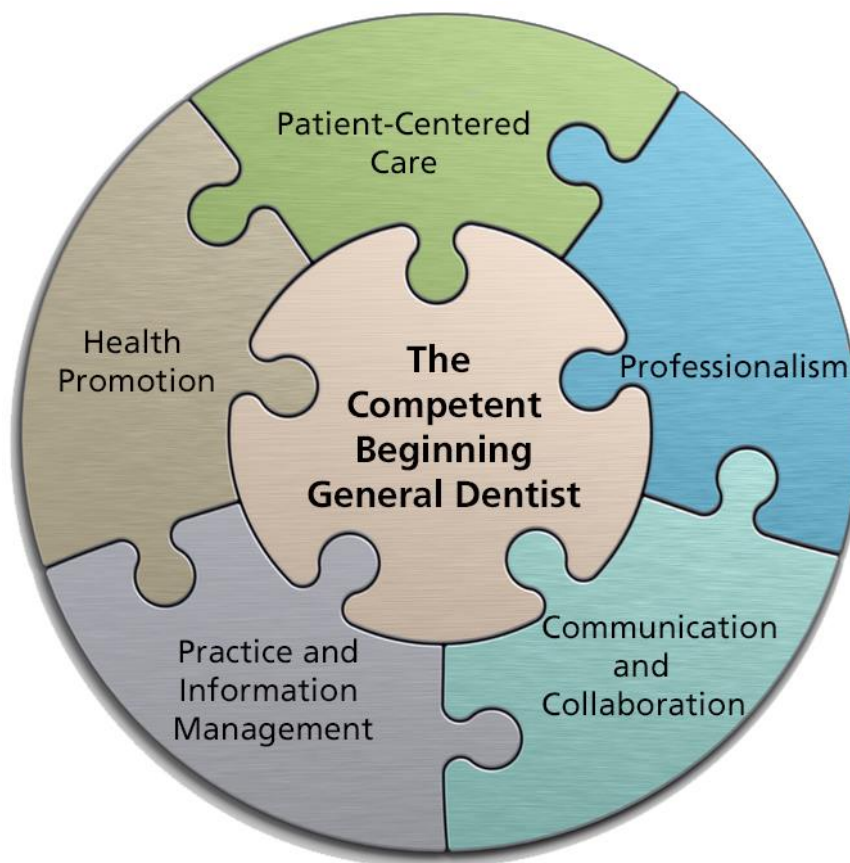


ACFD educational framework for the development of competency in dental programs



The size of pieces corresponding to competencies does not represent the time spent in the curriculum for their development

This document utilizes the following definitions and acronyms:

- Competency:** A global statement of the complex knowledge, skills and attitudes required of a beginning general dentist.
Component: Aspects of a Competency that help elaborate and illustrate its meaning.
Indicator: Specific knowledge, skills and behaviours that can be measured as steps towards developing competence. Rather than an exhaustive list of Indicators, this document provides examples for illustration. It is anticipated that each dental program will add to these examples to develop their own Indicators.
- KSA:** National Dental Examining Board's Knowledge, Skills and Abilities document of 2014
CBDP: Competencies for a Beginning Dental Practitioner (2005)
CMF: CanMEDS 2005 or 2015 (Draft Series III) Framework of the Royal College of Physicians and Surgeons of Canada
AAC: ACFD Academic Affairs Committee

Acknowledgments

The definitions, descriptions, and components of this document borrow heavily from the CanMEDS 2015 (Draft Series III) Framework of the Royal College of Physicians and Surgeons of Canada, the CanMEDS 2005 Framework¹, and the American Dental Education Association. (ADEA) "Competencies for the New General Dentist". It likewise includes the essential learning identified by the National Dental Examining Board's Knowledge, Skills and Abilities document of 2014. ACFD gratefully acknowledges the guidance provided by these essential reference documents.

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Introduction

A competent beginning general dentist in Canada must be able to independently provide oral health care for the benefit of individual patients and communities in a culturally sensitive manner (adapted from CBDP).

The ACFD educational framework is a conceptual tool for use in Canadian undergraduate dental curricula. The framework identifies five areas of competence to best ensure that Canadian dental school graduates are prepared to enter general dental practice.

This framework interprets competency as “A global statement of the complex knowledge, skills and attitudes required of a beginning general dentist.” This interpretation builds on a number of previous definitions as proposed by others.

Chambers (1993) defined competence as “the behaviour expected of the beginning practitioner. This behaviour incorporates understanding, skill, and values in an integrated response to the full range of requirements presented in practice”.

