



NATIONAL DENTAL HYGIENE
CERTIFICATION BOARD

BUREAU NATIONAL DE LA
CERTIFICATION EN HYGIÈNE DENTAIRE

BLUEPRINT
FOR THE
NATIONAL DENTAL HYGIENE
CERTIFICATION EXAMINATION

2005

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INTRODUCTION

In 1982, in response to a priority concern of its members, the Canadian Dental Hygienists Association (CDHA) decided to explore the possibility of a certification program for Canadian dental hygienists. The goals of the program were to create a nationally recognized standard, enhance the ability of dental hygienists to become licensed in all Canadian jurisdictions and ensure quality assurance in the provision of dental hygiene services. In 1984, the CDHA Board of Directors endorsed the concept of a single national standard for entry to practice. An Ad Hoc Committee began the investigation and development of an arm's length organization that would administer a national certification program and as a result, the National Dental Hygiene Certification Board (NDHCB) was established in 1995.

The NDHCB began the development work to create a national certification process. The NDHCB contracted the services of testing professionals to assist in the development of the certification program and especially in the development of a national written examination. In 1995, the first Blueprint was established and in 1996, the first National Dental Hygiene Certification Examination (Examination) was administered. Since then, the Examination has been administered a minimum of twice a year in both official languages to an average of 600 candidates a year in 27 different writing centres in Canada.

Licensure/certification examinations have a well-defined purpose: to protect the public by ensuring that those who are certified possess sufficient knowledge and skills to perform important occupational activities safely and effectively (American Education Research Association et al., 1999). In the case of the National Dental Hygiene Certification Examination (NDHCE), the purpose is to determine whether or not examinees are prepared to practice dental hygiene without risk to their clients. The registering/licensing authorities impose additional eligibility criteria (e.g., completion of an approved program of dental hygiene education) that provides the added information required to decide on an individual's readiness to practice dental hygiene.

The primary function of the *Blueprint for the National Dental Hygiene Certification Examination* (Blueprint) is to describe how the examination is to be developed. Specifically, this Blueprint provides explicit instructions and guidelines on how the competencies (e.g., knowledge, abilities, skills, attitudes, and judgment) are to be expressed within the examination in order for accurate decisions to be made on the examinees' competence in dental hygiene.

In order to obtain a valid examination, the blueprint must be based on the competencies that are currently required to practice safely and effectively. In 1995, a group of content experts reflecting regional representation, all

dental hygiene practice roles and both official languages drafted the original list of competencies required of the entry-level dental hygienist. This list of competencies was further validated by over 100 dental hygienists and representatives of all provincial dental hygiene regulatory authorities. In 1999, this list was reviewed by the NDHCB Examination Committee (EC); a new list of competencies was produced and then validated by means of a nationwide survey of practising dental hygienists. In 2004 the EC again performed a thorough review of the list of competencies followed by focus group validation in Eastern (Nova Scotia), Central (Ontario) and Western (Alberta) regions. The focus group input was reviewed by the EC and integrated into a nation-wide validation survey of practising dental hygienists, the results of which were used by the EC to make the current modifications to the blueprint for the NDHCE.

The current blueprint therefore reflects the most current requirements for competent and safe dental hygiene practice in Canada. The NDHCE competencies and blueprint will continue to be updated on a five-year cycle to ensure requirements for competent and safe dental hygiene practice remain current.

The Blueprint has two major components: 1) the content domain to be measured and, 2) the explicit guidelines on how this content is to be measured. The content domain consists of the National Dental Hygiene Certification Examination List of Competencies (i.e., the competencies expected of competent practising dental hygienist), and the guidelines are expressed as structural and contextual variables. The Blueprint also includes a **summary chart** (p. 11) that summarizes the examination guidelines. In order to remain valid, the examination blueprint must be based on the competencies that are currently required to practice safely and effectively.

Given that the primary purpose of the Blueprint is to guide test development activities, caution should be exercised when considering its use for other applications.

The National Dental Hygiene Certification Board (NDHCB) wishes to thank all the dental hygienists who have contributed to the creation of this Blueprint. In particular, thanks are extended to the National Dental Hygiene Certification Examination Committee and to the participants in the focus groups and the national survey.



