

Canadian Competencies for Baccalaureate Dental Hygiene Programs

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THE CANADIAN DENTAL
HYGIENISTS ASSOCIATION

L'ASSOCIATION CANADIENNE
DES HYGIÉNISTES DENTAIRES

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Introduction

Competencies describe the essential knowledge, skills, and attitudes important for the practice of a profession. The first national dental hygiene competency profile was developed in the mid-1980s for the purposes of national accreditation.¹ These ability statements created a foundation for the dental hygiene profession but were largely technical in nature and focused on clinical therapy. Since that time competency documents have evolved to define more clearly the full scope of dental hygiene practice.²⁻⁴ This evolution was prompted by the discussions in postsecondary education about the abilities necessary for graduates to adapt to our changing world from a social and employment perspective.⁵⁻⁹

The health sector has been prolific in the articulation of ability statements for a wide range of professions.¹⁰⁻¹² The development of these statements was driven largely by the emphasis on accountability within governments at the international, national, and provincial levels. The increasing prevalence of chronic diseases,¹³⁻¹⁵ the evidence of growing health inequalities,¹⁵⁻¹⁸ and the threat of pandemic incidents focused attention on workforce development and, in particular, on client safety and better health outcomes.¹⁹⁻²⁰ These factors were also instrumental in highlighting the need for collaboration among health professionals.^{11,12,14,21,22} Governments allocated funding to make health care systems more accessible, efficient, and cost-effective.²³⁻²⁵

Dental hygiene education in Canada has evolved along diverse pathways with the result that programs range from 2 years to 4 years in length; they are implemented in the private and public sectors including colleges, institutes, and universities. Three universities offer degree completion education while a fourth offers both a degree completion and an entry-to-practice option. While the number of baccalaureate programs in Canada is small, these programs provide an important avenue for access to graduate studies in oral health as well as other health faculties. Baccalaureate dental hygiene education is a critical step along the pathway from diploma to doctoral programs within Canada and internationally. It supports a continuum of education for the dental hygiene profession, and it is now important to establish a standard for such education in Canada.

This document presents a competency profile for 4-year baccalaureate dental hygiene programs in Canada. The competencies will be preceded by a discussion of the what, why, and how questions surrounding their development, in order to provide a context for understanding the intent, structure, and content of the competencies.

What is the history of competencies in the dental hygiene profession?

The movement towards ability-based postsecondary education emerged across Canada in conjunction with government mandates for increased quality and accountability.^{5,8,26} Work began on dental hygiene ability statements in the mid-1980s in response to an identified need for a national standard for accreditation purposes. Many years later, the Canadian Dental Hygienists Association (CDHA) established a Task Force on Dental Hygiene Education.²⁷ Its work included the articulation of

abilities at the diploma, baccalaureate, master's, and doctoral levels. Dental Hygiene Educators Canada (DHEC) then further developed the ability statements for diploma and baccalaureate education through a study focused on the validation of the abilities by dental hygiene educators across Canada.²⁸ These two documents were viewed as being owned by specific organizations and they were also generic in nature; they were never integrated in any substantive manner into the work of other national dental hygiene organizations.

When the time came to review the DHEC diploma and baccalaureate competencies, it was decided to include all national organizations in this exploration. DHEC initiated the development of the national dental hygiene entry-to-practice competencies through a collaborative effort of five national dental hygiene organizations. The consortium members, presented in alphabetical order, were as follows:

- Canadian Dental Hygienists Association (CDHA)
- Commission on Dental Accreditation of Canada (CDAC)
- Dental Hygiene Educators Canada (DHEC)
- Federation of Dental Hygiene Regulatory Authorities (FDHRA)
- National Dental Hygiene Certification Board (NDHCB)

This work occurred at a time when dental hygiene education appeared to be at risk; diploma education was seen as being increasingly fragmented and trivialized by forces external to the profession.

To produce a competency document that could be integrated into the work of national dental hygiene organizations, it was important to focus on entry-to-practice competencies without attaching a credential to the abilities. The focus of the work was on the competencies needed by dental hygienists to support the oral health of Canadians in the 21st century. The document was developed through an initial workshop, a national survey, and regional focus groups; it was met with mixed reviews. Some expressed the view that many of the competencies were more appropriate for baccalaureate education while others felt that they were congruent with 2- and 3-year diploma programs. Regardless of the diverse views, the competencies were used to move forward with national practice standards, accreditation, examination, and curriculum reviews.

Why do we need Canadian baccalaureate dental hygiene competencies?

During the development of the national dental hygiene entry-to-practice competencies, the need to articulate national baccalaureate competencies was frequently discussed and then furthered by CDHA's Education Advisory Committee, a forum that was created when DHEC was disbanded and its role integrated within the CDHA structure. The competencies were viewed as a quality assurance product that would inform the public, applicants, students, employers, and postsecondary organizations about baccalaureate dental hygiene education. The standardization of baccalaureate education was considered important from both a professional and public standpoint.

While the dental hygiene profession has national documents pertaining to entry-to-practice abilities,²⁹⁻³¹ there is no national standard for baccalaureate education. The need for such a standard

has become increasingly important with the diverse entry-to-practice educational models across Canada, the range of postsecondary organizations involved, and changing regulatory legislation.

The competencies articulated here have been developed to provide one national standard for Canadian baccalaureate dental hygiene education, accreditation, examination, and regulation. It is important to support the current work of educators and regulators as well as examination and accreditation organizations as the profession evolves to align dental hygiene education with that of other health care professionals. This project relied on a collaborative approach similar to the one taken for the development of the national dental hygiene entry-to-practice competencies and represents a further milestone in the evolution of our profession.

How were these competencies developed?

The development of the competencies began with the establishment of an advisory committee to support the creation of a document that would meet the needs of national and provincial dental hygiene organizations. The committee included representatives from Canadian dental hygiene regulatory organizations from the provinces with a dental hygiene degree program, baccalaureate degree program directors, as well as representatives from CDAC and the Canadian Association of Public Health Dentistry (CAPHD). Two dental hygiene educators from the United States with experience in baccalaureate and master's level dental hygiene education were also invited to participate.

The initial work involved a literature review of primary sources and gray literature from international, national, and provincial organizations. It was deemed important to align the profile with the essential abilities identified for baccalaureate education by the Council of Ministers of Education, Canada.³² They included abilities in the following areas:

- depth and breadth of knowledge
- knowledge of methodologies
- application of knowledge
- communication skills
- awareness of limitations of knowledge
- autonomy and professional capacity

The depth and breadth of knowledge area emphasizes the science of the profession. The knowledge of methodologies and application of knowledge areas include critical thinking, problem solving, and research use. The awareness of limitations, and autonomy and professional capacity themes encompass collaboration, coordination, and professionalism with a particular focus on autonomous judgements and self-directed learning.

Another step involved the alignment of the competencies with baccalaureate level competency documents developed by other health professions, with a particular emphasis on those associated with the public health sector and the nursing profession.³³⁻⁴³

The boundary between baccalaureate and master's programs was explored by analyzing ability documents in dental hygiene and other health professional education.^{33,37,43-47} This analysis was undertaken in hopes of ensuring that the competencies would be written at a level consistent with baccalaureate education. The challenge was to define the boundaries between diploma, baccalaureate, and master's programs as expressed in national and provincial documents.^{32,33,48} The Ontario document⁴⁹ that built on the work of the Council of Ministers of Education, Canada, was particularly influential as it differentiates between the outcomes of baccalaureate (3-year) and honours baccalaureate (4-year) degrees; it allowed for the exploration of differences between 3- and 4-year postsecondary education expectations.

A 3-round Delphi study⁵⁰ was conducted to acquire further evidence and establish expert consensus based on the draft competency document that was developed from the initial literature review. The focus of the Delphi was to articulate the key elements of baccalaureate education, as well as the elements that differentiated diploma from 4-year degree education. It was also designed to identify the boundary between baccalaureate and master's education through questions about the realistic nature of the ability statements. A Delphi approach provided a structured group communication process to support decision making. Ethics approval was obtained from the University of Manitoba Research Ethics Board.

This Version 1 competency document is, however, larger than the Delphi study. It includes evidence from the literature in the health professions related to baccalaureate education, with a particular focus on Canadian documents. Upon completion of the Delphi study, CDHA's Advisory Committee members further shaped the competencies during a workshop held on April 29, 2014, as well as 2 teleconference meetings following the workshop. The committee focused on eliminating redundancies, clarifying the language, and meshing abilities from the national dental hygiene entry-to-practice competencies into the profile arising from the Delphi study. This work included the analysis of the themes and abilities from the national entry-to-practice competencies² to verify that similar themes existed within the baccalaureate profile. The wording of many of the entry-to-practice competencies were shaped to reflect more accurately the increased depth of learning and abilities gained through baccalaureate education. This analysis, coupled with the Delphi study data resulted in the generation of a stand-alone document of competencies for 4-year baccalaureate programs in Canada.

The goal was to generate a product that was flexible and global, while still being measurable. The committee members also sought to create a profile that provided room for growth and development, while not being overly prescriptive for university faculties. The resulting profile represents the cumulative work of CDHA's advisory committee and the project consultant over a 2-year period.

How do these competencies compare to other national documents?