Lachiver and Tardif (2002) expanded on the definition of competence as follows: “A competence could be defined as a complex ability to act based on effectively mobilizing and using a set of resources. This ability highlights that each competence is active in nature, allowing an individual to implement a set of reflections, process, strategies, and actions in performing a given task. It helps distinguish competence from a simple procedure, preventing competence from becoming misconstrued as a synonym of know-how. It therefore endows competence with comprehensive role and character.”

Tardif (2006) adds that competence involves knowing “how to act” based on calling-up and combining various internal and external resources within a group of situations.

Epstein and Hundert (2002) defined competence in Medicine as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individuals and communities being served.”

The current American Dental Education Association (ADEA) “Competencies for the New General Dentist” document (2011), used for dental education and accreditation in the U.S., defines competency as “a complex behaviour or ability essential for the general dentist to begin independent, unsupervised practice”.

The 5 competencies

A competent beginning general dentist in Canada must successfully integrate the understanding, skills, and values inherent in each of the following five competencies:

COMPETENCY 1 – PATIENT-CENTERED CARE

COMPETENCY 2 – PROFESSIONALISM

COMPETENCY 3 – COMMUNICATION and COLLABORATION

COMPETENCY 4 – PRACTICE AND INFORMATION MANAGEMENT

COMPETENCY 5 – HEALTH PROMOTION

Each of these competencies is considered essential although the curricular time devoted to each will vary. This framework is adapted from the CanMEDs (Draft Series III and IV) 2015 framework and the ADEA “Competencies for the New General Dentist.” It also links the 2014 NDEB KSA statements and the 2005 “Competencies for a Beginning Dental Practitioner in Canada” to each competency.

COMPETENCY 1 – PATIENT-CENTERED CARE: The application of professional knowledge, skills and values in the provision of patient-centered care. (CMF2005)

Components of Competency 1 Patient-Centered Care	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
1.1 Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to Dentistry. (CMF2005)	<ul style="list-style-type: none"> a. Evaluate the scientific literature and justify management recommendations based on the level of evidence available. (CDBP 3) (KSA 12.1) b. Interpret the findings from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests. (CDBP 13) (KSA 1.2.2) c. Develop treatment options based on the evaluation of all relevant data. (i.e., obtained from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests). (CDBP 19) (KSA 1.3.3) d. Recognize the relationship between general health and oral health. (CDBP 2) (see also 5.2) 	<ul style="list-style-type: none"> • Evaluate the scientific literature and justify management recommendations based on the level of evidence available. (CDBP 3) (KSA 12.1) • Interpret the findings from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests. (CDBP 13) (KSA 1.2.2) • Develop treatment options based on the evaluation of all relevant data. (i.e., obtained from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests). (CDBP 19) (KSA 1.3.3)
1.2 Perform a complete and appropriate assessment of patients. (CMF2005)	<ul style="list-style-type: none"> a. Obtain the patient’s chief complaint, medical, psychosocial and dental histories. (CDBP 5, 6) (KSA 1.1.1) b. Interpret the findings from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests. (CDBP 6, 13) (KSA 1.2.2) c. Perform a clinical examination. (CDBP 9) (KSA 1.1.2) d. Differentiate between normal and abnormal hard and soft tissues of the maxillofacial complex. (CDBP 10) (KSA 1.2.1) e. Prescribe, make and interpret radiographs. (CDBP 12) (KSA 4.1) f. Assess patient-specific risk factors for oral disease or injury. (CDBP 16, 33a) (KSA 1.1.3) g. Prescribe and obtain the required diagnostic tests, considering their risks and benefits. (CDBP 11) 	<ul style="list-style-type: none"> • Obtain the patient’s chief complaint, medical, psychosocial and dental histories. (CDBP 5, 6) (KSA 1.1.1) • Interpret the findings from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests. (CDBP 6, 13) (KSA 1.2.2) • Perform a clinical examination. (CDBP 9) (KSA 1.1.2) • Differentiate between normal and abnormal hard and soft tissues of the maxillofacial complex. (CDBP 10) (KSA 1.2.1) • Prescribe, make and interpret radiographs. (CDBP 12) (KSA 4.1) • Assess patient-specific risk factors for oral disease or injury. (CDBP 16, 33a) (KSA 1.1.3)
1.3 Demonstrate appropriate diagnostic and treatment planning skills. (CMF2005)	<ul style="list-style-type: none"> a. Develop a problem list and establish diagnoses. (CDBP 17) (KSA 1.2.3) b. Develop treatment options based on the evaluation of all relevant data. (i.e., obtained from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests). (CDBP 19) (KSA 1.3.3) c. Develop an appropriate comprehensive, prioritized and sequenced treatment plan. (CDBP 21) (KSA 1.3.5) 	<ul style="list-style-type: none"> • Develop a problem list and establish diagnoses. (CDBP 17) (KSA 1.2.3) • Develop treatment options based on the evaluation of all relevant data. (i.e., obtained from the patient’s chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests). (CDBP 19) (KSA 1.3.3) • Develop an appropriate comprehensive, prioritized and sequenced treatment plan. (CDBP 21) (KSA 1.3.5)

