



Federation of Dental Hygiene Regulators of Canada

**BLUEPRINT FOR THE
NATIONAL DENTAL HYGIENE
CERTIFICATION EXAMINATION**

February 2023

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I. INTRODUCTION

In 1982 the Canadian Dental Hygienists' Association (CDHA) decided to explore the possibility of a certification program for Canadian dental hygienists. The purpose of the program was to:

- Create a nationally recognized standard.
- Enhance the ability of dental hygienists to become licensed in all Canadian jurisdictions.
- Ensure quality assurance in the provision of dental hygiene services across Canada.

In 1984, the CDHA Board of Directors endorsed the concept of a single national dental hygiene standard for entry to practice. An ad hoc committee began the investigation and development of a separate organization to administer a national certification program. This led to the establishment of the National Dental Hygiene Certification Board (NDHCB) in 1995.

The NDHCB began the development of a national certification program and the national written examination. In 1995, the NDHCB published the first competency list and blueprint, and in 1996, they administered the first National Dental Hygiene Certification Examination (NDHCE). Since then, the NDHCE has been administered by across Canada a minimum of twice a year in both official languages.

Certification examinations are often used in credentialing to determine whether the essential knowledge and skills have been mastered by the candidate and for identifying practitioners who have met the particular standards required (AERA, APA & NCME, 2014). The purpose of the NDHCE is to determine the competence of candidates to practice dental hygiene without risk to the public. The provincial/territorial registering/licensing authorities require additional eligibility criteria (e.g., completion of an approved dental hygiene educational program, clinical examination, etc.) to determine the eligibility to practice in each jurisdiction.

Blueprint

A blueprint provides guidelines on the key features of an examination including content covered and the emphasis allocated to each content area examination (Raymond & Grande, 2019). It also provides information regarding competency groups and weightings, structural and contextual variables, and other development specifications (Raymond & Grande, 2019). The NDHCE Blueprint provides detailed instructions and guidelines on how competencies (e.g., knowledge, skills, attitudes, judgment) are to be expressed within the examination to make accurate decisions regarding the candidates' level of competence in the practice of dental hygiene.

The NDHCE Blueprint has two major components:

- 1) The Competency Framework, which defines the national dental hygiene entry-level competencies to be measured, and

- 2) The Examination Development Guidelines, which outlines structural and contextual variables.

The Blueprint includes a [summary chart](#) that summarizes the examination guidelines.

To ensure examination validity, the NDCHE Blueprint must be based on the most current competencies required to practice dental hygiene safely and effectively in Canada. The NDHCE Blueprint is reviewed and updated on a regular cycle to ensure requirements for competent and safe dental hygiene practice are current and relevant.

II. TECHNICAL SPECIFICATIONS

A. COMPETENCY FRAMEWORK

This chapter, divided into two sections, presents the technical specifications that guide the development of the Examination. In the first section, issues related to the competencies are addressed. The second section describes the guidelines regarding the representation of the structural and contextual variables in the Examination.

A fundamental component of a criterion-referenced approach to testing is the comprehensive description of the content domain being measured. In the case of the Examination, the content domain of interest consists of the **competencies** of a competent practicing entry-level dental hygienist. These competencies form the basis of the Examination.

As indicated in the [Introduction](#), no changes have been made to the competencies that are used to create versions of the Examination. **The list of competencies remains the same as those from the 2016 NDHCE Competency profile.** This section describes the way the competencies have been grouped together, the manner in which they are to be sampled for creating versions of the Examination, and how the results will be reported to the candidate.

THE NDHCE LIST OF COMPETENCIES

The 2016 NDHCE Competency Profile comprises 82 competencies classified under different domains, and according to their relative order of importance. **The Blueprint for the NDHCE (2023) is based on the 2016 NDHCE Competency profile, the competency profile used in the Blueprint for the NDHCE (2016, updated in 2018).**

DENTAL HYGIENE IN CANADA

For the purpose of developing the NDHCE Competency profile, a number of assumptions were made, and a specific definition of dental hygiene was used. Below are the definitions and the assumptions onto which the competencies are based:

a) Description of the Practice of Dental Hygiene:

Dental hygiene is a health service profession encompassing the theory and practice of preventive, therapeutic, and educational services/interventions/programs in order for clients to achieve better oral and overall health.

Dental hygiene practice is a collaborative relationship in which the dental hygienist works with the client, dental and other health professionals to achieve and maintain optimal oral health as an integral part of well-being. Dental hygienists work in a wide variety of practice settings, including in their own practice or independently within a dental health team.

In Canada, there are six dental hygiene practice key responsibility areas:

Administration: Refers to management processes and policy and protocol development.

Change Agent: Refers to taking a leadership role in managing the process of change. This can involve getting things started (catalyst); offering ideas for solving a problem (solution giver); helping individuals find and make the best use of resources (resource link); or understanding the change process (process helper). Acting as a change agent may also involve advocacy and promoting and supporting clients' rights and well-being.

Clinical Therapy: Refers to the primary interceptive, therapeutic, preventive, and ongoing care procedures that help to enable individuals to achieve optimal oral health that contribute to overall health.