This competency profile articulates the essence of 4-year baccalaureate education in dental hygiene. Many documents were consulted in generating this profile, with the most important among them being the following:

- National Competencies for Dental Hygiene Entry-To-Practice¹
- *Core Competencies for Public Health in Canada* (PHAC)²⁰
- *Discipline Competencies for Dental Public Health in Canada* (CAPHD)³³
- UBC Dental Hygiene Degree Program competencies document³⁴
- *Ministerial Statement on Quality Assurance of Degree Education in Canada* (Council of Ministers of Education, Canada)³²
- *Ensuring the Value of University Degrees in Ontario* (Council of Ontario Universities)⁴⁹
- *A National Interprofessional Competency Framework* (Canadian Interprofessional Health Collaborative)³⁵
- DHEC learning outcomes²⁸
- *Entry-to-Practice Competencies for the Registered Nurses Profession* (College & Association of Registered Nurses of Alberta)³⁶
- *Public Health Skills and Career Framework: Multidisciplinary/multi-agency/multi-professional* (Department of Health in England)³⁷
- *The Essentials of Baccalaureate Education for Professional Nursing Practice* (American Association of Colleges of Nursing)³⁸
- *Public Health: Recommended Baccalaureate Competencies and Curricular Guidelines for Public Health Nursing* (American Association of Colleges of Nursing)³⁹
- *Quad Council Competencies for Public Health Nurses*⁴⁰
- *Core Competencies for Interprofessional Collaborative Practice* (Interprofessional Education Collaborative Expert Panel, USA)⁴¹
- Galway consensus on the core competency for building capacity in health promotion⁴²
- WHO Bangkok charter for health promotion⁴³
- WHO competencies for health professionals in the 21st century⁴⁴

The first seven documents listed were the most influential but the others helped to guide and to corroborate the decisions taken. The themes from these health documents are evident in the competencies generated for baccalaureate dental hygiene education.

When comparing the competency profile of graduates of baccalaureate dental hygiene programs to previous dental hygiene documents expressing graduate abilities, many similarities and differences emerge. The domains related to health promotion, clinical therapy, and education have been re-affirmed as they have been for many years in CDHA and other national documents.^{1,28-33,51} The profile is organized into core competencies and dental hygiene services as is the national dental hygiene entry-to-practice document; this profile also shares with it many domain headings such as professionalism, coordination, and advocacy. However, the communication and collaboration domain has been separated to emphasize dental hygienists' interprofessional, collaborative role as well as changing information technologies in the communication area. Because critical thinking underpins each domain, it has not been articulated as a unique ability. Several new domains have been added, in recognition of the increasing focus on knowledge of the discipline, research use, prevention of oral disease, policy use, and leadership. Given that dental hygiene education reflects a continuum of learning, these shifts help to differentiate between the abilities required of 3-year diploma and 4-year baccalaureate graduates.

This document also emphasizes the concept of client safety as found in the University of British Columbia's competency profile.³⁴ The literature related to client safety found in health professional literature⁵²⁻⁶² has been threaded throughout the profile with a particular emphasis on the communication, collaboration, coordination, advocacy, education, health promotion, and leadership domains.

These shifts complement the themes in the ability statements of other health professions both nationally and internationally.^{20,33,34,42-44} In particular they align with core competencies for public health professionals developed by the Public Health Agency of Canada (PHAC)²⁰ and the associated *Discipline Competencies for Dental Public Health in Canada*³³ developed by CAPHD. Such an alignment of the competency profile helps to support interprofessional collaboration, which has been found to contribute to increased client safety and better health outcomes.^{19,20}

The quantitative data from the Delphi study⁶³ support the view that dental hygiene education reflects a continuum of gradually increasing abilities in domains that are central to diploma as well as baccalaureate education. The domains that best differentiate baccalaureate from diploma education are the following:

- research use
- health promotion
- advocacy
- policy use

Statements in the clinical therapy, coordination, leadership, health education, and knowledge integration domains also reflect differences between the two credentials, though to a lesser extent.

However, all of the domains include ability statements that the majority of the Delphi respondents identified as substantive differences between diploma and baccalaureate education. They all appear to make some contribution to the analysis of the differences between diploma and baccalaureate education; this again supports the view that dental hygiene education involves some essential abilities that gradually expand in depth and breadth as learners move from diploma to graduate programs.

The Delphi respondents' comments⁶³ suggested that the major differences between diploma and baccalaureate degree graduates are expressed in the depth and breadth of competencies through cognitive abilities as follows:

- their use of research and its associated critical thinking, evaluation and decision making skills
- their advocacy, policy use and health promotion abilities
- their work with groups, communities, and populations
- their work within a public policy and governmental context

These themes are evident in the competency profile that follows.

Canadian Competencies for Baccalaureate Dental Hygiene Programs

The Graduate of Baccalaureate Dental Hygiene Programs Defined

The following definition of a baccalaureate graduate emerged from the Delphi study and CDHA Advisory Committee discussions. It reflects the outcomes of baccalaureate dental hygiene programs that will continue to be shaped by the practice experiences of the graduates over time.

Graduates of baccalaureate dental hygiene programs ...

are primary oral health care providers guided by the principles of social justice who specialize in services related to health promotion, disease prevention, oral health education, and clinical therapy.

are skilled in applying scientifically sound research to practice decisions and making autonomous judgements to support not only individuals but also groups, communities, and populations, allowing them to increase control over and improve their oral health.

are able to provide oral health services for diverse clients including those with evolving medically complex needs throughout the life cycle. They have had the opportunity to provide services in a variety of practice environments where they have worked collaboratively with clients and members of their support network such as guardians, and other professionals to enhance the quality of life of their clients and the public.

have an increased potential to improve access to dental hygiene services through their advocacy abilities and more nuanced understanding of the policy process, interprofessional collaboration, health promotion, and research use.

This description of graduates reflects the continuum of learning that exists in professions whose educational pathways include diploma, baccalaureate, masters and doctoral programs. The foundation for many abilities is developed through diploma education and then further augmented in baccalaureate and graduate education.

Organization of Competencies

The competency domains are divided into three sections: integration of knowledge, core and client service competencies. The “knowledge of the discipline competency” was added to emphasize the knowledge base of dental hygienists. The core category includes abilities that are fundamental to the provision of all dental hygiene services and are shared by other health care professions. The description of these core abilities is then followed by the client service abilities, which articulate the specialized services provided by dental hygienists. It is acknowledged that some of these abilities are shared with other oral health professions, but dental hygienists provide unique expertise in these areas as so much of their education and practice time is dedicated to these services.

Knowledge of Discipline Competency

1. Integration of Knowledge of Discipline

Core Competencies

2. Professionalism
3. Communication
4. Collaboration
5. Coordination
6. Research Use
7. Leadership

Dental Hygiene Service Competencies

8. Health Promotion Activities, Initiatives, and Programs
9. Disease Prevention Activities, Initiatives, and Programs
10. Oral Health Education
11. Advocacy
12. Policy Use
13. Clinical Therapy

The competency profile is based on the understanding that the process of care model (ADPIE – Assess, Diagnose, Plan, Implement and Evaluate) underpins decision making within dental hygiene services. A list of the domains and an associated explanatory statement are found on the following page. The information is then presented in schematic form, where “knowledge of the discipline” grounds all domains. The core competencies set the stage for professional practice. The abilities that distinguish dental hygienists from other professions are clustered above the core competencies; they revolve around the central themes of health promotion and clinical therapy. Each domain is distinct yet connected to the whole scope of dental hygiene practice. Together they form a solid and unified structure.

The competencies set the minimum standard for 4-year baccalaureate dental hygiene programs. They represent a point along the continuum of dental hygiene education and are not meant to limit the abilities acquired from dental hygiene baccalaureate education. Universities will likely include additional abilities unique to their dental hygiene degree programs.

Following the schematic, detailed information is provided about each domain. Each page includes a domain competency statement, which is then supported by a brief description of the essence of the domain. A more detailed description of the abilities inherent in the domain competency statement is then provided; these can be viewed as sub-competencies. These are then followed by a list of examples related to each domain. Finally, a glossary of terms appears at the end of the document. These elements should allow readers to gain a more comprehensive understanding of each ability statement.

As is common in frameworks, there are overlapping areas within the competency domains; they reflect unique yet interconnected abilities. For example, it is understood that *Policy Use, Advocacy, and Education* are pillars of health promotion while many aspects of *Disease Prevention* overlap with both *Health Promotion* and *Clinical Therapy*. Each domain has been developed to highlight and emphasize important abilities for baccalaureate dental hygiene education in the 21st century. Together the competencies are anticipated to support dental hygiene graduates in assuming an increased role in providing access to oral health services with a particular focus on working with underserved and vulnerable groups and populations within Canada.

Canadian Competencies for Baccalaureate Dental Hygiene Programs

Knowledge of Discipline Competency

1. **Integration of Knowledge of Discipline:** Incorporate foundational knowledge in behavioural, social, and biological sciences into practice decisions to generate evidence-based autonomous judgements.