TECHNICAL SPECIFICATIONS

COMPETENCIES

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 practising dental hygienist. These competencies form the basis of the Examination.

This section describes the competencies that were obtained as a result of the validation process, the way they have been grouped, and the manner in which they are to be sampled for creating an examination.

DEVELOPING THE LIST OF COMPETENCIES

At the outset of the certification program, an Examination Committee was formed that reflected regional representation, and all dental hygiene practice roles. This Examination Committee developed a preliminary national list of competencies which was validated by means of focus groups of practising dental hygienists and representatives of dental hygiene regulatory authorities in all jurisdictions. In 1999 and 2004 the NDHCE Examination Committee (EC) reviewed the competencies which were then further validated. In 2004 the validation process included three focus groups with national representation and a nation-wide survey of practising dental hygienists. Both the results of the survey and the expert opinion of the members of the EC were used to form the final list of 151 competencies and to determine their relative importance in the examination.

DEFINITION OF DENTAL HYGIENE

In order to develop the list of competencies for dental hygienists, a number of assumptions were made and a specific definition of dental hygiene was used. Following are the definition of dental hygiene, and the assumptions on which the competencies are based:

Dental Hygiene Defined

Dental hygiene is a health service profession encompassing the theory and practice of preventive oral health and health promotion.

Dental Hygiene Practice is a collaborative relationship in which the dental hygienist works with the client, other health care professionals and society in general to achieve and maintain optimal oral health as an integral part of well-being.

The Dental Hygiene process utilizes a systems approach to service that includes dental hygiene process: assessment and diagnosis, dental hygiene process: planning, dental hygiene process: implementation, and dental hygiene process: evaluation.

Throughout Dental Hygiene practice there are six key responsibility areas: administration; clinical therapy; change agent; education; health promotion; and research.

ASSUMPTIONS

Entry-Level Dental Hygienists:

- @ must meet the criteria for licensure/registration within the Canadian jurisdiction in which they intend to practice.
- @ apply a dental hygiene process of care model.
- @ practise with a foundation of evidence-based knowledge and theory.
- @ practise collaboratively with clients, colleagues and other health care professionals.
- @ provide client-centred services to prevent oral disease and promote wellness.
- @ can apply their competencies in a variety of key responsibility areas related to dental hygiene practice (e.g. clinical, education, health promotion, administration, research, etc.).
- @ are legally, ethically and professionally accountable for their practice and recognize personal limitations.

Clients of Entry-Level Dental Hygienists:

- @ may be individuals or their guardians, families, groups, institutions, communities or populations.
- @ include all individuals across their lifespans.
- @ are unique and diverse in needs, demands, motivations, resources, determinants of health and definition of wellness.
- @ are partners or potential partners in the dental hygiene process of care.
- @ are consumers who expect effective dental hygiene care, but may be unable to evaluate the quality of the services provided.
- @ have a right to recourse in the event of unsatisfactory dental hygiene care.

Practice Environments of Entry-Level Dental Hygienists:

- @ include a variety of practice settings.
- @ are influenced by legislation, governments, regulatory authorities, professional associations, the public, employment philosophies and

practices, research and technology.

@ encompasses physical, social, economic and cultural factors that interact in predictable and unpredictable ways.

@ are dynamic.

Oral Health and Wellness:

@ exist on a continuum from wellness to illness.

@ exist on a continuum from health to disease.

@ fluctuate over time.

@ are influenced by the determinants of health.

@ influence and are influenced by each other.

@ are achievable.

COMPETENCY CATEGORIES

The competencies are classified into the following four categories (the number and the percentage of competencies are indicated in parentheses following the category name):

1. Dental Hygiene Process: Assessment & Diagnosis

(56 competencies or 37% of the list of competencies)

The dental hygienist determines data requirements and then collects and records the subjective and objective data on the health status of clients using professional judgment and methods consistent with medico-legal-ethical principles in order to complete the client profile. The dental hygienist analyses and interprets data using problem solving and decision-making skills in order to synthesize information and formulate a diagnosis within the dental hygienist's scope of practice.