Education: Refers to the application of teaching and learning principles to facilitate the development of specific attitudes, knowledge, skills and behaviours.

Health Promotion: Refers to the process of enabling individuals and communities to improve their health through the development of awareness, self-responsibility and control over internal and external factors.

Research (scientific inquiry): Refers to the strategies for systematic inquiry and reporting that supplements, revises and validates dental hygiene practice and may contribute to the knowledge base of other disciplines.

The ***dental hygiene process of care*** utilizes a system approach that includes the assessment and diagnosis of the clients' needs, formulation of a dental hygiene care plan, implementation of the dental hygiene services/interventions/programs outlined in the care plan and the subsequent evaluation of dental hygiene services/interventions/programs.

b) Definition of a Dental Hygienist:

A dental hygienist is a primary oral health care provider who specializes in services related to:

- Clinical therapy
- Oral health education
- Health promotion

The dental hygienist provides culturally sensitive oral health services for diverse clients throughout their lifespan and works collaboratively with clients, parents/guardians, health professionals, and other stakeholders to enhance the oral and overall health of these clients.

ASSUMPTIONS

An Entry-Level Dental Hygienist:

- Meets the criteria for licensure/registration within the Canadian jurisdiction in which they intend to practice.

- Practices dental hygiene autonomously.
- Has the knowledge, skills, and ability to practice as a primary oral health care provider.
- Is familiar with the Canadian healthcare system.
- Uses a dental hygiene process of care model to deliver client-centered, safe, and competent dental hygiene services.
- Practices with a foundation of evidence-informed knowledge and theory.
- Practices collaboratively with clients, colleagues and other health care professionals.
- Is legally, ethically and professionally accountable for their practice and must be able to recognize personal limitations.

Clients of an Entry-Level Dental Hygienist:

- May be individuals, families, groups, organizations, or communities.
- Include individuals across the lifespan.
- Are unique and diverse in needs, motivations, resources, and determinants of health.
- Are active participants who make informed decisions about their dental hygiene care and services.
- Are consumers who expect effective dental hygiene care and services.
- Have a right to recourse in the event of unsatisfactory dental hygiene care.

Practice Environments of an Entry-Level Dental Hygienist:

- Include a variety of practice settings (e.g., general practice, specialty practice, community settings, teaching institutions, hospitals, etc.).
- Are influenced by physical, social, economic, and cultural factors.
- Are dynamic.

COMPETENCY PROFILE

The NDHCE Competency Profile comprises 82 competencies under 8 different categories. The categories are as follows: Responsibility and Accountability, Client and Professional Relationships, Health & Safety and Practice Management, Foundational Knowledge, Assessment and Diagnosis, Planning, Implementation, and Evaluation. See [Appendix B](#) for the complete competency profile.

COMPETENCY GROUPS AND WEIGHTINGS

In 2022, a Competency Rating Survey was sent to a group of Canadian dental hygiene stakeholders, including education program directors, provincial regulatory colleges, and dental hygiene associations. The survey results were used to determine the relative importance of the 2016 NDHCE competencies. Respondents to the survey were asked to rate each competency according to two parameters: degree of criticality and frequency of application of the competency in practice. Based on the ratings obtained in the survey and on the expert opinion of the Blueprint Revision Committee, the competencies were placed into four groups according to their relative criticality and frequency of application (See Table 1). These groups determine the relative weights to be given to the each of the competencies in the Examination. The Examination List of Competencies (by Group) is presented in [Appendix C](#).

TABLE 1: COMPETENCY GROUPING

| | 1. Very Critical | 2. Less Critical |
|----------------------------|-------------------------|-------------------------|
| A. Higher Frequency | Group 1-A | Group 2-A |
| B. Lower Frequency | Group 1-B | Group 2-B |

The National Dental Hygiene Certification Examination Competencies are grouped on the basis of the ratings obtained in the national competency rating survey and finalized by the Blueprint Revision Committee.

COMPETENCY SAMPLING

Each version of the Examination will consist of 200 items from which 170 items will be selected for each Examination according to the distribution sampling presented in Table 2 and 30 items will be considered experimental items that will not count towards the candidate final score (see "Examination Length and Format" section).

TABLE 2: COMPETENCY SAMPLING (N = 170 items)

| | | |
|-------------------|------------------------|----------------------------------|
| Group 1-A: | 22 competencies | 35-45% of the Examination |
| Group 1-B: | 20 competencies | 25-35% of the Examination |
| Group 2-A: | 20 competencies | 15-25% of the Examination |
| Group 2-B: | 20 competencies | 5-15% of the Examination |

B. EXAMINATION DEVELOPMENT GUIDELINES

In addition to the specifications related to the competencies, other variables are considered during the development of the Examination. This section presents the guidelines for the following two types of variables:

Structural Variables: Structural variables include those characteristics that determine the general appearance and design of the Examination. They define the length of the Examination, the format/presentation of the examination items (e.g., multiple-choice format, item presentation), and special functions of examination items (e.g., to measure a competency within the cognitive domain).

Contextual Variables: Contextual variables qualify the content domain by specifying the contexts in which the examination items will be set (i.e., age of the client and health care environment).