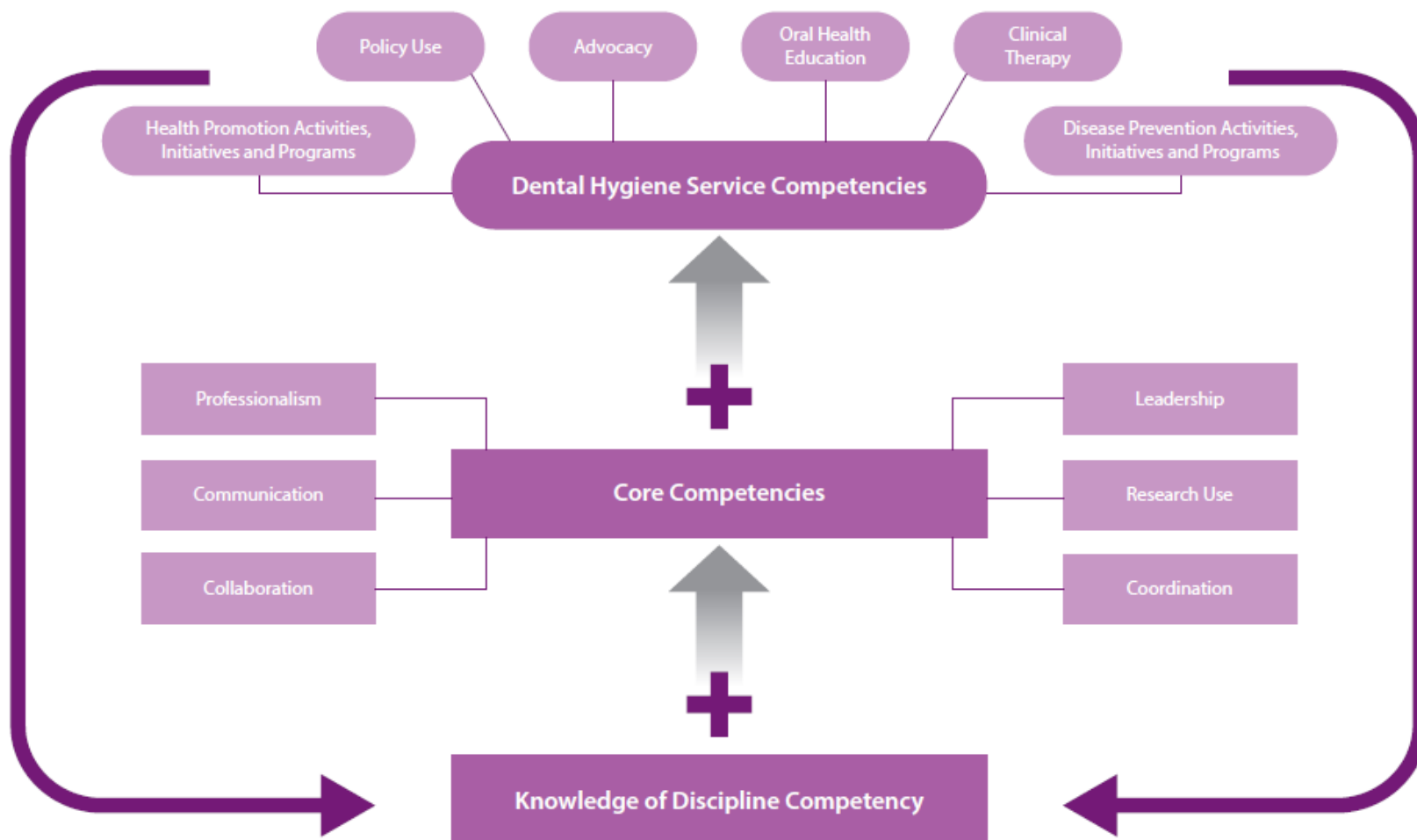
Core Competencies

2. **Professionalism:** Demonstrate self-management and self-regulation within oral health and interprofessional settings within the parameters of relevant legislation, codes of ethics, and practice standards.
3. **Communication:** Interact effectively with individuals and groups to facilitate the gathering, integrating, and conveying of information in multiple forms.
4. **Collaboration:** Work effectively with others to address the oral health needs of individuals, groups, communities, and populations with a view to improving overall well-being.
5. **Coordination:** Organize oral health services by bringing together the contributions of diverse individuals to manage the oral health needs and outcomes of individuals, groups, communities, and populations.
6. **Research Use:** Use scientific information to support evidence- and theory-based autonomous judgments and services.
7. **Leadership:** Facilitate change and innovation in diverse practice environments to support and promote the well-being of individuals, groups, communities, and populations.

Dental Hygiene Service Competencies

8. **Health Promotion Activities, Initiatives, and Programs:** Assess, diagnose, plan, implement, and evaluate health promotion services for individuals, groups, communities, and populations.
9. **Disease Prevention Activities, Initiatives, and Programs:** Apply knowledge of oral, general, and behavioural sciences to minimize the occurrence of oral disease and to foster the competence of clients to achieve oral health.
10. **Oral Health Education:** Support clients in the exploration of their values and beliefs, and the acquisition of knowledge, skills, and self-care habits related to oral health and well-being.
11. **Advocacy:** Support social issues, policies, and individuals, groups, communities, and populations to reduce inequities in oral health status and increase access to oral health services.
12. **Policy Use:** Work with policies to improve and protect the oral and general health status of the public.
13. **Clinical Therapy:** Manage therapeutic and ongoing supportive services for clients, including those with medically complex needs, through the life stages.

Figure 1: Canadian Competencies for Baccalaureate Dental Hygiene Programs



Integration of Knowledge of Discipline: Incorporate foundational knowledge in behavioural, social, and biological sciences into practice decisions to generate evidence-based autonomous judgements.

The graduate has reliably demonstrated the ability to:

1. Integrate knowledge of general, behavioural, social, and oral health sciences to support the dental hygiene process of care.
2. Incorporate knowledge of evaluation to assess outcomes of oral health interventions, activities, initiatives, and programs.
3. Draw on knowledge of political action to support oral health programs and policies that impact oral health and well-being.
4. Integrate knowledge of qualitative and quantitative research into the development and evaluation of oral health services and policies that impact oral health and well-being.
5. Apply dental hygiene and interprofessional theories, theoretical frameworks, research, and evidence to support dental hygiene judgments and services.

Examples:

- a. Apply the epidemiology triangle (host, environment, and agent) to the issue of early childhood caries.
- b. Incorporate behavioural science research into the development of a tobacco cessation program.
- c. Provide the public with information on the value of community water fluoridation.
- d. Assess the individual client's learning style as part of the planning process.
- e. Develop educational plans based on principles of change and stages of behaviour change.
- f. Access systematic reviews comparing manual and powered toothbrushes.
- g. Assess current recommendations for the use of ultrasonic instrumentation.
- h. Compare best practice standards for qualitative and quantitative research studies.
- i. Analyse the strength of evidence available for a new desensitizing agent.

Professionalism: Demonstrate self-management and self-regulation in oral health and interprofessional settings within the parameters of relevant legislation, codes of ethics, and practice standards.

A profession is “an occupation whose core element is work based upon the mastery of a complex body of knowledge and skills. It is a vocation in which knowledge of some department of science or learning or the practice of an art founded upon it is used in the service of others. Its members are governed by codes of ethics and profess a commitment to competence, integrity and morality, altruism, and the promotion of the public good within their domain. These commitments form the basis of a social contract between a profession and society, which in return grants the profession ... the right to considerable autonomy in practice and the privilege of self-regulation. Professions and their members are accountable to those served and to society.”⁶⁴
The graduate has reliably demonstrated the ability to:

1. Exhibit the capacity to be governable through licensure and fulfillment of regulatory legislation.
2. Display a disposition towards critical thinking (e.g., to be inquisitive, truth seeking, open minded, systematic, and analytical).
3. Be aware of own limitations and the implications of these limitations on analyses and interpretations.
4. Develop approaches for dealing with the ambiguities, incomplete information, and the uncertainty of an ever-changing environment.
5. Exercise initiative, personal responsibility, and accountability.
6. Manage own learning in changing circumstances.
7. Seek credible sources of feedback to assess the congruence, incongruence, and outcomes of services.
8. Self-correct professional performance in relation to standards of practice and legislation.
9. Mentor others in their professional development abilities.
10. Promote ethical decision making when providing care for clients, including those with limitations and impairments.
11. Serve society and the profession through community activities and affiliations with professional organizations.

Examples:

- a. Report unethical, unsafe, and incompetent services to appropriate faculty members.
- b. Respect the autonomy of clients as full partners in decision making.
- c. Recognize the relationship between personal health, self-renewal, and the ability to deliver sustained quality care.
- d. Seek input to assess personal limitations within scope of practice, and obtain support and assistance as necessary.
- e. Volunteer time to provide oral health information at a community house.
- f. Participate in a mentoring program.
- g. Participate in a provincial or national dental hygiene student blog.
- h. Participate in local professional association events.

Communication: Interact effectively with individuals and groups to facilitate the gathering, integrating, and conveying of information in multiple forms.

“Communication involves an interchange of ideas, opinions and information. This category addresses numerous dimensions of communication including: internal and external exchanges, written, verbal, non-verbal and listening skills, computer literacy, providing appropriate information to different audiences, working with the media and social marketing techniques.”²⁰

The graduate has reliably demonstrated the ability to:

1. Assess challenges, barriers, and opportunities for effective communication with diverse individuals, groups, communities, and populations.
2. Use professional resources to support the development of oral health messages and learning sessions.
3. Work with established client care information systems to manage information within health settings and communities.
4. Communicate with linguistic and cultural proficiency.
5. Incorporate strategies for interacting with people of diverse backgrounds and health literacy skills into services provided.
6. Use information technologies for health care to support client safety and better health care outcomes.
7. Apply skills related to information and communication technologies to improve oral health services including business operations.
8. Evaluate the effectiveness of communication strategies and outcomes.
9. Identify clients’ support networks and include its members in communications while respecting current privacy legislation.