2. Dental Hygiene Process: Planning

(16 competencies or 11% of the list of competencies)

The dental hygienist, in partnership with the client and, if needed, in collaboration with other professionals, uses the assessment data and the dental hygiene diagnosis to formulate goals and objectives, select dental hygiene interventions or services, and determine evaluation methods in order to formulate a dental hygiene care plan and to create a plan for own ongoing professional competence.

3. Dental Hygiene Process: Implementation

(64 competencies or 42% of the list of competencies)

The dental hygienist activates the dental hygiene care plan in collaboration with the client and, if needed, in collaboration with other professionals, including educational, preventive, and therapeutic services, in order to achieve the planned oral and other health goals, and to revise the plan of care as required.

4. Dental Hygiene Process: Evaluation

(15 competencies or 10% of the list of competencies)

The dental hygienist appraises the effectiveness of the implemented care plan, comparing actual outcomes to expected outcomes, in order to determine the extent to which oral health and wellness goals have been attained, to provide recommendations in regard to client’s ongoing care, and to self-evaluate professional competence.

Some of the competencies lend themselves to being placed in one or more of the categories, so these four categories should be viewed simply as an organizing framework. Also, it should be recognized that the competency statements vary in scope, with some representing global behaviours and others more discrete and specific dental hygiene behaviours.

Some changes to the 2005 NDHCE competency categories have been made in accordance with the document, *Dental Hygiene: Definition, Scope, and Practice Standards* (published May 7, 2002; Canadian Dental Hygienists Association).

The National Dental Hygiene Certification Examination List of Competencies presents the competencies, grouped on the basis of the ratings from the national validation survey as finalized by the Examination Committee.

COMPETENCY GROUPS AND WEIGHTINGS

The survey results are used not only to validate the list of competencies but also to determine their relative importance in the examination. Respondents to the survey were asked to classify each competency according to two parameters: degree of importance and frequency of application of the competency in practice. Based on the ratings obtained in the survey and on the expert opinion of the Examination Committee, the competencies were placed into four groups according to their relative importance and frequency of application (i.e., Very important/High frequency, Important/High frequency, Very Important/Low frequency and Important/Low frequency). These groups (see Table 1 for their distribution) were used to establish the relative weights to be given to the competencies in the examination. The Examination List of Competencies (by Group) is presented in the Appendix A.

TABLE 1: COMPETENCY GROUPING

	1. Very/Extremely Important	2. Important
A. High Frequency	Group 1-A: 38 competencies	Group 2-A: 38 competencies
B. Low Frequency	Group 1-B: 38 competencies	Group 2-B: 37 competencies

COMPETENCY SAMPLING

Based on the importance and frequency data, and with the guideline that the Examination will consist of between 220 and 250 items (see "Examination Length and Format," p. 7), the sampling scheme presented in Table 2 was developed. The distribution of weights in this sampling scheme was selected: (1) to provide differentiation on the rating variables (importance and frequency); and (2) to conform with the examination length requirement.

TABLE 2: COMPETENCY SAMPLING

Group 1-A: 38 competencies	40-50% of the Examination (i.e., approximately 2.8 items per competency)
Group 1-B: 38 competencies	25-35% of the Examination (i.e., approximately 1.9 items per competency)
Group 2-A: 38 competencies	10-20% of the Examination (i.e., approximately 1.0 item per competency)
Group 2-B: 37 competencies	5–15% of the Examination (i.e., approximately 0.6 item per competency)

Where random selection is indicated in the sampling scheme (i.e., Group 2-B), efforts will be made to achieve maximum coverage of these competencies. This means selecting different competencies from across the four categories, for each examination, and for multiple versions of the examination.

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 and gender of the client, client culture, and health care environment).

There will be 220 to 250 objective items on the National Dental Hygiene Certification Examination.

STRUCTURAL VARIABLES

1. Examination Length and Format: The examination consists of between 220 and 250 objective items (i.e., multiple-choice).