STRUCTURAL VARIABLES

Examination Length and Format:

The Examination is a fully computer-based examination and is administered over a period of 4 hours. The Examination consists of a total of 200 multiple-choice items from which 170 items are scored and count towards the candidate's results and the remaining 30 items are experimental questions included for statistical gathering purposes only and do not count towards the candidate's overall results.

Item Presentation:

The multiple-choice items are presented in one of two formats: independent and case-based items. Case-based items are a set of a minimum of four to six items associated with a brief case scenario (e.g., a description of the client's age, gender, general and oral health issues, etc.). Items presented on the Examination will also reflect current dental hygiene practices including dental radiographs, intraoral photographs, and clients' dental chart.

The scored portion of the Examination, which includes 170 items, represents 70-80% of independent items and 20-30% of case-based items.

Cognitive Domains:

To ensure that competencies are measured at different levels of cognitive ability, each item on the Examination is classified into one of three levels: Knowledge/Comprehension; Application; or Critical Thinking. These cognitive domains are adapted from the *Taxonomy of Educational Objectives, the classification of educational goals – Handbook I: Cognitive Domains* from B.S. Bloom et al (1956).

1) Knowledge/Comprehension

This domain combines the ability to recall previously learned material and to understand its meaning. It includes mental abilities such as knowing and understanding definitions, facts, and principles.

2) Application

This domain refers to the ability to apply knowledge and learning to new or practical situations. It includes applying rules, methods, principles, and dental hygiene theories in providing care to clients.

3) Critical Thinking

This domain deals with higher-level thinking processes. It includes the ability to judge the relevance of data, to analyse and synthesize information and to solve problems (e.g., identifying priorities of care, evaluating the effectiveness of interventions provided). The dental hygienist 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. (See Table 3 for the distribution of items for each cognitive domain)

TABLE 3: TARGET PERCENTAGES OF ITEMS FOR EACH COGNITIVE LEVEL

| Cognitive Domains | Percentage of Items |
|--------------------------|----------------------------|
| Knowledge/Comprehension | 10-20% |
| Application | 55-65% |
| Critical Thinking | 20-30% |

CONTEXTUAL VARIABLES

The National Dental Hygiene Certification Examination represents the demographic and cultural realities of the Canadian population that requires dental hygiene care in a variety of practice settings.

a) Client Age:

The only contextual variable specified for the Examination is the **age** of the clients. Specifications for client age groups, listed in Table 4 as percentage ranges, will serve as guidelines for test development. It is to be noted that while the client gender is no longer specified as a contextual variable for the Examination, an effort will be made during examination assembly to include a mix of items representing a variety of client genders to reflect the demographic characteristics of the population encountered by the dental hygienist.

TABLE 4: TARGET PERCENTAGES FOR CLIENT AGE

| Age Group | Percentage of Items |
|---------------------------------|---------------------|
| Child & Adolescent (0-18 years) | 10-30% |
| Adult (19-64 years) | 40-60% |
| Older Adult (65+ years) | 20-40% |

b) Client Culture:

The Examination is designed to include items representing the variety of cultural backgrounds encountered while providing dental hygiene care in Canada. While the Examination does not test candidates' knowledge of specific values, beliefs, and practices linked to individual cultures, it is intended to measure awareness, sensitivity, and respect for diverse cultural values, beliefs, and practices. Cultural issues are integrated within the Examination without introducing cultural stereotypes or biases.

c) Practice Setting:

Since the profession of dental hygiene can be practiced in a variety of settings and most of the competencies are not setting dependent, the practice setting is only specified when required.

C. PERFORMANCE PROFILE: FEEDBACK CATEGORIES

After writing the NDHCE, all candidates who fail the examination will receive feedback on their performance. The NDHCE Performance Profile provides feedback on the four (4) competency sampling groups (p.8), the eight (8) content categories (p.11), and the three (3) cognitive domains (p.9). See Table 5 for the content category breakdown including the number of competencies that fall under each category and its relative percentage:

TABLE 5: CONTENT CATEGORIES FOR THE DEVELOPMENT OF THE PERFORMANCE PROFILE

| CATEGORIES | Total Number of Competencies | Percentage of Items |
|--|-------------------------------------|----------------------------|
| 1. RESPONSIBILITY & ACCOUNTABILITY | 8 | 7-13% |
| 2. CLIENT & PROFESSIONAL RELATIONSHIPS | 4 | 2-8% |
| 3. HEALTH & SAFETY AND PRACTICE MANAGEMENT | 5 | 3-9% |
| 4. FOUNDATIONAL KNOWLEDGE | 14 | 14-20% |
| 5. ASSESSMENT AND DIAGNOSIS | 19 | 20-26% |
| 6. PLANNING | 7 | 6-11% |
| 7. IMPLEMENTATION | 18 | 19-25% |
| 8. EVALUATION | 7 | 6-11% |

III. CONCLUSION

The *Blueprint for the National Dental Hygiene Certification Examination (2023)* is the outcome of the combined efforts of the FDHRC, DHRAs, CDAC, CDHA, provincial/territorial dental hygiene associations, accredited Canadian dental hygiene educational programs, practicing dental hygienists, and the Measure Learning company. The compilation and validation of the competencies required of a practicing dental hygienist in Canada and the production of guidelines for the measurement of these competencies were made possible through a collaborative process.