Examples:

- a. Manage appointments through professional email communication with clients.
- b. Access client information through a health database.
- c. Use conflict resolution strategies to resolve a disagreement between students involved in a community rotation.
- d. Generate a referral letter to a local oral mucosa clinic regarding a lesion on the lateral surface of the tongue for a 24-year-old male with a history of tobacco use.
- e. Identify strategies that would be helpful to explain a new immunization policy to staff members who may not agree with its elements.
- f. Use health literacy principles and assessment tools to develop messages surrounding oral cancer.
- g. Provide a private environment for single mothers to explore the challenges they face with their children’s oral health.
- h. Use data collection tools to document practice.

Collaboration: Work effectively with others to address the oral health needs of individuals, groups, communities, and populations with a view to improving overall well-being.

Collaboration encompasses the abilities required to influence and work with others to improve the health and well-being of the public through the pursuit of a common goal. Partnership and collaboration optimize performance through shared resources and responsibilities.²⁰

The graduate has reliably demonstrated the ability to:

1. Support the development of shared language to promote communication about roles, knowledge, abilities, and oral health and well-being.
2. Establish and maintain professional relationships with students, faculty, staff, health professionals, professional associations, and regulatory authorities to support the oral health and well-being of individuals, groups, communities, and populations.
3. Develop and sustain professional relationships based on respect, empathy, and trust with individuals, groups, communities, and populations.
4. Use coaching, mentoring, and networking strategies to promote problem solving and decision making.
5. Incorporate relationship skills including conflict resolution and negotiation abilities into dealings with others.
6. Engage in joint decision making to support continuity of care for individuals, groups, communities, and populations.

Examples:

- a. Provide oral health input in care conference discussions.
- b. Work with family members to help them achieve oral health goals.
- c. Follow-up on a referral to a physician.
- d. Interview a committee member of a regulatory college to learn how to become involved in the work of the organization.
- e. Provide input on a survey conducted by a professional association.
- f. Examine how a professional could approach health protection agencies to gain input on how new provincial infection control protocols could be integrated into oral health settings.
- g. Work with hospital staff to assess the oral health learning needs of their co-workers.
- h. Work with a dietitian to support the oral health of a resident living with dysphagia.
- i. Work with public school teachers to support pregnant teenagers with their oral health needs.
- j. Work with First Nations elders to evaluate the outcome of oral health activities and programs implemented on their reserve.

Coordination: Organize oral health services by bringing together the contributions of diverse individuals to manage the oral health needs and outcomes of individuals, groups, communities, and populations.

This domain entails organizing complex undertakings that involve resources and numerous individuals, bringing their contributions together to support the needs and outcomes of individuals, groups, communities, and populations.

The graduate has reliably demonstrated the ability to:

1. Work to align dental hygiene services with the organizational and community culture.
2. Develop, implement, and monitor quality assurance standards and protocols to ensure a safe and effective working environment.
3. Ensure that practice is consistent with legal, professional, and ethical responsibilities.
4. Ensure the practice environment supports the efficient and appropriate delivery of dental hygiene services.
5. Apply culturally relevant approaches to interactions with people from diverse cultural, socioeconomic, and educational backgrounds, and persons of all ages, genders, health status, sexual orientations, and abilities.
6. Support the integration of a family-centred/community-centred approach in the provision of oral health services.
7. Assume responsibility for being clients' first point of access to oral health services.
8. Take responsibility for the overall coordination of client care including appropriate delegation to qualified individuals, use of community resources, and management of referrals.
9. Integrate the basic principles of business management including business ethics, economics, marketing, and entrepreneurship into practice.

Examples:

- a. Identify essential elements for developing service proposals.
- b. Follow up on a referral related to a possible area of dysplasia.
- c. Review the budget for an oral health program implemented through the faculty to determine the cost of services provided.
- d. Download oral health information from credible sources in different languages to support communication with diverse groups.
- e. Review personal practice data to verify timely completion of dental hygiene services for clients.
- f. Review policies related to monthly biological monitoring of sterilizers to determine if they are aligned with the frequency-of-use parameters of the clinic.

Research Use: Use scientific information to support evidence- and theory-based autonomous judgements and services.

Research use is viewed as an element of evidence-based practice, the latter being a larger concept including not only research but the best available information. It involves the specific application of research to an issue for enlightenment and/or instrumental use.

The graduate has reliably demonstrated the ability to:

1. Develop focused, realistic, and meaningful questions about practice and/or the profession.
2. Analyse the strengths and limitations of different research approaches and their contributions to the knowledge base of dental hygiene.
3. Navigate proficiently through diverse databases and resources related to oral and general health.
4. Examine the appropriateness of statistical tests based on the theories underpinning the tests.
5. Critique study methodology and conclusions for their relevance and application to oral care.
6. Weigh various perspectives, biases, and assumptions related to complex issues.
7. Differentiate between more and less valid, reliable, and/or credible types of information.
8. Apply the principles of research ethics to the collection of data in practice settings.
9. Apply theoretical frameworks and processes to the analysis of information to support practice decisions.
10. Use information from current, credible research and resources to support evidence-based judgements about oral health services.
11. Formulate strategies to protect and further the oral health status of the public.

Examples:

- a. Identify issues in practice that would benefit from further exploration.
- b. Use epidemiological evidence to help assess the effectiveness of services.
- c. Seek out and critique studies related to a new technology with possible oral health benefits.
- d. Compare best practice standards development by different organizations to look for common themes and differences in recommendations.
- e. Develop a table clinic related to end-of-life oral care for a hospice facility.
- f. Develop a client fact sheet on dry mouth products grounded in primary literature.
- g. Conduct a needs assessment of new immigrant mothers from Cambodia.
- h. Compare the strengths and limitations of health care systems in North America and Europe.
- i. Generate a table comparing fluoride recommendations of national organizations.

Leadership: Facilitate change and innovation in diverse practice environments to support and promote the well-being of individuals, groups, communities, and populations.

This domain comprises abilities that improve performance, build capacity, and generally enhance the quality of the environment. It is focused on enabling practices, organizations, and communities “to create, communicate and apply shared visions, missions and values.”²⁰

The graduate has reliably demonstrated the ability to:

1. Promote the value of client safety, health and well-being, and reduction of inequities in diverse practice environments.
2. Collaborate with others to advance oral health within overall health.
3. Compare and contrast ways of initiating and managing change for self, others, communities, and/or organizations.
4. Advocate for resources to promote oral health and well-being.
5. Contribute to the measuring, reporting, and continuous improvement of practice performance.
6. Participate in implementing the vision of the practice, organization, and/or community.
7. Model the values of social justice within the work of the practice, organization, and community.
8. Participate in the dental hygiene profession with political awareness of health issues ranging from the local to the global levels.
9. Engage in leadership activities to advance the profession.

Examples:

- a. Assist others in the development of their learning plans.
- b. Work with community groups to identify and apply for grants from charitable organizations.
- c. Contribute to collective knowledge on topics discussed at student meetings.
- d. Help to organize a sealant clinic during National Dental Hygienists Week.
- e. Serve as a student representative on a university committee.
- f. Analyse how a program logic model incorporates the organization’s mission into program specific goals and outcomes.
- g. Provide feedback to clinical staff related to the implementation of infection control and prevention protocols.
- h. Participate in a mentorship program for junior year students.

Health Promotion Activities, Initiatives, and Programs: Assess, diagnose, plan, implement, and evaluate health promotion services for individuals, groups, communities, and populations.

The health promotion domain involves “the process of enabling people to increase control over, and to improve their health. It not only embraces actions directed at strengthening the skills and capabilities of individuals, but also action directed towards changing social, environmental and economic conditions so as to alleviate their impact on public and individual health. The Ottawa Charter for Health Promotion (1986) describes five key strategies for health promotion: build healthy public policy; create supportive environments for health; strengthen community action for health; develop personal skills; and re-orient health services.”²⁰

The graduate has reliably demonstrated the ability to:

1. Assess population oral health and its determinants.
2. Apply knowledge of the social determinants of health and associated inequities when participating in the designing of health promotion activities, initiatives, programs, and policies.
3. Collaborate with community, interprofessional, and other partners to achieve sustainable health promotion goals for individuals, groups, communities, and populations.
4. Support people within communities to build their capacity for oral health and general well-being.
5. Use evidence-based strategies to work effectively with at-risk groups to support access to oral health care.
6. Support the adaptation of oral health policies, delivery of health promotion services, and evaluation to respond to diversity in population characteristics.
7. Use cost-effectiveness, cost-benefit, and cost-utility data to support service prioritization and decision making.
8. Incorporate system thinking into health promotion practice.
9. Participate in the development of mechanisms to monitor, evaluate, and modify activities, initiatives, and programs for their effectiveness and quality.
10. Compare and contrast the current and potential role of oral health professionals in the management of incidents, outbreaks, and emergencies.

Examples:

- a. Gain information about a specific immigrant population to adapt an oral health program for the targeted group.
- b. Collect information about client services provided, DMFT scores, and client demographics during the course of an enamel sealant program.
- c. Plan an oral health presentation for an ESL group of Vietnamese parents.
- d. Meet with a local multicultural group to provide information about oral care and nutrition for preschool children.
- e. Use non-parametric tests to explore the differences between the oral health needs of well seniors over a 10-year span using data collected annually at a seniors’ centre.
- f. Interview the elders of a First Nations community to gain information about the outcomes of an oral health program.
- g. Critique evaluations of dental hygiene oral health activities, initiatives and/or programs to identify successes and failures.

