behaviour management techniques;
 - b) promoting the client's independence and capabilities;
 - c) providing safe client environment (e.g., crisis intervention, environmental modifications, constant care, minimizing risk factors, least restraints);
 - d) administering and monitoring pharmacological agents; and
 - e) implementing non-pharmacological agents to manage underlying cause of behaviours (e.g., therapeutic communication, complementary therapies, family involvement, visualization, relaxation techniques, support groups).

- 11.5 Recognizes and manages actual or potential complications related to mental health (e.g., safety, withdrawal, seizures, suicide, violence/aggression).

- 11.6 Evaluates interventions for clients with mental health care needs (e.g., age-related medication considerations, recognizing subtle changes, adapting plan, communicating/documenting plan).

- 11.7 Develops an individualized teaching plan for clients with mental health care needs (e.g., client's and/or family's readiness to learn, evaluating client's understanding, discharge planning, medication regimens, health promotion, community support).

Professional, Legal and Ethical Issues

The medical-surgical nurse:

- 12.1 Ensures client confidentiality and privacy (e.g., electronic health records, social media, over-capacity facilities).
- 12.2 Demonstrates accountability in nursing practice (e.g., client assignment, responsibility for actions, understanding scope, documentation).
- 12.3 Prioritizes nursing care and adapts to varying or unexpected situations (e.g., staff shortages, skill mix changes, client acuity/intensity, working with unregulated health workers).
- 12.4 Provides interprofessional care (e.g., collaboration, communication, advocacy).
- 12.5 Approaches conflict situations in a constructive manner and investigates when appropriate (e.g., horizontal violence, family conflict, abuse, aggression, neglect).
- 12.6 Recognizes ethical issues and seeks assistance in addressing them (e.g., refusal of blood products, refusal of care, withdrawal of treatment, culturally congruent care, advance health-care directives).
- 12.7 Participates in professional development (e.g., peer feedback, mentorship/preceptorship, conference attendance, research).