There will be case-based and independent items on the National Dental Hygiene Certification Examination.

2. **Item Presentation:** The objective items are presented in one of two formats, case-based or independent items. Case-based items are a set of approximately five objective examination items associated with a brief health care scenario (e.g., a description of the client's age, gender, health care situation, and requirements for care).

For the 220-250 items on the examination, 70-80% are presented as independent items and 20-30% are presented within cases.

3. **Cognitive Ability Levels:** To ensure that competencies are measured at different levels of cognitive ability, each item on the examination is classified into one of three levels: 1) Knowledge/ Comprehension; 2) Application; and 3) Critical Thinking. These cognitive ability levels are adapted from the Taxonomy of Cognitive Abilities originally developed by Bloom (1956).

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.

2) Application

This level 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

The third level 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.

Table 3 presents the distribution of items for each cognitive level.

TABLE 3: PERCENTAGE OF ITEMS AT EACH COGNITIVE LEVEL

Cognitive Ability Level	Percentage of Items
Knowledge/Comprehension	20-30%
Application	45-55%
Critical Thinking	20-30%

CONTEXTUAL VARIABLES

1. Client Age and Gender: Two of the contextual variables specified for the Examination are the **age** and **gender** of the clients. Providing specifications for the use of these variables ensures that the clients described in the examination reflect the demographic characteristics of the population encountered by the dental hygienist. These specifications, listed in Table 4 as percentage ranges, serve as guidelines for test development.

TABLE 4: TARGET PERCENTAGES FOR CLIENT AGE AND GENDER

Age Group	Target Percentage of Items in each age group	Target Percentage of Males	Target Percentage of Females
Child & Adolescent (0–18 years)	20-40%	10-20%	10-20%
Adult (19–64 years)	30-50%	15-25%	15-25%
Older Adult (65+ years)	20-40%	10-20%	10-20%

The National Dental Hygiene Certification Examination represents the demographic and cultural realities of the Canadian population that require dental hygiene care.

2. 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.
3. Health Care Environment: Since dental hygiene can be practised in a variety of settings and most of the competencies are not setting dependent, the health care environment is only specified where required.



CONCLUSION

The *Blueprint for the National Dental Hygiene Certification Examination (2005)* is the outcome of the combined efforts of the National Dental Hygiene Certification Board, Canadian dental hygienists and the Performance Assessment Group Inc. The compilation and validation of the competencies required of the practising dental hygienist and the production of guidelines for the measurement of these competencies were made possible through this collaborative work.

It is recognized that the dental hygiene profession will continue to evolve. As this occurs, the Blueprint (i.e., the competencies and the test development guidelines) may require revision so that it accurately reflects the scope of practice, roles, and responsibilities of the practising dental hygienist.

SUMMARY CHART

NATIONAL DENTAL HYGIENE CERTIFICATION EXAMINATION DEVELOPMENT GUIDELINES

COMPETENCIES			
Group 1-A: 40-50% of items	Group 1-B: 25-35% of items	Group 2-A: 10-20% of items	Group 2-B: 5-15% of items
STRUCTURAL VARIABLES			
Examination Length and Format	220–250 objective items (i.e., multiple choice)		
Item Presentation	70-80% independent items 20-30% case-based items		
Cognitive Ability Levels	Knowledge/Comprehension:	20-30% of items	
	Application:	45-55% of items	
	Critical Thinking:	20-30% of items	
Competency Categories	Dental Hygiene Process: Assessment & Diagnosis Dental Hygiene Process: Planning Dental Hygiene Process: Implementation Dental Hygiene Process: Evaluation		
CONTEXTUAL VARIABLES			
Client Age and Gender		Male	Female
	0 to 18 years	10-20%	10-20%
	19 to 64 years	15-25%	15-25%
	65+ years	10-20%	10-20%
Client Culture	Items are included that measure awareness, sensitivity, and respect for different cultural values, beliefs, and practices, without introducing stereotypes.		
Health Care Environment	Since dental hygiene can be practised in a variety of settings and most of the competencies are not setting dependent, the health care environment is only specified where required.		