Disease Prevention Activities, Initiatives, and Programs: Apply knowledge of oral, general, and behavioural sciences to minimize the occurrence of oral disease and to support individuals, groups, communities, and populations to achieve oral health.

Prevention focuses on reducing risk and building resilience to enhance protective factors. Prevention includes activities designed to diminish the risk of occurrence and the progression of disease.⁶⁵ Distinctions are often made between different types of prevention with primary prevention focused on reducing modifiable risk factors and increasing protective factors; secondary prevention directed to activities in asymptomatic stages; and tertiary prevention designed “to reverse, arrest or delay progression of a disease.”⁶⁶ In essence prevention involves fostering competence and averting problems.

The graduate has reliably demonstrated the ability to:

1. Use a common risk factor approach in assessing and supporting the oral health and well-being of individuals, groups, communities, and populations.
2. Promote a culture of safety in practice settings to support the positive management of breaches related to practice standards.
3. Participate in the development of evidence-informed protocols and standards of practice for client safety and better health outcomes in diverse practice settings.
4. Encourage client self-efficacy to maintain and support healthy lifestyles.
5. Plan and implement preventive services for individuals, groups, communities, and populations at risk for oral disease.
6. Engage clients, health professionals, decision makers, and interest groups in discussions about oral disease, health, and well-being.
7. Compare the outcomes of preventive services provided to accepted scientific benchmarks.

Examples:

- a. Develop a presentation for pregnant Inuit women to inform them about the transfer of oral bacteria between mother and newborn.
- b. Recommend the removal of junk food from a local school given the increasing caries rate in school populations.
- c. Participate in a sports mouthguard clinic for a local high school rugby team.
- d. Discuss the possible need for an orthodontic appliance with the parents of a child with a thumbsucking habit.
- e. Evaluate the integrity of enamel sealants during follow-up appointments.
- f. Support clients in establishing and maintaining safe living environments to promote and protect oral health and well-being.
- g. Implement an information session for teenagers on sexual activities and oral cancer.

Oral Health Education: Support clients in the exploration of their values and beliefs, and the acquisition of knowledge, skills, and self-care habits related to oral health and well-being.

Health education involves “the application of teaching and learning principles to facilitate the development of specific attitudes, knowledge, skills, and behaviours”⁴⁹ with particular emphasis on oral health and its relationship to general health and well-being.

The graduate has reliably demonstrated the ability to:

1. Assess the health literacy of individuals, groups, communities, and populations served.
2. Use multiple strategies to communicate appropriate oral health messages effectively to diverse audiences.
3. Create an environment in which effective learning can take place.
4. Participate in knowledge translation of oral health information to other professionals and policy makers.
5. Present demographic, statistical, programmatic, and/or scientific information for use by lay audiences.
6. Coach individuals and groups in learning oral health knowledge and skills.
7. Support clients to develop self-management skills.
8. Collaborate with care workers and other professionals on issues and protocols related to oral care.
9. Promote the integration of oral health issues within chronic disease management programs and general health education activities, initiatives, and programs.
10. Evaluate the effectiveness of learning activities and revise the learning strategy as needed.

Examples:

- a. Develop an oral health module for a prenatal program.
- b. Help a care assistant in developing brushing techniques to support residents.
- c. Review tobacco cessation strategies with clients.
- d. Participate in a health fair.
- e. Assist family members in working towards oral health goals.
- f. Write a letter to the editor of a local newspaper about an oral health issue.
- g. Call into a local radio station to contribute oral health perspectives to a discussion about health.
- h. Implement a module on oral self-care for new immigrants.
- i. Revise oral health messages to meet the needs of different individuals and audiences.

Advocacy: Support social issues, policies, and individuals, groups, communities, and populations to reduce inequities in oral health status and increase access to oral health services.

Advocacy involves “speaking, writing or acting in favour of a particular issue or cause, policy,”²⁰ individual or group of people. The focus is often aimed at reducing inequities in oral health status or improving access to oral health services.

The graduate has reliably demonstrated the ability to:

1. Examine how political arenas such as government, workplace, organizations, and communities shape the delivery of oral health care.
2. Identify strategies for advocating the needs of individuals, groups, communities, and populations within diverse organizational structures.
3. Solicit input from individuals, groups, organizations, and communities to address social inequities.
4. Support individuals, groups, and communities in developing advocacy action plans.
5. Work with others to build cultures that support social justice through the acknowledgement of power, privilege, and oppression.
6. Help to create culturally safe and supportive environments within activities, initiatives, programs, organizations, and communities.
7. Use the political process to advocate for oral health.
8. Act as a voice for change in the face of behaviour that might bring harm to individuals, groups, communities, and populations.
9. Follow-up on advocacy initiatives to determine the outcomes of the strategy.

Examples:

- a. Work with community groups to identify and apply for grants from charitable organizations.
- b. Disseminate information about the value of water fluoridation to a parent group.
- c. Write a letter to the local MLA/MPP regarding access to dental hygiene services.
- d. Provide a client with the name and telephone number of an appropriate regulatory organization with which the person can communicate about a concern.
- e. Provide clients with information about low-cost dental clinics in their area.
- f. Identify networks and alliances inside and outside the profession to support advocacy initiatives.

Policy Use: Work with policies to improve and protect the oral and general health status of the public.

This domain involves assessing the need for new or different policies, assisting in the development of policies and the plans for their implementation; it includes the interpretation and application of policies, and the evaluation of their impact. It is directed to working collaboratively with others to encourage policies in the public and private sector that support the oral health and well-being of the public.³⁴

The graduate has reliably demonstrated the ability to:

1. Recognize the potential differential effects of oral health interventions on population subgroups.
2. Assist in the development of recommendations for policies to support the oral health and well-being of individuals, groups, communities, and populations.
3. Assist in the development of plans to implement policies taking into account relevant information including other policies, regulations, and legislation.
4. Collaborate with others to advance health equity through the policy process.
5. Collect data about policies that impact oral health and well-being to support their monitoring and evaluation.

Examples:

- a. Make recommendations and suggestions based on best practice protocols for the revision of a policy and procedure manual.
- b. Participate in the consultation process for the review of a policy by providing feedback to an online survey.
- c. Question actions that appear to be inconsistent with best practices and/or clinical policies.
- d. Explain how evidence from a recent peer-reviewed study might influence clinical policies.
- e. Summarize key findings from a credible report to support possible policy changes in an aspect of oral health delivery.

Clinical Therapy: Manage therapeutic and ongoing supportive services for clients including those with medically complex needs through the life stages.

Clinical therapy involves the provision of “interceptive, therapeutic, preventive and ongoing care procedures that help to enable people to achieve optimal oral health that contributes to overall health.”⁴⁹

The graduate has reliably demonstrated the ability to:

1. Apply standards, best practices, and protocols to support client and practitioner safety, and client health outcomes.
2. Perform needs assessments for individuals and groups grounded in evidence-based approaches.
3. Differentiate between significant and non-significant findings when summarizing client assessment data for individuals and groups including those with medically complex needs.
4. Develop diagnostic statements based on a comprehensive knowledge of pathophysiology and the social determinants of health.
5. Plan strategies for gaining and maintaining informed consent for clients including those with learning and cognitive limitations and impairments.
6. Identify errors in care and make recommendations to support client safety.
7. Identify alternative care options for clients for whom the initiation or continuation of treatment is contraindicated.
8. Manage primary oral health care in diverse contexts for individuals and groups with an emphasis on risk assessment, prevention, education, therapeutic services, and referrals.
9. Analyse the provision of oral health services in diverse contexts such as residential care and assisted living environments in the urban and/or rural contexts.

Examples:

- a. Assess population health data to determine the strength of evidence to support screening protocols being considered or currently used.
- b. Explore how a fluoride varnish program could provide increased access and decrease caries in children from low socioeconomic backgrounds.
- c. Review screening data to determine high, moderate, and low-risk segments of the community to identify those with the highest need for services.
- d. Manage medical emergencies including risk assessment, risk reduction, and emergency care based on recognized CPR and first aid standards.
- e. Identify clients for whom the initiation or continuation of treatment is contraindicated based on the interpretation of health history and clinical data.
- f. Provide a choice of services within a range of affordable options consistent with the client’s needs.
- g. Use professional judgement and methods consistent with medico-legal-ethical principles when providing dental hygiene services.
- h. Refer clients who are having difficulty in managing the cost of care to low-cost dental clinics.
- i. Implement an oral health screening clinic at a local homeless shelter.

Conclusion

Oral health services vary between provinces and territories across Canada. Thus, the use of the baccalaureate competencies may also vary according to different jurisdictional contexts. The adoption of the baccalaureate competencies requires acceptance and commitment from a variety of groups including:

- professional associations
- regulatory bodies
- accreditation organization
- national examination board
- academic institutions
- dental hygiene students and dental hygienists

As the practice of dental hygiene evolves, so too must the competencies for each dental hygiene credential. In collaboration with its partners, the Canadian Dental Hygienists Association is committed to ensuring that the competencies remain current and relevant. This commitment will include monitoring the impact of the competencies within the broader professional and postsecondary education system as well as on dental hygiene practice.