It is recognized that the dental hygiene profession will continue to evolve. The NDHCE Blueprint (i.e., the competencies and the test development guidelines) will require periodic revision to reflect the most current scope of practice and competencies for entry-level dental hygienists in Canada.

The FDHRC wishes to thank everyone who contributed to the creation of the 2022 Blueprint. Thanks are extended to the Blueprint Revision Committee and to everyone who participated in the validation survey.

IV. SUMMARY CHART

NATIONAL DENTAL HYGIENE CERTIFICATION EXAMINATION DEVELOPMENT GUIDELINES

| COMPETENCIES | | | |
|--------------------------------------|--|--------------------------------------|-------------------------------------|
| Group 1-A: 35-45% of items | Group 1-B: 25-35% of items | Group 2-A: 15-25% of items | Group 2-B: 5-15% of items |
| STRUCTURAL VARIABLES | | | |
| Examination Length and Format | <p>It is a computer-administered examination.</p> <p>The examinee will have 4 hours to complete the examination.</p> <p>The examination consists of 200 objective items (i.e., multiple-choice questions), from which 170 will be scored for each examinee. The other 30 items are experimental and will be tested for statistics gathering only (these items will not count towards the final score).</p> | | |
| Item Presentation | <p>70-80% independent items</p> <p>20-30% case-based items</p> | | |
| Cognitive Ability Levels | <p>Knowledge/Comprehension: 10-20% of items</p> <p>Application: 55-65% of items</p> <p>Critical Thinking: 20-30% of items</p> | | |
| Competency Categories | <ol style="list-style-type: none"> 1. Responsibility and Accountability 2. Client Professional Relationships 3. Health & Safety and Practice Management 4. Foundational Knowledge 5. Assessment and Diagnosis 6. Implementation 7. Planning 8. Evaluation | | |
| CONTEXTUAL VARIABLES | | | |
| Client Age | <p>Child & Adolescent (0-18 years): 10-30% of items</p> <p>Adult (19-64 years): 40-60% of items</p> <p>Older Adult (65+ years): 20-40% of items</p> | | |
| Client Culture | <p>Items are included that measure awareness, sensitivity, and respect for different cultural values, beliefs, and practices, without introducing stereotypes or biases.</p> | | |
| Practice Settings | <p>Since dental hygiene can be practiced in a variety of settings and most of the competencies are not setting dependent, the practice setting is only specified when required.</p> | | |

APPENDIX A

HISTORY OF THE NDHCE BLUEPRINT

1995

A group of subject-matter experts from across Canada, including representation of a variety of dental hygiene practice roles and both official languages, drafted the original list of competencies required of an entry-level dental hygienist in Canada. The Dental Hygiene Competency List was reviewed and validated by over 100 dental hygienists and representatives of all provincial dental hygiene regulatory authorities.

1999

The Dental Hygiene Competency List was reviewed by the NDHCB's Examination Committee (EC). A new list of competencies was produced and validated with a nationwide survey of practicing dental hygienists.

2004-2005

The EC completed a review of The Dental Hygiene Competency List. Focus group validation took place in Eastern (Nova Scotia), Central (Ontario) and Western (Alberta) regions in Canada. The focus group input was reviewed by the EC and integrated into a nationwide validation survey of practicing dental hygienists. The EC used the results of this validation survey, under the guidance of a third-party psychometrician, to produce the Blueprint for the National Dental Hygiene Certification Examination (2005).

2010

The *Entry to Practice Competencies and Standards for Canadian Dental Hygienists* document was published. This publication of the competencies was the result of a collaborative project involving the CDHA, the NDHCB, the Federation of Dental Hygiene Regulatory Authorities (FDHRA), the Commission on Dental Accreditation of Canada (CDAC), and dental hygiene educators from across Canada.

2011

The Blueprint for the National Dental Hygiene Certification Board Examination (2011) was published. The 2011 NDHCE Blueprint competency list was based on the 2010 *Entry-to-Practice Competencies and Standards for Canadian Dental Hygienists*. The EC completed a review of the 2010 Entry-to-Practice Competencies and Standards for Canadian Dental

Hygienists, a list of blueprint competencies was developed, followed by the completion of a nationwide validation survey by all provincial DHRAs, accredited Canadian dental hygiene educational programs, provincial dental hygiene associations (except for Quebec); as well as the CDHA. The EC used the results of the survey, under the guidance of a third-party psychometrician, to produce the Blueprint for the NDHCE (2011).

2016

The Blueprint for the National Dental Hygiene Certification Examination (2016) was published. A review of the competency list and dental hygiene practices in Canada was completed by the EC. A new list of competencies, the 2016 NDHCE Competency Profile, was compiled by the EC then reviewed by all provincial Dental Hygiene Regulatory Authorities (DHRAs), all levels of dental hygiene professional associations, dental hygiene educational programs and other appropriate stakeholders. Subsequently, a validation survey was distributed to the above stakeholder and the EC used the survey results, along with the guidance of a third-party psychometrician, to produce the Blueprint for the NDHCE (2016).

