

Exam Blueprint and Specialty Competencies

Introduction – Blueprint for the Gerontological Nursing Certification Exam

The primary function of the blueprint for the CNA Gerontological 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 gerontological 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 gerontological 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 Gerontological 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 Gerontological Nursing Certification Exam, the content consists of the competencies of a fully competent practising gerontological 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 Gerontological 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 gerontological nurses, the following assumptions, based on current national standards for nursing practice, were made:

The client

- The definition of “older adult” varies across individuals, societies, cultures and/or geographic regions.
- The client may be an individual, a family, a group, a community and/or a population.
- The older adult is viewed comprehensively within the physiological, psychological, functional, social, cultural, developmental, environmental and spiritual dimensions of a total life experience.
- The client and/or substitute decision-maker is actively involved in determining goals of care and subsequent interventions by participating in shared decision-making to make informed decisions that are consistent with personal values and preferences to the extent that they desire.

The environment

Gerontological nursing:

- Takes place in a variety of settings across the continuum of care;
- Occurs within a socio-political and/or legal context; and
- Is provided in the context of teams that include clients, significant others, formal and informal caregivers, volunteers and interprofessional team members.

The gerontological nurse

The gerontological nurse:

- Is a registered nurse (RN) who works with older adults;
- Promotes safe, efficient, evidence-informed and effective health-care programs/services for older adults;
- Practises and advocates for client-centred care;
- Works in partnership with older adults to incorporate their individual preferences, expectations, needs and experiences into the goals of care and subsequent interventions;

- Collaborates with the interprofessional team;
- Uses evidence-informed, reliable, validated and standardized measurement tools;
- Applies relevant theoretical frameworks and an evolving and specialized body of knowledge;
- Pursues lifelong learning to maintain competence in the provision of quality gerontological nursing care;
- Contributes to the development of new specialty knowledge and the evaluation of current knowledge through research and quality improvement activities;
- Engages in specialty knowledge translation and transfer;
- Bases practice on codes of ethics, jurisdictional standards of practice and legal requirements;
- Provides guidance, support, education, leadership and supervision to care providers;
- Uses a variety of approaches to enhance awareness about issues that impact the health of older adults;
- Participates in health promotion activities for older adults;
- Advocates for the rights of older adults;
- Recognizes the impact of the social determinants of health;
- Establishes therapeutic relationships with older adults, considering processes of care and their associated developmental tasks;
- Recognizes normal age-related changes, common conditions and diseases, and atypical presentations;
- Recognizes the impact of values, beliefs and judgments on care; and
- Engages in effective, respectful and compassionate communication when interacting with older adults.

Health

- The definitions of health vary greatly and are influenced by culture and where people are in their lifespan.
- Wellness involves a person's whole being, including physiological, psychological, functional, social, cultural, developmental, environmental and spiritual components.
- Health is a personal concept and is based on the older adult's perspectives, beliefs and values.

Competency Categories

The competencies are classified under a seven-category scheme commonly used to organize gerontological nursing.

Some of the competencies lend themselves to one or more of the categories; therefore, these seven 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 Gerontological 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
Culture and Human Diversity	4-11%
Assessment	18-25%
Health Promotion and risk Reduction	21-28%
Illness and Disease Management	21-28%
Ethical, Legal and Health System Issues	5-12%
Professional Practice	3-7%
Information and Health Technologies	3-7%

Technical Specifications

In addition to the specifications related to the competencies, other variables are considered during the development of the Gerontological 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 age and gender, 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 Gerontological Nursing Certification Exam, 65 to 80 per cent of the questions are presented as independent questions and 20 to 35 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 Gerontological 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 gerontological 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.

The following table presents the distribution of questions for each level of cognitive ability.

² These levels are adapted from the taxonomy of cognitive abilities developed in Bloom (1956).

Table 2: Distribution of Questions for Each Level of Cognitive Ability

Cognitive Ability Level	Percentage of questions on Gerontological Nursing Exam
Knowledge/Comprehension	15-25%
Application	45-55%
Critical Thinking	25-35%

Contextual Variables

Client Age and Gender: The age of the client will be 65 years and over and will be determined by the health situations presented in the questions. The questions will divide equally between gender

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

Health-Care Environment: It is recognized that gerontological nursing is practiced in a variety of settings. 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 Gerontological Nursing Certification Exam is the product of a collaborative effort between CNA, ASI and a number of gerontological nurses across Canada. Their work has resulted in a compilation of the competencies required of practising gerontological nurses and has helped determine how those competencies will be measured on the Gerontological Nursing Certification Exam. A summary of these guidelines can be found in the summary chart Gerontological Nursing Certification Development Guidelines.