The practice of dental hygiene is both an art and a science. The common language and purpose of national competencies help to describe and standardize complex work in an equally complex and diverse environment. Dental hygienists in the 21st century will need to tap into their shared and unique knowledge, skills, and values to support and promote the oral health and general well-being of the Canadian public.

References

- ¹Sunell S, Richardson F, Udahl B, Jamieson L, Landry D. National competencies for dental hygiene entry-to-practice. *Can J Dent Hyg.* 2008;42(1):27–36.
- ²Dental Hygiene Educators Canada, Canadian Dental Hygienists Association, National Dental Hygiene Certification Board, Commission on Dental Accreditation of Canada, Federation of Dental Hygiene Regulatory Authorities. *National dental hygiene competencies for entry-to-practice: release 3.* Ottawa (ON): Authors; 2008.
- ³American Dental Educators Association, American Dental Hygienists Association. *Core competencies for graduate dental hygiene education.* Chicago: Authors; 2011 [accessed 2012 Sept 12]. Available from:
http://www.adea.org/uploadedFiles/ADEA/Content_Conversion_Final/about_adea/governance/ADEA_Core_Competencies_for_Graduate_Dental_Hygiene_Education.pdf
- ⁴Blitz P, Hovius M. Towards the international curriculum standards. *Int J Dent Hyg.* 2003;1:57–61.
- ⁵Ontario Ministry of Colleges and Universities. *Vision 2000: Quality and opportunity.* Toronto (ON): Author; 1990.
- ⁶Bauslaugh G. Undergraduate education in British Columbia: Choices for the future. Victoria (BC): Ministry of Advanced Education, Training and Technology; 1992.
- ⁷College Standards and Accreditation Council. *Generic skills learning outcomes for two and three year programs in Ontario's Colleges of Applied Arts and Technology.* Toronto (ON): Author; 1995.
- ⁸British Columbia Ministry of Education, Skills and Training. *Charting a new course: A strategic plan for the future of British Columbia's college, institutes and agency system.* Victoria (BC): Author; 1996.
- ⁹Betcherman G, McMullen K, Davidman K. *Training for the new economy.* Ottawa (ON): Renouf Publishing; 1998.
- ¹⁰Verma S, Paterson M, Medves J. Core competencies for health care professionals: What medicine, nursing, occupational therapy and physiotherapy share. *J Allied Health.* 2006;35(2):109–15.
- ¹¹Verma S, Broers T, Paterson M, Schroder C, Medves JM, Morrison C. Core competencies: The next generation. *J Allied Health.* 2009;38(1):47–53.
- ¹²American Association of Colleges of Nursing. *The essentials of baccalaureate education for professional nursing practice* [online] 2008 [accessed 2012 Aug 14]. Available from: www.aacn.nche.edu/education-resources/baccessentials08.pdf

- ¹³Public Health Agency of Canada. *Chief Public Health Officer's report on the state of public health in Canada, 2008. Addressing health inequalities*. Ottawa (ON): Minister of Health; 2008.
- ¹⁴Petersen PE. The World Oral Health Report 2003: Continuous improvement of oral health in the 21st century—the approach of the WHO Global Oral Health Program. *Community Dent Oral Epidemiol.* 2003;31(Suppl 1):3–24.
- ¹⁵Federal, Provincial and Territorial Dental Directors. *A Canadian oral health strategy*. Ottawa (ON): Federal, Provincial and Territorial Dental Directors; 2005.
- ¹⁶Health Disparities Task Group of the Federal/Provincial/Territorial Advisory Committee on Population Health and Health Security. *Reducing health disparities—roles of the health sector: discussion paper*. Ottawa (ON): Public Health Agency of Canada; 2005.
- ¹⁷Lawrence HP, Leake JL. The US Surgeon General's report on oral health in America: A Canadian perspective. *J Can Dent Assoc.* 2001;67(10):1–10.
- ¹⁸Commission on the Social Determinants of Health. *Closing the gap in a generation: Health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health*. Geneva: World Health Organization; 2008 [accessed 2014 May 25]. Available from:
http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf?ua=1
- ¹⁹Public Health Agency of Canada (PHAC), Canadian Public Health Association (CPHA). *Moving ahead, together: Launch of a national dialogue on public health and sustainable development in Canada. Workshop summary report*. Ottawa (ON): PHAC; 2007.
- ²⁰Public Health Agency of Canada (PHAC). *Core competencies for public health in Canada: release 1.0*. Ottawa: PHAC; 2008 [accessed 2012 May 24]. http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/about_cc-afpropos_ce-eng.php
- ²¹Thornhill J, Dault M, Clements D. Ready, set ... collaborate? The evidence says “go,” so what's slowing adoption of inter-professional collaboration in primary healthcare? *Healthcare Quarterly.* 2008;11(2):14–16.
- ²²World Health Organization. *A safer future: Global public health security in the 21st century*. Geneva: WHO; 2007 [accessed 2014 May 26]. Available from:
http://www.who.int/whr/2007/whr07_en.pdf?ua=1
- ²³Romanow RJ. *Building on values: The future of health care in Canada*. Ottawa (ON): Commission on the Future of Health Care in Canada; 2002 [accessed 2014 Aug 04]. Available from:
http://www.cbc.ca/healthcare/final_report.pdf

- ²⁴Belkhdja O, Amara N, Landry R, Ouimet M. The extent and organizational determinants of research utilization in Canadian health services organizations. *Science Communication*. 2007;28(3):377–417.
- ²⁵US Department of Health and Human Services. *Oral health in America: A report of the Surgeon General*. Rockville (MD): US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health; 2000.
- ²⁶Webber CF, Townsend D. The comparative politics of accountability of New South Wales and Alberta. *Educational Policy*. 1998;12(1/2):177–90.
- ²⁷Canadian Dental Hygienists Association (CDHA). *Task force on dental hygiene education: Report to the CDHA Board*. Ottawa (ON): CDHA; 2000.
- ²⁸Sunell S, Wilson M, Landry D. *Learning outcomes in Canadian dental hygiene education: DHEC/EHDC Report*. Edmonton (AB): DHEC/EHDC; 2004.
- ²⁹Canadian Dental Hygienists Association (CDHA), Federation of Dental Hygiene Regulatory Authorities (FDHRA), Commission on Dental Accreditation of Canada (CDAC), National Dental Hygiene Certification Board (NDHCB). *Entry-to-practice competencies and standards for Canadian dental hygienists*. Ottawa (ON): CDHA, FDHRA, CDAC, NDHCB; January 2010.
- ³⁰Commission on Dental Accreditation of Canada (CDAC). *Accreditation requirements for dental hygiene programs*. Ottawa (ON): CDAC; 2001 (updated 2011) [accessed 2014 May 24]. Available from: <http://www.cda-adc.ca/en/cda/cdac/accreditation/index.asp>
- ³¹National Dental Examination Board. Competencies for beginning dental practitioners in Canada [accessed 2007 April 10]. Available from: <http://www.ndeb.ca/en/accredited/competencies.htm>
- ³²Council of Ministers of Education, Canada. *Ministerial statement on quality assurance of degree education in Canada*. Ottawa (ON): CMEC; 2007 [accessed 2012 Sept 26]. Available from: www.cicic.ca/docs/cmec/Qa-statement-2007.en.pdf
- ³³Canadian Association of Public Health Dentistry (CAPHD). *Discipline competencies for dental public health*. Edmonton (AB): CAPHD; 2008 [accessed 2014 May 24]. http://www.caphd.ca/sites/default/files/pdf/DisciplineCompetenciesVersion4_March31.pdf
- ³⁴University of British Columbia. *UBC dental hygiene program competencies document – Version 1.3*. Vancouver (BC): UBC; 2011.
- ³⁵Canadian Interprofessional Health Collaborative. *A national interprofessional competency framework*. Vancouver (BC): Author; 2010 [accessed 2014 May 26]. Available from: http://www.cihc.ca/files/CIHC_IPCompetencies_Feb1210.pdf
- ³⁶College & Association of Registered Nurses of Alberta. *Entry-to-practice competencies for the registered nurses profession*. May 2013 [accessed 2014 Feb 12]. Available from:

http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Standards/RN_EntryPracticeCompetencies_May2013.pdf