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Components of Competency 1 Patient-Centered Care	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
	<ul style="list-style-type: none"> d. Modify the treatment plan as required during the course of treatment. (CDBP 24) e. Recommend appropriate non-surgical and surgical therapy for caries management. (CDBP 33b) 	
1.4 Demonstrate appropriate preventive skills. (CMF2005)	<ul style="list-style-type: none"> a. Provide therapies for the prevention of oral disease and injury. (CDBP 26) (KSA 2.1.2) b. Promote measures to prevent oral disease/injury in response to identified risk. (CDBP 25) (KSA 2.1.1) 	<ul style="list-style-type: none"> • Provide therapies for the prevention of oral disease and injury. (CDBP 26) (KSA 2.1.2) • Promote measures to prevent oral disease/injury in response to identified risk. (CDBP 25) (KSA 2.1.1)
1.5 Demonstrate appropriate therapeutic skills. (CMF2005)	<ul style="list-style-type: none"> a. Manage the anxious or fearful dental patient. (CDBP 14) (KSA 2.2.1) b. Achieve local anesthesia for dental procedures. (CDBP 28) (KSA 11.1) c. Prescribe and administer pharmacotherapeutic agents used in dentistry. (CDBP 29) (KSA 2.2.6) d. Manage conditions and diseases of the periodontium. (CDBP 32) (KSA 5.1) e. Restore carious lesions and manage other defects in teeth. (CDBP 34b) (KSA 9.1) f. Manage diseases and injury of the pulp. (CDBP 38) (KSA 6.1) g. Manage abnormalities of orofacial growth and development. (CDBP 39a) (KSA 8.1) h. Manage partially and completely edentulous patients. (CDBP 42) (KSA 7.1) i. Manage occlusal function. (CDBP 40) (KSA 2.2.5) j. Manage oral mucosal and osseous diseases. (KSA 3.1) k. Manage surgical procedures related to oral soft and hard tissues. (CDBP 36) (KSA 10.1) l. Manage odontogenic pain. (KSA 11.2) m. Manage non-odontogenic pain. (CDBP 35) (KSA 11.3) n. Manage dental emergencies. (CDBP 30) (KSA 2.2.2) o. Manage medical emergencies that occur in dental practice. (CDBP 31) (KSA 2.2.3) p. Manage trauma to the orofacial complex. (CDBP 37) (KSA 2.2.4) q. Manage complications, outcomes and continuity of care. (KSA 2.2.7) r. When restoration is warranted, use techniques that conserve tooth structure and preserve pulp vitality to restore form and function. (CDBP 34b) 	<ul style="list-style-type: none"> • Manage the anxious or fearful dental patient. (CDBP 14) (KSA 2.2.1) • Achieve local anesthesia for dental procedures. (CDBP 28) (KSA 11.1) • Prescribe and administer pharmacotherapeutic agents used in dentistry. (CDBP 29) (KSA 2.2.6) • Manage conditions and diseases of the periodontium. (CDBP 32) (KSA 5.1) • Restore carious lesions and manage other defects in teeth. (CDBP 34b) (KSA 9.1) • Manage diseases and injury of the pulp. (CDBP 38) (KSA 6.1) • Manage abnormalities of orofacial growth and development. (CDBP 39a) (KSA 8.1) • Manage partially and completely edentulous patients. (CDBP 42) (KSA 7.1) • Manage occlusal function. (CDBP 40) (KSA 2.2.5) • Manage oral mucosal and osseous diseases. (KSA 3.1) • Manage surgical procedures related to oral soft and hard tissues. (CDBP 36) (KSA 10.1) • Manage odontogenic pain. (KSA 11.2) • Manage non-odontogenic pain. (CDBP 35) (KSA 11.3) • Manage dental emergencies. (CDBP 30) (KSA 2.2.2) • Manage medical emergencies that occur in dental practice. (CDBP 31) (KSA 2.2.3) • Manage trauma to the orofacial complex. (CDBP 37) (KSA 2.2.4) • Manage complications, outcomes and continuity of care. (KSA 2.2.7)