Gerontological 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

Gerontological Nursing Exam Development Guidelines

STRUCTURAL VARIABLES		
Examination Length and Format	Approximately 165 multiple choice questions	
Question Presentation	65-80% independent questions 20-35% case-based questions	
The Cognitive Domain	Knowledge/Comprehension Application Critical Thinking	15-25% of questions 45-55% of questions 25-35% of questions
Competency Categories	Culture and Human Diversity Assessment Health Promotion and Risk Reduction Illness and Disease Management Ethical, Legal and Health System Issues Professional Practice Information and Health Technologies	4-11% of questions 18-25% of questions 21-28% of questions 21-28% of questions 5-12% of questions 3-7% of questions 3-7% of questions
CONTEXTUAL VARIABLES		
Client Age and Gender	The age of the client will be 65 years and over and will be determined by the health situations presented in the questions. The questions will divide equally between gender.	
Client Health Situation	In the development of the Gerontological Nursing Examination, the client is viewed comprehensively within the physiological, psychological, functional, social, cultural, developmental, environmental and spiritual dimensions of a total life experience.	
Health-Care Environment	It is recognized that gerontological nursing is practiced in a variety of settings. The health-care environment is specified only where it is required for clarity or in order to provide guidance to the examinee.	

The Gerontological Nursing Exam

List of Competencies

Culture and Human Diversity

The gerontological nurse:

- 1-1 Ensures quality of care tailored to the individualized needs of older adults, including:
 - 1-1a Family (e.g., family composition and dynamics, intergenerational relationships, older adult as primary caregiver, geographical dispersion, surrogate families, family expectations of care)
 - 1-1b Diverse communities (e.g., veterans, Aboriginal peoples, members of religious and/or cultural groups, immigrants, lesbian, gay, bisexual or transgender (LGBT) persons)
 - 1-1c Vulnerable populations (e.g., intellectually, developmentally and/or physically challenged clients, clients with mental illness, substance abusers, inmate populations, homeless, refugees, economically disadvantaged populations)

Assessment

The gerontological nurse:

- 2-1 Assesses older adults in the following areas:
 - 2-1a Physiological (e.g., age-related changes, common conditions, atypical presentation, diagnostics, nutrition, infectious diseases, continence, sleep)
 - 2-1b Functional (e.g., activities of daily living, instrumental activities of daily living, mobility, ability to communicate)
 - 2-1c Cognitive (e.g., memory, attention, processing time, perceptual disturbances, orientation, age-associated memory impairment)
 - 2-1d Psychological (e.g., previous coping patterns, mood and affect, decision-making, history of mental illness, developmental stage, response to life events, depression scales, risk of self-harm, suicidal ideation, grief and loss)
 - 2-1e Nutritional (e.g., food preferences, allergies, swallowing, nutritional status, weight, oral health, intake)
 - 2-1f Social/cultural (e.g., roles, relationships, formal/informal supports, cultural beliefs, education, leisure, literacy, income, lifestyle, intimacy/sexuality, life history)
 - 2-1g Spiritual (e.g., religious affiliation, practices, spiritual values and beliefs, spiritual distress)

- 2-1h Sexual (e.g., sexual orientation, relationships, need for intimacy and privacy, gender identity, sexual dysfunction)
 - 2-1i Environmental (e.g., living arrangements, living conditions, location, physical layout, accessibility, exposure to pollutants, home assessments)
 - 2-1j Abuse (e.g., indicators of neglect, caregiver factors, corroborative history, indicators of emotional, physical, sexual, psychological and financial abuse)
 - 2-1k Pain (e.g., manifestations, pain scales, pain types, impact on function and quality of life, response to non-pharmacological and pharmacological interventions)
 - 2-1l Risk factors (e.g., falls, altered nutrition, tobacco, alcohol and/or other substance use, immunization status, use of restraints, comorbidities, frailty)
- 2-2 Assesses medication(s) (e.g., prescribed, over-the-counter, complementary, supplements) in the following areas:
- 2-2a Use (e.g., adherence, polypharmacy, history, client understanding, administration methods, medication review, age-related changes affecting medications)
 - 2-2b Response to pharmacological intervention (e.g., effectiveness, interactions, adverse effects)
 - 2-2c Diagnostic results and implications related to treatment (e.g., adjustments, dosing, titration, toxicity)

Health Promotion and Risk Reduction

The gerontological nurse:

- 3-1 Utilizes evidence-informed practice to promote health and prevent illness (e.g., immunizations, self-care management, education, healthy eating, health screening, lifestyle counselling, leisure)
- 3-2 Selects evidence-informed interventions regarding the following:
 - 3-2a Functional abilities (e.g., exercise programs, referrals to formal and informal resources, diet modifications, adaptive clothing, lighting, strength and balance exercises)
 - 3-2b Cognitive functioning (e.g., cueing, reminiscing, validation, behavioural response approaches, pharmacological)
 - 3-2c Environment (e.g., falls prevention, structural modifications, home adaptations, exit alarms, raised toilet seats, transfer poles, thermoregulation, emergency preparedness planning, removal of hazards)
 - 3-2d Emotional and spiritual well-being (e.g., facilitation of spiritual practices, referrals, attentive listening, instilling hope, life review)
 - 3-2e Sleep/rest (e.g., sleep hygiene, accommodating lifelong patterns, pharmacological)
 - 3-2f Coping (e.g., counselling, support groups, stress reduction, conflict resolution)