2018

Minor edits were made to the Blueprint for the NDHCE (2016), and an updated Blueprint was published.

2020

COVID pandemic placed many NDHCB projects on hold.

2021

The new *Entry-to-Practice Canadian Competencies for Dental Hygienists* (EPCCoDH) was published in November of 2021 by the FDHRC.

2022

In January 2022, the Federation of Dental Hygiene Regulators of Canada (FDHRC) amalgamate with the National Dental Hygiene Certification Board (NDHCB). The new organization operates as the FDHRC.

2023

The FDHRC publishes a revised Blueprint for the National Dental Hygiene Certification Examination (2023) based on the Blueprint Revision Committee's review of the existing Blueprint for the NDHCE (2016, updated in 2018) and results of a stakeholder survey

completed in 2022. **The Blueprint for the NDHCE (2023) is based on the 2016 NDHCE Competency Profile which was used in the Blueprint for the NDHCE (2016, updated 2018).** Although a new competency profile was published in 2021, time is required to incorporate the new EPCCoDH (2021) into dental hygiene educational programs in Canada and the Blueprint for the NDHCE (2016, updated in 2018) is nearing the end of its lifecycle.

The FDHRC will be publishing a new Blueprint following the full integration of the EPCCoDH (2021) into dental hygiene educational programs and accreditation in Canada.

APPENDIX B

THE NATIONAL DENTAL HYGIENE CERTIFICATION EXAMINATION LIST OF COMPETENCIES (BY CATEGORY)

1. RESPONSIBILITY AND ACCOUNTABILITY

The Dental Hygienist:

- 1.01 Applies ethical principles.
- 1.02 Complies with current national [jurisprudence](#) requirements and relevant legislation, standards, and codes.
- 1.03 Works within scope of practice and own level of competence, both independently and as part of an [interprofessional team](#).
- 1.04 Maintains privacy and confidentiality in accordance with relevant legislation.
- 1.05 Maintains documentation and records consistent with relevant legislation.
- 1.06 Recognizes incompetent or unsafe practice of self and others and responds appropriately.
- 1.07 Implements [quality improvement](#) activities based on self-assessment of own professional learning needs.
- 1.08 Incorporates new evidence from research, clinical expertise, and other relevant resources to support dental hygiene practice.

2. CLIENT AND PROFESSIONAL RELATIONSHIPS

The Dental Hygienist:

- 2.01 Demonstrates sensitivity to client [diversity](#).
- 2.02 Implements communication approaches (e.g., verbal, nonverbal, visual, written and electronic forms of communication) for [clients](#) and [stakeholders](#) based on their characteristics, needs, linguistic level, and health literacy.
- 2.03 Collaborates with communities, interprofessional teams, and stakeholders to improve oral health outcomes.
- 2.04 Acts as a client [advocate](#).

3. HEALTH & SAFETY AND [PRACTICE MANAGEMENT](#)

The Dental Hygienist:

- 3.01 Applies principles of infection prevention and control.
- 3.02 Applies principles of risk reduction for client, colleague, and practitioner safety, health and well-being.
- 3.03 Takes responsibility for the use, maintenance, and disposal of equipment and materials involved in the delivery of [dental hygiene services](#).
- 3.04 Uses information systems (e.g., health records, online pharmacology database, financial records, etc.) for the collection, retrieval, and storage of data to support dental hygiene practice.

- 3.05 Manages time, resources (e.g., financial, materials, personnel, etc.), and priorities to ensure effective dental hygiene practice.

4. FOUNDATIONAL KNOWLEDGE

The Dental Hygienist:

- 4.01 Uses knowledge of basic principles of research methods and statistics in dental hygiene practice.
- 4.02 Uses knowledge of the behavioural sciences (e.g., psychology, sociology, etc.) in dental hygiene practice.
- 4.03 Uses knowledge of anatomy, biology, histology, pathology, and physiology in dental hygiene practice.
- 4.04 Uses knowledge of biochemistry and nutrition in dental hygiene practice.
- 4.05 Uses knowledge of immunology and microbiology in dental hygiene practice.
- 4.06 Uses knowledge of pharmacology in dental hygiene practice.
- 4.07 Uses knowledge of periodontology in dental hygiene practice.
- 4.08 Uses knowledge of head/neck anatomy and physiology in dental hygiene practice.
- 4.09 Uses knowledge of oral/dental anatomy and physiology in dental hygiene practice.
- 4.10 Uses knowledge of oral/dental embryology and histology in dental hygiene practice.
- 4.11 Uses knowledge of oral pathology in dental hygiene practice.
- 4.12 Uses knowledge of dental radiography in dental hygiene practice.
- 4.13 Uses knowledge of orthodontics in dental hygiene practice.
- 4.14 Uses knowledge of restorative dentistry, endodontics, prosthodontics, and oral surgery in dental hygiene practice.