APPENDIX A

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

COMPETENCY SAMPLING	
Group 1-A: 38 competencies	40-50 % of the National Dental Hygiene Certification Examination (i.e., approximately 2.8 items per competency)
Group 1-B: 38 competencies	25-35% of the National Dental Hygiene Certification Examination (i.e., approximately 1.9 items per competency)
Group 2-A: 38 competencies	10-20% of the National Dental Hygiene Certification Examination (i.e., approximately 1.0 item per competency)
Group 2-B: 37 competencies	5-15% of the National Dental Hygiene Certification Examination (i.e., approximately 0.6 item per competency)

GROUP 1A

40-50% of the Examination

DENTAL HYGIENE PROCESS: ASSESSMENT & DIAGNOSIS

For
internal
use only

The Dental Hygienist:

assesses the determinants of health (e.g., age, gender, socioeconomic status, environment, education, lifestyle, etc.).	01-01
determines the need for fluoride.	01-03b
assesses client behavioural factors (e.g., motivation, beliefs, values, compliance, etc.).	01-07
assesses health history.	01-08a
compares current to previous health history.	01-08b
assesses oral health history.	01-08c
compares current oral health history to previous oral health findings.	01-09
assesses intraoral soft tissues other than the periodontium.	01-14
assesses gingivae.	01-15
assesses clinical attachment level and adjacent bone.	01-16a
determines the presence or absence of periodontal diseases.	01-16b
assesses hard and soft deposits.	01-17
assesses intraoral hard tissues.	01-18
assesses client oral self-care.	01-20
identifies client's oral health education needs.	01-26
identifies client's oral health concerns and goals.	01-27
interprets data to determine client's oral health status and needs.	01-28
determines and utilizes appropriate communication channels throughout the dental hygiene process of care (e.g., verbal, nonverbal, written, electronic, interpreter, etc.).	01-30a
applies principles of effective communication throughout the dental hygiene process of care (e.g., active listening, reflective responding, etc.).	01-30b
assesses risk factors for periodontal diseases.	01-33
complies with the national practice standards, code of ethics and relevant legislation throughout the dental hygiene process of care.	01-35
assesses the need for management of client pain, anxiety and discomfort.	01-36

documents all records accurately, legibly, comprehensively, and in compliance with privacy legislation throughout the dental hygiene process of care (e.g., paper, electronic, etc.). 01-38

DENTAL HYGIENE PROCESS: PLANNING

The Dental Hygienist:

records the dental hygiene care plan (e.g. in writing, electronically, etc.). 02-14

DENTAL HYGIENE PROCESS: IMPLEMENTATION

The Dental Hygienist:

applies principles of risk management for client health and safety. 03-01

applies principles of risk management for practitioner health and safety. 03-02

applies principles of infection control. 03-03

applies principles of instrumentation. 03-04

applies principles of ergonomics. 03-05

applies principles of time management. 03-08

teaches the client oral self-care techniques and strategies (e.g., postoperative care, etc.). 03-17

teaches proper selection and use of appropriate oral care products (e.g., automated toothbrushes, chemotherapeutics, tongue scraper, etc.). 03-18

uses materials and equipment according to manufacturer's specifications. 03-31

maintains instruments and equipment (e.g., care of air polishing equipment, ultrasonic scaler and tips, instrument sharpening, etc.). 03-33

manages continuing care/supportive periodontal therapy/maintenance. 03-34

performs non-surgical periodontal therapy by hand instrumentation. 03-38

exposes intra- and extra-oral radiographs. 03-53

uses knowledge of tooth anatomy and periodontium during periodontal debridement (e.g., maxillary first premolar, etc.). 03-64

DENTAL HYGIENE PROCESS: EVALUATION (no competencies)