- 3-2g Addictions/substance abuse (e.g., support groups/programs, treatment centres, counselling, smoking cessation programs, psychosocial support, community resources, harm reduction strategies)
- 3-2h Urinary and bowel elimination (e.g., continence strategies, diet, hydration, mobility, hygiene, medication effects)
- 3-2i Sexual function (e.g., education, safety, resources, advocacy)
- 3-2j Abuse (e.g., safety plans, respite, counselling, resources)
- 3-2k Iatrogenesis (e.g., infection, deconditioning, adverse effects of therapeutic and diagnostic regimens, relocation stress syndrome, age-friendly environments, medication review)
- 3-2l Integumentary (e.g., healthy skin practices, pressure reduction strategies, environmental modification to avoid trauma)
- 3-2m Nutrition (e.g., affordable and nutritious food, supplements, dysphagia management, hydration, weight management, bariatrics)
- 3-2n Pharmacological and non-pharmacological therapies (e.g., medication reconciliation, counselling regarding safe practices, polypharmacy, complementary therapies)
- 3-2o Restraint use (e.g., physical, chemical, alternatives to restraints, regular review and monitoring, restraint reduction)
- 3-2p End-of-life transitions (e.g., advance directives, culturally sensitive care and communication, pain/symptom management)

Illness and Disease Management

The gerontological nurse:

- 4-1 Assesses and determines evidence-informed interventions in the following areas:
 - 4-1a Sensory (e.g., macular degeneration, cataracts, glaucoma, tinnitus, chronic sinusitis, retinal detachment)
 - 4-1b Integumentary (e.g., lesions, wounds, cellulitis, psoriasis, fungal)
 - 4-1c Gastrointestinal (e.g., diarrhea, bleeds, ulcers, obstructions, reflux disease, hemorrhoids, diverticulitis, infections, pernicious anemia)
 - 4-1d Musculoskeletal (e.g., osteoporosis, osteoarthritis, rheumatoid arthritis, foot deformities, degenerative disc disease, fractures, prosthesis)
 - 4-1e Cardiovascular (e.g., congestive heart failure, pulmonary edema, hypertension, blood disorders, myocardial infarction, coronary artery disease)
 - 4-1f Respiratory (e.g., chronic obstructive pulmonary disease (COPD), asthma, tuberculosis, pneumonia, sleep apnea, infections)
 - 4-1g Genitourinary (e.g., incontinence, renal failure, prolapse, benign prostatic hypertrophy, vaginitis, sexually transmitted infections)

- 4-1h Endocrine/metabolic (e.g., thyroid dysfunction, diabetes mellitus, metabolic syndrome)
- 4-1i Neurological (e.g., acquired brain injuries, cerebrovascular disorders, Parkinson's disease, multiple sclerosis, seizures, vertigo, neuropathy, infections)
- 4-1j Delirium (e.g., risk, prevention, hypo/hyperactive, causes, manifestations, consequences)
- 4-1k Dementia (e.g., types, stages, behavioural manifestations)
- 4-1l Mental illness (e.g., anxiety, depression, post-traumatic stress disorder, schizophrenia, personality disorders, bipolar disorder)
- 4-1m Cancer (e.g., prostate, breast, lung, skin, colon, bladder, lymphoma, leukemia)
- 4-1n Infections (e.g., prevention, surveillance, outbreaks/epidemics, infection control, mandatory reporting, antibiotic-resistant organisms)

Ethical, Legal and Health System Issues

The gerontological nurse:

- 5-1 Recognizes and understands the implications of ethical, legal and health system issues in the following areas:
 - 5-1a Decision-making (e.g., end-of-life issues, autonomy, capacity, informed consent, substitute decision-makers, advance directives, guardianship, allocation of resources, right to live at risk, negotiating goals of care, decisions regarding nutrition and hydration, resuscitation status, symptom management)
 - 5-1b Restraints (e.g., chemical, physical, environmental)
 - 5-1c Potential for abuse (e.g., crime, fraud, neglect, exploitation, coercion, mandatory reporting)
 - 5-1d Approaches to care (e.g., person-centred care, models of care, restorative care, demographics of aging, geographical- and climate-related influences, biases/prejudices, ageism)
 - 5-1e Confidentiality (e.g., inappropriate use of social media, breaches of privacy, privacy legislation)

Professional Practice

The gerontological nurse:

- 6-1 Recognizes the implications of interprofessional practice:
 - 6-1a Scope of practice (e.g., education, delegation, assignment, supervision, role clarity)
 - 6-1b Collaboration (e.g., effective communication, collaborative problem-solving, team-building, negotiating responsibilities, advocacy, stakeholder engagement)

- 6-2 Engages in professional growth (e.g., certification, membership in professional associations, reflective practice, continuing education, lifelong learning, mentorship, preceptorship)

Information and Health Technologies

The gerontological nurse:

- 7-1 Uses relevant technologies:
- 7-1a Assistive/adaptive devices (e.g., communication devices, alerting devices, hearing aids, portable talking keyboards)
 - 7-1b Health informatics (e.g., telehealth, information resources, electronic assessments, electronic health records)
 - 7-1c Emergency and disaster preparedness (e.g., emergency response planning, fire prevention, evacuation, power outage, violence)