ACFD educational framework for the development of competency in dental programs

Components of Competency 1 Patient-Centered Care	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
	<ul style="list-style-type: none"> s. Provide non-surgical management for caries. (CBDP 33, 34a) t. Select and, where indicated, prescribe appropriate biomaterials for patient treatment. (CBDP 41) u. Make records required for use in the laboratory fabrication of dental prostheses and appliances. (CBDP 43) v. Design a dental prosthesis or appliance, write a laboratory prescription and evaluate laboratory products. (CBDP 44) 	
1.6 Recognize own limits and seek appropriate consultation from other health professionals where appropriate. (CMF2005)	a. Determine when consultation, referral, and/or further diagnostic testing are indicated. (CBDP 11, 18a) (KSA 1.3.1)	<ul style="list-style-type: none"> • Determine when consultation, referral, and/or further diagnostic testing are indicated. (CBDP 11, 18a) (KSA 1.3.1)

COMPETENCY 2 - PROFESSIONALISM: The commitment to the oral health and well-being of individuals and society through ethical practice, reflective learning, self-regulation and high personal standards of behaviour. (CMF2005)

Components of Competency 2 Professionalism	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
<p>2.1. Demonstrate a commitment to patients and the profession by applying best practices and adhering to high ethical standards. (CMF2015)</p>	<p>a. Know ethical and legal obligations. (e.g., confidentiality requirements, task delegation, commitment to continued professional development, patient-centered care). (CBDP 45) (KSA 14.1)</p> <p>b. Implement measures to prevent the transmission of infectious diseases. (CBDP 8) (KSA 2.1.4)</p> <p>c. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law. (CMF2005)</p> <p>d. Exhibit appropriate professional behaviours in practice, including honesty, integrity, commitment, compassion, respect and altruism. (CMF2005-2015)</p> <p>e. Recognize and appropriately respond to ethical issues encountered in practice. (CMF2005-20015)</p> <p>f. Appropriately manage conflicts of interest. (CMF2005)</p> <p>g. Contribute to the enhancement of quality care and patient safety in practice. (CMF2005)</p> <p>h. Integrate the available best evidence and best practices. (CMF2005)</p> <p>i. Exhibit professional behaviour that supercedes self-interest. (AAC from CBDP 47)</p>	<ul style="list-style-type: none"> • Know ethical and legal obligations. (e.g., confidentiality requirements, task delegation, commitment to continued professional development, patient-centered care). (CBDP 45) (KSA 14.1) • Implement measures to prevent the transmission of infectious diseases. (CBDP 8) (KSA 2.1.4)
<p>2.2. Demonstrate a commitment to society by recognizing and responding to the social contract in dental health care. (CMF2015)</p>	<p>a. Take appropriate action when signs of abuse and/or neglect are identified. (CBDP 15) (KSA 14.4)</p> <p>b. Implement measures to prevent medical emergencies from occurring in dental practice. (KSA 2.1.3)</p> <p>c. Demonstrate a commitment to delivering the highest quality care and maintenance of competence. (CMF2005)</p> <p>d. Maintain appropriate relationships with patients. (CMF2005)</p> <p>e. Facilitate the learning of patients, families, students, other health professionals, the public, and others, as appropriate. (CMF2005)</p>	<ul style="list-style-type: none"> • Take appropriate action when signs of abuse and/or neglect are identified. (CBDP 15) (KSA 14.4) • Implement measures to prevent medical emergencies from occurring in dental practice. (KSA 2.1.3)