GROUP 1-B

25-35% of the Examination

DENTAL HYGIENE PROCESS: ASSESSMENT & DIAGNOSIS

For
internal
use only

The Dental Hygienist:

assesses pharmacological actions/interactions.	01-10
assesses oral manifestations of pharmaceuticals (i.e., prescribed and nonprescribed).	01-11
assesses head and neck region (e.g., temporomandibular joint, lymph nodes, thyroid gland, etc.).	01-13
determines the classification of periodontal diseases.	01-16c
interprets dental radiographs.	01-21a
assesses the need for radiographs for dental hygiene care.	01-22
assesses barriers to the attainment of oral health (e.g., economics, attitudes, habits, values, access, etc.).	01-29
assesses the need for consultation and referrals within the health care delivery system.	01-31
assesses risk factors for caries.	01-32
identifies signs of abuse and/or neglect.	01-37
assesses practice environment for safety risks and emergency measures.	01-39
assesses the client's ability to make an informed choice.	01-43
demonstrates sensitivity to client diversity throughout the dental hygiene process of care (e.g., culture, language, disability, religion, creed, lifestyle, etc.).	01-44
identifies clients at risk for medical emergency.	01-45

DENTAL HYGIENE PROCESS: PLANNING

The Dental Hygienist:

develops priorities with the client based on the client's needs and values.	02-03
obtains informed consent for dental hygiene care plan.	02-11
revises the plans of services/programs when necessary (e.g., based on the input of clients, relevant others, or information gained during implementation or evaluation, etc.).	02-15
plans strategies to ensure continuing competence/quality assurance.	02-16

DENTAL HYGIENE PROCESS: IMPLEMENTATION

The Dental Hygienist:

acts as a client advocate.	03-12
adapts and applies clinical techniques to a community setting (e.g., aseptic technique, operator/client positioning, etc.).	03-13
adapts and applies clinical techniques for clients with special needs (e.g., mobility aids, operator/client positioning, etc.).	03-14
provides information regarding dental treatment (e.g., dental implants, prosthodontics, orthodontics, restorative, endodontics, etc.).	03-23
provides information regarding the relationship between general health and oral health (e.g., lung disease, heart disease, diabetes, low birth weight, etc.).	03-29c
implements strategies to manage client pain, anxiety and discomfort.	03-35
performs non-surgical periodontal therapy by powered instrumentation.	03-39
performs subgingival irrigation techniques.	03-40
applies caries prevention agents.	03-45a
applies debridement techniques for dental implants.	03-49a
monitors the client for adverse reactions to interventions.	03-57
reports signs of abuse and/or neglect.	03-59
manages hazardous substances and wastes.	03-60
applies strategies to ensure continuing competence/quality assurance.	03-62

DENTAL HYGIENE PROCESS: EVALUATION

The Dental Hygienist:

verifies the client has received the planned services.	04-01
evaluates the need for further dental hygiene interventions.	04-11
evaluates the need for further consultation and referrals within the health care delivery system.	04-12
evaluates own performance in relation to practice standards and the code of ethics.	04-14
evaluates client satisfaction	04-15
establishes the continuing care interval based on evaluation outcomes.	04-17

GROUP 2-A

10-20% of the Examination

DENTAL HYGIENE PROCESS: ASSESSMENT & DIAGNOSIS

**For
internal
use only**

The Dental Hygienist:

assesses epidemiological data.	01-02a
assesses exposure to fluoride.	01-03a
determines the need for non-fluoride caries prevention agents.	01-05
assesses occlusion.	01-19a
assesses parafunctional habits.	01-19b
assesses the quality of dental radiographs.	01-21b
selects relevant scientific/professional information.	01-23a
selects appropriate oral health indices.	01-24a
interprets appropriate oral health indices.	01-24b
assesses risk factors for pathologies other than caries and periodontal diseases (e.g., systemic diseases, cancer, etc.).	01-34
assesses the effect of fixed and removable prostheses on oral health (e.g., implants, partial denture, complete denture, crown, bridge, etc.).	01-41