- ³⁷Department of Health in England. *Public health skills and career framework: Multidisciplinary/multi-agency/multi-professional*. April 2009 [accessed 2014 Feb 12]. Available from: http://www.skillsforhealth.org.uk/component/docman/doc_view/1869-public-health-skills-career-framework-03-2009.html
- ³⁸American Association of Colleges of Nursing. *The essentials of baccalaureate education for professional nursing practice*. 2008 [accessed 2014 Feb 12]. Available from: www.aacn.nche.edu/education-resources/baccessentials08.pdf
- ³⁹American Association of Colleges of Nursing. *Public health: Recommended baccalaureate competencies and curricular guidelines for public health nursing*. September 2013 [accessed 2014 May 26]. <http://www.aacn.nche.edu/education-resources/BSN-Curriculum-Guide.pdf>
- ⁴⁰Quad Council of Public Health Nursing Organizations. *Quad Council competencies for public health Nurses*. Summer 2011 [accessed 2014 May 26]. Available from: http://www.resourcenter.net/images/ACHNE/Files/QuadCouncilCompetenciesForPublicHealthNurses_Summer2011.pdf
- ⁴¹Interprofessional Education Collaborative Expert Panel. *Core competencies for interprofessional collaborative practice: Report of an expert panel*. Washington (DC): Interprofessional Education Collaborative; 2011 [accessed 2014 May 26]. Available from: <http://www.aacn.nche.edu/education-resources/ipecreport.pdf>
- ⁴²International Union for Health Promotion (IUHP), Society for Public Health Education (SOPHIE). *Towards domains of core competency for building capacity in health promotion: The Galway consensus conference statement*. June 2008 [accessed 2014 May 26]. Available from: http://www.iuhpe.org/images/IUHPE/Advocacy/Galway_Consensus_Statement.pdf
- ⁴³World Health Organization. *Bangkok charter for health promotion in a globalized world*. Geneva: WHO; 2005 [accessed 2014 May 26]. Available from: http://www.who.int/healthpromotion/conferences/6gchp/bangkok_charter/en/
- ⁴⁴World Health Organization. *Preparing a health care workforce for the 21st century: The challenge of chronic conditions*. Geneva: WHO Non-communicable Disease and Mental Health Cluster, Chronic Disease and Health Promotion Department; 2005 [accessed 2014 May 26]. Available from: <http://whqlibdoc.who.int/publications/2005/9241562803.pdf>
- ⁴⁵National Physiotherapy Advisory Group. *Essential competency profile for physiotherapists in Canada, 2010* [accessed 2014 May 26]. Available from: http://www.peicpt.com/content/page/front_news/id/23/Essential-Competency-Profile-for-Physiotherapists-in-Canada.html

- ⁴⁶ADEA & ADHA. *Core competencies for graduate dental hygiene education*. Chicago: Author; 2011 [accessed 2014 May 26]. Available from: http://www.adea.org/uploadedFiles/ADEA/Content_Conversion_Final/about_adea/governance/ADEA_Core_Competencies_for_Graduate_Dental_Hygiene_Education.pdf
- ⁴⁷American Dental Hygienists Association. *Competencies for advanced dental hygiene practitioner*. Chicago: Author; 2008 [accessed 2014 May 26]. Available from: <http://www.newenglandruralhealth.org/activities/items/oralhealth/FitzpatrickADHP09.pdf>
- ⁴⁸College Standards and Accreditation Council (CSAC). *Generic skills learning outcomes for two and three year programs in Ontario's Colleges of Applied Arts and Technology*. Toronto (ON): CSAC; 1995.
- ⁴⁹Council of Ontario Universities. *Ensuring the value of university degrees in Ontario: A guide to learning outcomes, degree level expectations and the quality assurance process in Ontario*. 2011 [accessed 2014 May 24]. Available from: <http://www.cou.on.ca/publications/reports/pdfs/ensuring-the-value-of-university-degrees-in-ontari>
- ⁵⁰Sunell S, Asadoorian J, Gadbury-Amyot CC, Biggar HC. Competencies for Canadian baccalaureate dental hygiene education—a Delphi study—part 1. *Can J Dent Hyg*. Forthcoming 2015.
- ⁵¹Canadian Dental Hygienists Association (CDHA). *Dental hygiene definition and scope*. Ottawa, ON: CDHA; 2002. Available from: http://www.cdha.ca/pdfs/profession/resources/definitionscope_public.pdf
- ⁵²Stevenson L, McRae C, Mughal W. Moving to a culture of safety in community home health care. *J Health Serv Res Policy*. 2008;13(1):20–4.
- ⁵³Lau DT, Scandrett KG, Jarzebowski M, Holman K, Emanuel L. Health-related safety: A framework to address barriers to aging in place. *Gerontologist*. 2007;47(6):830–37.
- ⁵⁴Ponte PR, Connor M, DeMarco R, Price J. Linking patient and family-centered care and patient safety: The next leap. *Nursing Economics* 2004;22(4):211–15.
- ⁵⁵Kilbridge PM, Classen DC. The informatics opportunities at the intersection of patient safety and clinical informatics. *J Am Med Inform Assoc*. 2008;15(4):397–407.
- ⁵⁶Ramadas K, Arrossi S, Thara S, Thomas G, Jissa V, Fayette JM, Mathew B, Sankaranarayanan R. Which socio-demographic factors are associated with participation in oral cancer screening in the developing world? Results from a population-based screening project in India. *Cancer Detection and Prevention*. 2008;32:109–115.
- ⁵⁷Feng X, Bobay K, Weiss M. Patient safety culture in nursing: A dimensional concept analysis. *Journal of Advanced Nursing*. 2008;63(3):310–19.

- ⁵⁸Ramoni R, Walji MF, Tavares A, White J, Tokede O, Vaderhobli R, Kalendarian E. Open wide: Looking into the safety culture of dental school clinics. *J Dent Educ.* 2014;78(5):745–56.
- ⁵⁹El-Jardali F, Sheikh F, Garcia NA, Jamal D, Abdo A. Patient safety culture in a large teaching hospital in Riyadh: baseline assessment, comparative analysis and opportunities for improvement. *BMC Health Serv Res.* 2014;14:122.
- ⁶⁰World Alliance for Patient Safety. *Summary of the evidence on patient safety: Implications for research.* Geneva: World Health Organization; 2008 [accessed 2014 May 26].
http://whqlibdoc.who.int/publications/2008/9789241596541_eng.pdf
- ⁶¹Ginsburg LR, Chuang YT, Berta WB, Norton PG, Ng P; Tregunno D, Richardson J. The relationship between organizational leadership for safety and learning from patient safety events. *Health Serv Res.* 2010;45(3):607–32.
- ⁶²Braithwaite J, Westbrook MT, Travaglia JF, Iedema R, Mallock NA, Long D, Nugus P, Forsyth R, Jorm C, Pawsey M. Are health systems changing in support of patient safety? A multi-methods evaluation of education, attitudes and practice. *Int J Health Care Qual Assur.* 2007;20(7):585–601.
- ⁶³Sunell S, Asadoorian J, Gadbury-Amyot CC, Biggar HC. Competencies for Canadian baccalaureate dental hygiene education—a Delphi study—part 2. *Can J Dent Hyg.* Forthcoming 2015.
- ⁶⁴Cruess SR, Johnston S, Cruess RL. “Profession”: a working definition for medical educators. *Teach Learn Med.* 2004 Winter;16(1):74–6.
- ⁶⁵Evans R, Spicer N. Is participation prevention? A blurring of discourses in children’s preventative initiatives in the UK. *Childhood.* 2008;15(1):50–73.
- ⁶⁶Guerra NG, Bradshaw CP. Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth development and risk prevention. *New Directions for Child & Adolescent Development.* Winter 2008;122:1–17.

Glossary of Terms

Most definitions in this glossary were compiled by Dr. John M Last in October 2006, revised and edited by Peggy Edwards in July 2007, and published in 2008 by the Public Health Agency of Canada as an appendix to its *Core Competencies for Public Health in Canada*. Citations are provided after the definitions that are taken directly from the PHAC document.

Advocacy: Interventions such as speaking, writing or acting in favour of a particular issue or cause, policy or group of people. In the public health field, advocacy is assumed to be in the public interest, whereas lobbying by a special interest group may or may not be in the public interest. Advocacy often aims to enhance the health of disadvantaged groups such as First Nations communities, people living in poverty or persons with HIV/AIDS.²⁰

Analysis: The examination and evaluation of relevant information in order to select the best course of action from among various alternatives [...] this requires the integration of information from a variety of sources.²⁰

Assessment: A formal method of evaluating a system or a process, often with both qualitative and quantitative components.²⁰

Attitude: A relatively stable belief or feeling about a concept, person or object. Attitudes can often be inferred by observing behaviours. Related to definition of values.²⁰

Collaboration: A recognized relationship among different sectors or groups, which have been formed to take action on an issue in a way that is more effective or sustainable than might be achieved by the public health sector acting alone.²⁰

Client: An individual, family, group, organization or community accessing the professional services of a dental hygienist. The term “client” may also include the client’s advocate such as the parent of a young child.⁵¹

Communication skills: These are the skills required by [...] health professionals to transmit and receive ideas and information to and from involved individuals and groups. Communication skills include the ability to listen, and to speak and write in plain language; i.e., verbal skills, often reinforced with visual images.²⁰

Community participation: Procedures whereby members of a community participate directly in decision-making about developments that affect the community. It covers a spectrum of activities ranging from passive involvement in community life to intensive action-oriented participation in community development (including political initiatives and strategies). The Ottawa Charter for Health Promotion emphasizes the importance of concrete and effective community action in setting

priorities for health, making decisions, planning strategies and implementing them to achieve better health.²⁰

Culturally-relevant (and appropriate): Recognizing, understanding and applying attitudes and practices that are sensitive to and appropriate for people with diverse cultural, socioeconomic and educational backgrounds, and persons of all ages, genders, health status, sexual orientations and abilities.²⁰

Data: A set of facts; one source of information. (*See definition—Information.*)²⁰

Determinants of health: Definable entities that cause, are associated with, or induce health outcomes. Public health is fundamentally concerned with action and advocacy to address the full range of potentially modifiable determinants of health – not only those which are related to the actions of individuals, such as health behaviours and lifestyles, but also factors such as income and social status, education, employment and working conditions, access to appropriate health services, and the physical environments. These, in combination, create different living conditions which impact on health.²⁰