5. ASSESSMENT AND DIAGNOSIS

The Dental Hygienist:

- 5.01 Assesses [epidemiological data](#) (e.g., [demographic data](#), [determinants of health](#), etc.).
- 5.02 Assesses health history including prescribed and non-prescribed pharmaceuticals, herbs, and supplements.
- 5.03 Assesses vital signs.
- 5.04 Identifies clients for whom the initiation or continuation of treatment is contraindicated.
- 5.05 Identifies clients at risk for medical emergencies.
- 5.06 Assesses the head and neck region.
- 5.07 Assesses intraoral soft tissues other than the periodontium.
- 5.08 Assesses intraoral hard tissues.
- 5.09 Assesses the periodontium.
- 5.10 Assesses hard and soft deposits.
- 5.11 Identifies [risk factors](#) for diseases including dental, oral, and periodontal pathologies.
- 5.12 Determines the need for radiographs.
- 5.13 Uses additional diagnostic modalities (e.g., photographs, study models, pulpal testing, microbiological testing, caries and oral cancer screening tests, etc.), as needed.
- 5.14 Assesses dietary practices.
- 5.15 Uses oral health indices.
- 5.16 Assesses and [interprets radiographs](#).

- 5.17 Assesses clients' oral health knowledge, beliefs, attitudes, motivation, skills, and barriers to learning as part of the educational process.
- 5.18 Determines the need for consultation with other [professionals](#).
- 5.19 Formulates a [dental hygiene diagnosis](#) using problem solving and decision-making skills.

6. PLANNING

The Dental Hygienist:

- 6.01 Prioritizes clients' needs through a collaborative process involving clients, family, care providers, and others, as needed.
- 6.02 Identifies strategies to minimize the risk of a medical emergency.
- 6.03 Adapts strategies and interventions for clients with diverse needs.
- 6.04 Develops [dental hygiene care plans](#) based on assessment data and [a client-centred approach](#).
- 6.05 Supports clients' autonomy by assisting them in making [informed decisions](#) about dental hygiene services.
- 6.06 Determines the need for client referral to other health professionals.
- 6.07 Develops educational interventions, health promotion strategies, and community oral health programs based on assessment data and a client-centred approach.

7. IMPLEMENTATION

The Dental Hygienist:

- 7.01 Applies principles of instrumentation.
- 7.02 Exposes and processes intraoral and extraoral radiographs.
- 7.03 Teaches clients oral self-assessment techniques.
- 7.04 Provides coaching/advice to clients regarding oral self-care.
- 7.05 Counsels clients regarding tobacco cessation strategies.
- 7.06 Provides clients with information regarding dietary practices.
- 7.07 Implements strategies to manage client pain, anxiety and discomfort, including local anesthesia.
- 7.08 Provides non-surgical periodontal therapy using hand instrumentation.
- 7.09 Provides non-surgical periodontal therapy using powered instrumentation.
- 7.10 Applies anticariogenic agents and therapies.
- 7.11 Applies appropriate chemotherapeutics/pharmacotherapeutics excluding anticariogenic agents.
- 7.12 Takes impressions and fabricates study models, tooth whitening trays, and sports mouthguards.
- 7.13 Provides tooth whitening services.
- 7.14 Takes intraoral and extraoral photographs.
- 7.15 Applies and removes periodontal dressings and removes sutures.
- 7.16 Places temporary restorations.
- 7.17 Responds to medical emergencies.
- 7.18 Implements educational interventions, health promotion strategies, and community oral health programs that meet clients' learning needs.

8. EVALUATION

The Dental Hygienist:

- 8.01 Uses measurable criteria to evaluate outcomes.
- 8.02 Revises dental hygiene care plans, educational interventions, health promotion strategies, and community oral health programs, as needed.
- 8.03 Evaluates the effectiveness of clinical dental hygiene care.
- 8.04 Evaluates the need for client referral to other health professionals.
- 8.05 Provides recommendations to clients regarding their ongoing care.
- 8.06 Evaluates the effectiveness of educational interventions, health promotion strategies, and community oral health programs.
- 8.07 Communicates evaluation outcomes to clients, family, care providers, stakeholders, and others.

APPENDIX C

COMPETENCIES - BY LEVEL OF CRITICALITY & FREQUENCY

GROUP 1A

35-45% of the Examination

The Dental Hygienist:

- 1.02 Complies with current national jurisprudence requirements and relevant legislation, standards, and codes.
- 1.03 Works within scope of practice and own level of competence, both independently and as part of an interprofessional team.
- 1.04 Maintains privacy and confidentiality in accordance with relevant legislation.
- 1.05 Maintains documentation and records consistent with relevant legislation.
- 3.01 Applies principles of infection prevention and control.
- 3.02 Applies principles of risk reduction for client, colleague, and practitioner safety, health and well-being.
- 4.06 Uses knowledge of pharmacology in dental hygiene practice.
- 4.07 Uses knowledge of periodontology in dental hygiene practice.
- 5.02 Assesses health history including prescribed and non-prescribed pharmaceuticals, herbs, and supplements.
- 5.07 Assesses intraoral soft tissues other than the periodontium.
- 5.08 Assesses intraoral hard tissues.
- 5.09 Assesses the periodontium.
- 5.10 Assesses hard and soft deposits.
- 5.11 Identifies risk factors for diseases including dental, oral, and periodontal pathologies.
- 5.12 Determines the need for radiographs.
- 5.16 Assesses and interprets radiographs.
- 5.19 Formulates a dental hygiene diagnosis using problem solving and decision-making skills.
- 6.04 Develops dental hygiene care plans based on assessment data and a client-centred approach.
- 7.01 Applies principles of instrumentation.
- 7.08 Provides non-surgical periodontal therapy using hand instrumentation.
- 7.09 Provides non-surgical periodontal therapy using powered instrumentation.
- 8.03 Evaluates the effectiveness of clinical dental hygiene care.