DENTAL HYGIENE PROCESS: PLANNING

The Dental Hygienist:

facilitates the client's participation in the planning of services/programs.	02-01
selects principles from change theories to facilitate adaptive behaviours (e.g., behaviour modification, social change theory, etc.).	02-02
establishes short term and long term goals with the client.	02-04
selects evidence-based clinical intervention options.	02-05
selects evidence-based health promotion intervention options.	02-06
identifies required resources (e.g., human, financial, material, etc.).	02-07
supports the client in making an informed choice among interventions (e.g., risks, costs, benefits, prognosis, time lines, etc.).	02-08
establishes expected outcome measures related to the goals of the client and the dental hygiene diagnosis.	02-09
develops a sequence for interventions based on the dental hygiene diagnosis.	02-10

communicates the plans of services/programs to others as required in accordance with privacy guidelines (e.g., health care providers, client's family or guardian, administrative staff, etc.). 02-13

DENTAL HYGIENE PROCESS: IMPLEMENTATION

The Dental Hygienist:

applies principles of teaching and learning to the education of individuals and groups. 03-16

provides nutritional counselling related to oral health. 03-20

provides information regarding actions, interactions, and oral manifestations of pharmaceuticals (i.e., prescribed and nonprescribed). 03-30

applies knowledge of whitening techniques. 03-42

applies dentinal desensitizing agents. 03-45b

removes deposits from fixed and removable prostheses. 03-48

processes intra- and extra-oral radiographs. 03-54a

performs coronal polishing techniques. 03-55

uses knowledge of general basic sciences during dental hygiene interventions (e.g., anatomy, chemistry, pathology, etc.). 03-63

DENTAL HYGIENE PROCESS: EVALUATION

The Dental Hygienist:

evaluates the progress of interventions (i.e., conducts interim interventions). 04-02

modifies interventions based on interim evaluations and discussions with the client. 04-03

modifies goals based on interim evaluations and discussions with the client. 04-04

evaluates oral biological and physiological outcomes of interventions. 04-05

evaluates the client's behavioural responses to interventions. 04-06

evaluates changes in the client's knowledge and perception of oral health. 04-07

uses measurable criteria in the evaluation of outcomes. 04-08

evaluates the short term and long term effectiveness of interventions by comparing actual outcomes to expected outcomes. 04-09

GROUP 2-B

5-15% of the Examination

DENTAL HYGIENE PROCESS: ASSESSMENT & DIAGNOSIS

For
internal
use only

The Dental Hygienist:

assesses demographic data.	01-02b
determines oral health status of a population.	01-06
assesses vital signs.	01-12
critiques relevant scientific/professional information.	01-23b
selects and interprets appropriate oral health diagnostic tests (e.g., microbiological tests, pulpal vitality, caries screening, etc).	01-25
assesses the effect of personal manipulations of oral structures on oral health (e.g., piercings, intraoral tattooing, tooth shaping, tongue bifurcation, etc.).	01-40
assesses the effect of orthodontic therapy on oral health.	01-42
assesses the effect of dietary practices on oral health (e.g., nutrition, eating disorders, etc.).	01-46

DENTAL HYGIENE PROCESS: PLANNING

The Dental Hygienist:

collaborates with others in planning services/programs as required (e.g., health care providers, client's family or guardian, community members, services clubs, professionals, etc.).	02-12
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DENTAL HYGIENE PROCESS: IMPLEMENTATION

The Dental Hygienist:

collaborates with others in providing, maintaining, and advocating for oral health care programs.	03-15
teaches oral self-examination techniques.	03-19
provides information or counselling regarding tobacco use cessation.	03-21a
provides information regarding the relationship between alcohol use and oral health.	03-21b
teaches oral health injury prevention strategies.	03-22
provides information regarding available social and health services.	03-24
provides information regarding the pathophysiology of oral conditions.	03-25
provides information regarding the microbiology of oral conditions.	03-26