Disease and injury prevention: Measures to prevent the occurrence of disease and injury, such as risk factor reduction, but also to arrest the progress and reduce the consequences of disease or injury once established. Disease and injury prevention is sometimes used as a complementary term alongside health promotion.²⁰

Diversity: The demographic characteristic of populations attributable to perceptible ethnic, linguistic, cultural, visible or social variation among groups of individuals in the general population.²⁰

Empowerment: A process through which people gain greater control over decisions and actions affecting their health. Empowerment may be a social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs. (*See definition— Health promotion*)²⁰

Equity/equitable: Equity means fairness. Equity in health means that people's needs guide the distribution of opportunities for well-being. Equity in health is not the same as equality in health status. Inequalities in health status between individuals and populations are inevitable consequences of genetic differences and various social and economic conditions, or a result of personal lifestyle choices. Inequities occur as a consequence of differences in opportunity, which result, for example in unequal access to health services, nutritious food or adequate housing. In such cases, inequalities in health status arise as a consequence of inequities in opportunities in life.²⁰

Ethics: The branch of philosophy dealing with distinctions between right and wrong, and with the moral consequences of human actions. Much of modern ethical thinking is based on the concepts of human rights, individual freedom and autonomy, and on doing good and not harming. The concept of equity, or equal consideration for every individual, is paramount [...] Finding a balance between the public health requirement for access to information and the individual's right to privacy and to confidentiality of personal information may also be a source of tension.²⁰

Evaluation: Efforts aimed at determining as systematically and objectively as possible the effectiveness and impact of health-related (and other) activities in relation to objectives, taking into account the resources that have been used.²⁰

Evidence: Information such as analyzed data, published research findings, results of evaluations, prior experience, expert opinions, any or all of which may be used to reach conclusions on which decisions are based.²⁰

Governability: A concept borrowed from the sciences to refer to “governableness,” which can be defined as the quality of being governable; that is, capable of being controlled or managed (<http://knowledge.sagepub.com/view/governance/n219.xml>). Governable health professionals are accountable within the organizations in which they work to uphold a high quality of care and to abide by the standards and expectations set out by their regulatory body.

(Health) planning: A set of practices and procedures that are intended to enhance the efficiency and effectiveness of health services and to improve health outcomes. This important activity [...] commonly includes short-term, medium-term, and long-range planning. Important considerations are resource allocation, priority setting, distribution of staff and physical facilities, planning for emergencies and ways to cope with extremes of demand and unforeseen contingencies, and preparation of budgets for future fiscal periods...²⁰

Health policy: A course or principle of action adopted or proposed by a government, political party, organization, or individual; the written or unwritten aims, objectives, targets, strategy, tactics, and plans that guide the actions of a government or an organization. Policies have three interconnected and ideally continually evolving stages: development, implementation and evaluation. Policy development is the creative process of identifying and establishing a policy to meet a particular need or situation. Policy implementation consists of the actions taken to set up or modify a policy, and evaluation is the assessment of how, and how well, the policy works in practice. Health policy is often enacted through legislation or other forms of rule-making, which define regulations and incentives that enable the provision of and access to health services and programs.²⁰

Health program: A description or plan of action for an event or sequence of actions or events over a period that may be short or prolonged. More formally, an outline of the way a system or service will function, with specifics such as roles and responsibilities, expected expenditures, outcomes, etc. A health program is generally long term and often multifaceted, whereas a health project is a short-term and usually narrowly focused activity.²⁰

Health promotion: The process of enabling people to increase control over, and to improve their health. It not only embraces actions directed at strengthening the skills and capabilities of individuals, but also action directed towards changing social, environmental, political and economic conditions so as to alleviate their impact on public and individual health. The Ottawa Charter for Health Promotion (1986) describes five key strategies for health promotion: build healthy public policy; create supportive environments; strengthen community action; develop personal skills; and re-orient health services.²⁰

Health protection: A term to describe important activities of public health, in food hygiene, water purification, environmental sanitation, drug safety and other activities that eliminate as far as possible the risk of adverse consequences to health attributable to environmental hazards.²⁰

Information: Facts, ideas, concepts and data that have been recorded, analyzed, and organized in a way that facilitates interpretation and subsequent action.²⁰

Investigation: A systematic, thorough and formal process of inquiry or examination used to gather facts and information in order to understand, define and resolve a public health issue.²⁰

Leadership: Leadership is described in many ways. In the field of [...] health it relates to the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of their community and/or the organization in which they work. It involves inspiring people to craft and achieve a vision and goals. Leaders provide mentoring, coaching and recognition. They encourage empowerment, allowing other leaders to emerge.²⁰

Lifelong learning: A broad concept where education that is flexible, diverse and available at different times and places is pursued throughout life. It takes place at all levels—formal, non-formal and informal—utilizing various modalities such as distance learning and conventional learning.²⁰

Mediate: A process through which the different interests (personal, social, economic) of individuals and communities, and different sectors (public and private) are reconciled in ways that promote and protect health. Facilitating change in people's lifestyles and living conditions inevitably produces conflicts between the different sectors and interests in a population. Reconciling such conflicts in ways that promote health may require considerable input from health promotion practitioners, including the application of skills in advocacy for health.²⁰

Mission: The purpose for which an organization, agency or service exists, often summarized in a mission statement.²⁰

Partnerships: Collaboration between individuals, groups, organizations, governments or sectors for the purpose of joint action to achieve a common goal. The concept of partnership implies that there is an informal understanding or a more formal agreement (possibly legally binding) among the parties regarding roles and responsibilities, as well as the nature of the goal and how it will be pursued.²⁰

Performance standards: The criteria, often determined in advance, e.g., by an expert committee, by which the activities of health professionals or the organization in which they work, are assessed.²⁰

Population health assessment: Population health assessment entails understanding the health of populations and the factors that underlie health and health risks. This is frequently manifested through community health profiles and health status reports that inform priority setting and program planning, delivery and evaluation. Assessment includes consideration of physical, biological, behavioural, social, cultural, economic and other factors that affect health. The health of the population or a specified subset of the population can be measured by health status indicators such as life expectancy and hospital admission rates.²⁰

Public health: An organized activity of society to promote, protect, improve, and when necessary, restore the health of individuals, specified groups, or the entire population. It is a combination of sciences, skills, and values that function through collective societal activities and involve programs, services, and institutions aimed at protecting and improving the health of all people. The term “public health” can describe a concept, a social institution, a set of scientific and professional disciplines and technologies, and a form of practice. It is a way of thinking, a set of disciplines, an institution of society, and a manner of practice. It has an increasing number and variety of specialized domains and demands of its practitioners an increasing array of skills and expertise.²⁰

Public health sciences: A collective name for the scholarly activities that form the scientific base for public health practice, services, and systems. Until the early 19th century, scholarly activities were limited to natural and biological sciences sometimes enlightened by empirical logic. The scientific base has broadened to include vital statistics, epidemiology, environmental sciences, biostatistics, microbiology, social and behavioral sciences, demography, genetics, nutrition, molecular biology, and more.²⁰

Research: Activities designed to develop or contribute to knowledge, e.g., theories, principles, relationships, or the information on which these are based. Research may be conducted simply by observation and inference, or by the use of experiment, in which the researcher alters or manipulates conditions in order to observe and study the consequences of doing so. [...] Qualitative research aims to do in-depth exploration of a group or issue, and the methods used often include focus groups, interviews, life histories, etc.²⁰

Social justice: Refers to the concept of a society that gives individuals and groups fair treatment and an equitable share of the benefits of society. In this context, social justice is based on the concepts of human rights and equity. Under social justice, all groups and individuals are entitled equally to important rights such as health protection and minimal standards of income.²⁰

Social marketing: The design and implementation of health communication strategies intended to influence behaviour or beliefs relating to the acceptability of an idea such as desired health behaviour, or a practice such as safe food hygiene, by a target group in the population.²⁰

Social responsibility: An ethic of service that involves undertaking actions that advance the common good.

Surveillance: Systematic, ongoing collection, collation, and analysis of health-related information that is communicated in a timely manner to all who need to know which health problems require action in their community. Surveillance is a central feature of epidemiological practice, where it is used to control disease. Information that is used for surveillance comes from many sources, including reported cases of communicable diseases, hospital admissions, laboratory reports, cancer registries, population surveys, reports of absence from school or work, and reported causes of death.²⁰

Sustainable development: The use of resources, investments, technology and institutional development in ways that do not compromise the health and well-being of future generations. There is no single best way of organizing the complex development–environment–health relationship that reveals all the important interactions and possible entry points for public health interventions.²⁰

Values: The beliefs, traditions and social customs held dear and honoured by individuals and collective society. Moral values are deeply believed, change little over time and are often grounded in religious faith. They include beliefs about the sanctity of life, the role of families in society, and protection from harm of infants, children and other vulnerable people. Social values are more flexible and may change as individuals undergo experience. These may include beliefs about the status and roles of women in society, attitudes towards use of alcohol, tobacco and other substances. Values can affect behaviour and health either beneficially or harmfully.²⁰

Vision: If a strategic plan is the "blueprint" for an organization's work, then the vision is the "artist's rendering" of the achievement of that plan. It is a description in words that conjures up the ideal destination of the group's work together.²⁰

Working environment: A setting in which people work. This comprises not merely the physical environment and workplace hazards, but also the social, cultural and psychological setting that may help to induce harmony among workers, or the opposite—tension, friction, distrust and animosity which can interfere with well-being and aggravate risks of injury.²⁰