GROUP 1B

25-35% of the Examination

The Dental Hygienist:

- 1.01 Applies ethical principles.
- 1.06 Recognizes incompetent or unsafe practice of self and others and responds appropriately.
- 3.03 Takes responsibility for the use, maintenance, and disposal of equipment and materials involved in the delivery of dental hygiene services.
- 4.03 Uses knowledge of anatomy, biology, histology, pathology, and physiology in dental hygiene practice.
- 4.08 Uses knowledge of head/neck anatomy and physiology in dental hygiene practice.
- 4.09 Uses knowledge of oral/dental anatomy and physiology in dental hygiene practice.
- 4.11 Uses knowledge of oral pathology in dental hygiene practice.
- 4.12 Uses knowledge of dental radiography in dental hygiene practice.
- 5.03 Assesses vital signs.
- 5.04 Identifies clients for whom the initiation or continuation of treatment is contraindicated.
- 5.05 Identifies clients at risk for medical emergencies.
- 5.06 Assesses the head and neck region.
- 5.18 Determines the need for consultation with other professionals.
- 6.02 Identifies strategies to minimize the risk of a medical emergency.
- 6.05 Supports clients' autonomy by assisting them in making informed decisions about dental hygiene services.
- 6.06 Determines the need for client referral to other health professionals.
- 7.07 Implements strategies to manage client pain, anxiety and discomfort, including local anesthesia.
- 7.17 Responds to medical emergencies.
- 8.04 Evaluates the need for client referral to other health professionals.
- 8.05 Provides recommendations to clients regarding their ongoing care.

GROUP 2A

15-25% of the Examination

The Dental Hygienist:

- 2.01 Demonstrates sensitivity to client diversity.
- 2.02 Implements communication approaches (e.g., verbal, nonverbal, visual, written and electronic forms of communication) for clients and stakeholders based on their characteristics, needs, linguistic level, and health literacy.
- 3.04 Uses information systems (e.g., health records, online pharmacology database, financial records, etc.) for the collection, retrieval, and storage of data to support dental hygiene practice.
- 3.05 Manages time, resources (e.g., financial, materials, personnel, etc.), and priorities to ensure effective dental hygiene practice.
- 4.05 Uses knowledge of immunology and microbiology in dental hygiene practice.
- 5.14 Assesses dietary practices.
- 5.15 Uses oral health indices.
- 5.17 Assesses clients' oral health knowledge, beliefs, attitudes, motivation, skills, and barriers to learning as part of the educational process.
- 6.01 Prioritizes clients' needs through a collaborative process involving clients, family, care providers, and others, as needed.
- 6.03 Adapts strategies and interventions for clients with diverse needs.
- 6.07 Develops educational interventions, health promotion strategies, and community oral health programs based on assessment data and a client-centred approach.
- 7.02 Exposes and processes intraoral and extraoral radiographs.
- 7.03 Teaches clients oral self-assessment techniques.
- 7.04 Provides coaching/advice to clients regarding oral self-care.
- 7.10 Applies anticariogenic agents and therapies.
- 7.11 Applies appropriate chemotherapeutics/pharmacotherapeutics excluding anticariogenic agents.
- 8.01 Uses measurable criteria to evaluate outcomes.
- 8.02 Revises dental hygiene care plans, educational interventions, health promotion strategies, and community oral health programs, as needed.
- 8.06 Evaluates the effectiveness of educational interventions, health promotion strategies, and community oral health programs.
- 8.07 Communicates evaluation outcomes to clients, family, care providers, stakeholders, and others.

GROUP 2B

5-15% of the Examination

The Dental Hygienist:

- 1.07 Implements quality improvement activities based on self-assessment of own professional learning needs.
- 1.08 Incorporates new evidence from research, clinical expertise, and other relevant resources to support dental hygiene practice.
- 2.03 Collaborates with communities, interprofessional teams, and stakeholders to improve oral health outcomes.
- 2.04 Acts as a client advocate.
- 4.01 Uses knowledge of basic principles of research methods and statistics in dental hygiene practice.
- 4.02 Uses knowledge of the behavioural sciences (e.g., psychology, sociology, etc.) in dental hygiene practice.
- 4.04 Uses knowledge of biochemistry and nutrition in dental hygiene practice.
- 4.10 Uses knowledge of oral/dental embryology and histology in dental hygiene practice.
- 4.13 Uses knowledge of orthodontics in dental hygiene practice.
- 4.14 Uses knowledge of restorative dentistry, endodontics, prosthodontics, and oral surgery in dental hygiene practice.
- 5.01 Assesses epidemiological data (e.g., demographic data, determinants of health, etc.).
- 5.13 Uses additional diagnostic modalities (e.g., photographs, study models, pulpal testing, microbiological testing, caries and oral cancer screening tests, etc.), as needed.
- 7.05 Counsels clients regarding tobacco cessation strategies.
- 7.06 Provides clients with information regarding dietary practices.
- 7.12 Takes impressions and fabricates study models, tooth whitening trays, and sports mouthguards.
- 7.13 Provides tooth whitening services.
- 7.14 Takes intraoral and extraoral photographs.
- 7.15 Applies and removes periodontal dressings and removes sutures.
- 7.16 Places temporary restorations.
- 7.18 Implements educational interventions, health promotion strategies, and community oral health programs that meet clients' learning needs.