provides information regarding immunology of oral conditions.	03-27
provides information regarding histology and embryology of oral and dental structures (e.g., cleft palate, enamel hypoplasia, fluorosis, amelogenesis imperfecta, etc.).	03-28
provides information regarding anatomy and physiology of oral and dental structures.	03-29a
provides information regarding anatomy and physiology of eruption patterns.	03-29b
promotes wellness through healthy public policies (e.g., lobbying, board/committee membership, education, etc.).	03-36
ensures provision of care or provides care in emergency situations.	03-37
applies appropriate chemotherapeutics (pharmacotherapeutics) excluding fluoride.	03-41
recontours overhanging restorations.	03-43
applies pit and fissure sealants.	03-44
applies and removes periodontal dressings.	03-46
removes surgical sutures.	03-47
demonstrates knowledge of impression-taking techniques.	03-49b
fabricates study casts.	03-50
fabricates acrylic mouth appliances (e.g., mouth protectors, whitening trays, etc.).	03-51
exposes intra and extra-oral photographs.	03-52
possesses knowledge of digital radiography.	03-54b
uses isolation techniques (e.g., rubber dam, cotton-roll holder, etc.).	03-56
facilitates the integration of interventions into the organizational structure for residents of facilities (e.g., long-term care, correctional, etc.).	03-58
documents health and safety incidents.	03-61

DENTAL HYGIENE PROCESS: EVALUATION

The Dental Hygienist:

performs periodic documentation audits.	04-16
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APPENDIX B

GLOSSARY

Change Theory

Theory related to the process of transforming, alternating or modifying behaviours.

Client Advocate

One who supports a client by respecting and promoting the rights of the client in health care and other issues.

Client Centred Care

A service approach from the perspective that the client is the main focus of attention, interest, and activity; the clients' values, beliefs and needs are of utmost importance in the selection and provision of services.

Continuing Competence

The dental hygienist maintains and improves professional competence over time through a variety of activities; for example, quality performance, continuing education courses, participation in professional associations and reading scientific literature.

Demographic Data

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

Dental Hygiene Care Plan

A written blueprint that directs the dental hygienist to implement the dental hygiene services/interventions that the client requires and confirms.

Dental Hygiene Diagnosis

A formal statement of the dental hygienist's decision regarding the actual or potential problems of a client that are amenable to treatment through the dental hygiene process of care.

Dental Hygiene Practice

A collaborative relationship in which the dental hygienist works with the client, dental and other health care professionals and society in general to achieve and maintain optimal oral health as an integral part of well-being. In accordance with the Canadian Dental Hygienists Association's *Dental Hygiene: Definition, Scope and Practice Standards* (May 7, 2002), 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); and understanding the change process (process helper). Acting as a change agent may also involve advocacy-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 people to achieve optimal oral health and 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.

Dental Hygiene Process of Care

Also referred to as “Dental Hygiene Process.” The foundation of professional practice and provides a model for organization and providing dental hygiene interventions/services/programs in a variety of settings. The system approach 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.

Dental Hygiene Services/Interventions

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

Dental Hygiene Standards of Practice

Standards published by the regulatory authorities and the Canadian Dental Hygienists Association to clarify the roles/responsibilities of the dental hygienist and to provide a framework for measuring the quality of dental hygiene interventions/services/programs.

Determinants of Health

Refers to an element or group of elements that identify the boundaries/limits of health, and influence optimal well being.

Documentation Audit

A formal verification of client records and/or charts to ensure compliance with legal and regulatory requirements.

Epidemiological Data

Information related to specific causes of occurrences of health problems or diseases in a locality.

Evidence Based Practice

Dental hygiene practice supported by a scientific body of knowledge that facilitates clinical decision making and evaluation of dental hygiene interventions/services/programs using objective outcome measures.

Health Public Policies

Policies instituted by municipal, provincial or federal governments that will contribute to the health and well-being of the public.

Risk Factors

Those attributes or exposures that have been shown to have a cause and effect relationship with the disease or condition. Example: Causal relationship between smoking and periodontal disease.

Risk Markers

Those attributes or exposures associated with the increased probability of the occurrence of disease or conditions, and which can be used as an indicator of the disease or condition. Example: Clinical attachment loss (CAL) as a risk marker of periodontal disease.

Scientific Method

Refers to the systematic, orderly procedures that, while not infallible, seek to limit the possibility for error and minimize the likelihood that any bias or opinion by the researcher might influence the results.

Theory of Dental Hygiene Practice

A set of concepts, definitions and propositions that helps to provide knowledge to improve dental hygiene practice by describing, explaining, predicting, and controlling phenomena. Theory guides the practice, education and research functions of a profession.