APPENDIX D

GLOSSARY OF TERMS AND ACRONYMS

Advocate

One who supports a client by taking action to promote the rights of the client in health care and other issues. Advocacy is the act of intervening such as speaking or writing in favour of a particular issue, cause, or policy for an individual or group of people. It aims to enhance the oral health of disadvantaged clients or groups and improve access to oral health services.

CDHA

Canadian Dental Hygienists Association

CDAC

Commission on Dental Accreditation of Canada

Client(s)

An individual, family, group, organization, or community accessing the professional services of a dental hygienist.

Client-Centred Approach/Client-Centred Care

A service approach from the perspective that the client is the focus of attention, interest, and activity; the client's values, beliefs and needs are of prioritized in the selection and provision of dental hygiene services.

Demographic Data

Information related to the statistics of groups of people, their environment and geographic distribution (e.g., age, gender, births, deaths, and diseases), and determinants of health.

Dental Hygiene Care Plan

The written blueprint that directs the dental hygienist and patient as they work together to meet the client's desired oral health outcomes. The plan is personalized to support the individual's unique oral health needs, general health status, values, expectations, and abilities (Bowen, 349).

Dental Hygiene Diagnosis

The use of evidence-based critical analysis and interpretation of all available assessment data in order to reach conclusions about the client's dental hygiene treatment needs.

DHRAs

Dental Hygiene Regulatory Authorities

Dental Hygiene Services

All therapeutic, preventive, and educational actions that a dental hygienist, by law, can provide to a client to assist them in achieving optimal oral health, and well-being.

Determinants of Health

The range of personal, social, economic, and environmental factors that determine the health status of individuals or populations (Government of Canada, 2022).

Diversity

The variety of identities found within an organization, group or society. Diversity is expressed through factors such as culture, ethnicity, religion, sex, gender, sexual orientation, age, language, education, ability, family status or socioeconomic status (Government of Canada, 2022).

EPCCoDH

Entry-to-Practice Canadian Competencies for Dental Hygienists (published 2021).

Epidemiology

The study (scientific, systematic, and data-driven) of the distribution (frequency, pattern) and determinants (causes, risk factors) of health-related states and events (not just diseases) in specified populations (neighborhood, school, city, state, country, global). It is also the application of this study to the control of health problems (CDC, 2014).

EC

Examination Committee

FDHRA

Federation of Dental Hygiene Regulatory Authorities

FDHRC

Federation of Dental Hygiene Regulators of Canada

Informed Decision-Making

Occurs when the client has been provided with the opportunity to discuss, understand relevant information, and to support their decision.

Interprets Radiographs

Interpretation refers to an explanation of what is viewed on a dental image. When interpreting a radiographic image, the starting points are a systematic analysis of the quality of the image and a thorough understanding of the appearances of normal anatomic structures and their variances. The dental hygienist must be competent in identifying and recognizing features such as: normal anatomy; dental restorations, dental materials, and foreign objects; dental caries; periodontal disease; trauma, pulpal lesions, and periapical lesions, etc.

Interprofessional team/interdisciplinary care providers

A group of healthcare practitioners from different fields who work together or toward the same goal to provide the best care or best outcome for a patient or group of patients, also called interprofessional healthcare providers (Bowen, 1025).

Jurisprudence

A system of laws, in this case, that govern the practice of a profession. National jurisprudence includes federal legislation such as: Safety Code 30 (Radiation Protection),

Freedom of Information Act, WHMIS, etc. (*Merriam-Webster.com Dictionary*, Accessed 8 Nov. 2022).

NDHCB

National Dental Hygiene Certification Board

NDHCE

National Dental Hygiene Certification Examination

Practice Management/Management of the Dental Hygiene Practice

Involves decisions, actions, and resource allocation to enable the provision of professional dental hygiene services to meet the objectives of the practice. Includes planning, budgeting, technology application, information systems management, and personnel.

Other Professionals

Includes dental and health professionals, and others (e.g., psychologists, social workers, insurance providers, etc.).

Quality Improvement/Quality Assurance

A mechanism for systematically assessing the quality of care and implementing and evaluating changes in the client care delivery system in order to maintain or improve the quality of care.

Risk Factors

Attributes, characteristics, or exposures that have been shown to have an association, or a direct cause-effect relationship, with a disease or condition (e.g., relationship between smoking and periodontal disease).

Stakeholder(s)

A person, group or organization that has interest or concern in the provision of dental hygiene care and services. Stakeholders can affect or be affected by the actions, objectives, and policies set by the dental hygiene profession or the dental hygienist.

APPENDIX E

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