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Components of Competency 2 Professionalism	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
<p>2.3. Demonstrate a commitment to personal health and well-being to foster optimal patient care. (CMF2015)</p>	<p>a. Manage occupational hazards related to the practice of dentistry. (CBDP 27) (KSA 14.3)</p> <p>b. Balance personal and professional priorities to ensure personal health and a sustainable practice. (CMF2005)</p> <p>c. Demonstrate appropriate self-monitoring and self-reflection. (AAC)</p> <p>d. Recognize other professionals in need and respond appropriately. (CMF2005)</p>	<ul style="list-style-type: none"> • Manage occupational hazards related to the practice of dentistry. (CBDP 27) (KSA 14.3)
<p>2.4. Demonstrate a commitment to the profession by adhering to standards and participating in profession-led regulation. (CMF2015)</p>	<p>a. Know ethical and legal obligations. (e.g., confidentiality requirements, task delegation, commitment to continued professional development, patient-centered care). (CBDP 45) (KSA 14.1)</p> <p>b. Demonstrate responsibility by attending classes and clinics as assigned. (AAC)²</p> <p>c. Demonstrate responsibility by following up on activities related to patient care. (AAC)</p> <p>d. Demonstrate capacity for self-improvement by accepting and acting on constructive criticism. (AAC)</p> <p>e. Demonstrate initiative by following through on commitments.</p> <p>f. Demonstrate cooperation with students, staff and faculty. (AAC)</p> <p>g. Demonstrate professional appearance and behaviour in all aspects of life. (AAC)</p> <p>h. Use social media responsibly. (AAC)</p> <p>i. Recognize and respond to others' unprofessional behaviours in practice. (CMF2005)</p> <p>j. Participate in peer review. (CMF2005)</p> <p>k. Adhere to the professional, legal and ethical codes of practice. (CMF2015)</p> <p>l. Demonstrate accountability to professional regulatory bodies. (CMF2005)</p>	<ul style="list-style-type: none"> • Know ethical and legal obligations. (e.g., confidentiality requirements, task delegation, commitment to continued professional development, patient-centered care). (CBDP 45) (KSA 14.1)

² Examples 2.4 b-f are derived from papers by Papadakis et al. (2005) and Teherani et al. (2005), which categorize and illustrate unprofessional behaviour by medical students, showing a relationship between professionalism issues in medical school and disciplinary action by medical boards after graduation.

COMPETENCY 3 – COMMUNICATION and COLLABORATION: The effective facilitation, both individually and as part of a healthcare team, of the dentist-patient relationship and the dynamic exchanges that occur before, during and after a patient interaction. (CMF2005)

Components of Competency 3 Communication and Collaboration	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
3.1 Establish professional therapeutic relationships with patients and their families. (CMF2015)	<ul style="list-style-type: none"> a. Communicate effectively with patients, parents, guardians, staff, peers, other health professionals and the public. (CBDP 4) (KSA 13.1) b. Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy, respect and compassion. (CMF2015) c. Manage emotionally charged conversations and conflicts. (CMF2015) d. Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances. (CMF2015) 	<ul style="list-style-type: none"> • Communicate effectively with patients, parents, guardians, staff, peers, other health professionals and the public. (CBDP 4) (KSA 13.1)
3.2 Elicit and synthesize accurate and relevant information along with the perspectives of patients and their families. (CMF2015)	<ul style="list-style-type: none"> a. Communicate effectively with patients, parents, guardians, staff, peers, other health professionals and the public. (CBDP 4) (KSA 13.1) b. Obtain the patient's chief complaint, medical, psychosocial and dental histories. (CBDP 5, 6) (KSA 1.1.1) c. Listen effectively. (CMF2005) d. Respond appropriately to patients' non-verbal communication and utilize appropriate non-verbal behaviours to enhance communication with patients. (CMF2015) e. Use patient-centred interviewing skills to effectively identify and gather relevant biomedical information. (CMF2015) f. Seek out and synthesize relevant information from other sources, such as a patient's family, caregivers and other professionals. (CMF2005) g. Inquire about and explore the patient's beliefs, values, preferences, context, expectations, and dental health care goals. (CMF2015) 	<ul style="list-style-type: none"> • Communicate effectively with patients, parents, guardians, staff, peers, other health professionals and the public. (CBDP 4) (KSA 13.1) • Obtain the patient's chief complaint, medical, psychosocial and dental histories. (CBDP 5, 6) (KSA 1.1.1)
3.3 Engage patients and others in developing plans that reflect the patient's dental health care needs and goals. (CMF2015)	<ul style="list-style-type: none"> a. Engage the patient in the discussion of the findings, diagnoses, etiology, risks, benefits, time requirements, costs, responsibilities, and prognoses of the treatment options. (CBDP 20,22) (KSA 1.3.4) b. Obtain and record informed consent. (CBDP 23) (KSA 1.3.6) c. Provide explanations that are clear, accurate, and adapted to the patient's level of understanding and need. (AAC) d. Share information that is timely, accurate, and transparent in regard to the patient's health status, care, and outcome. (AAC) 	<ul style="list-style-type: none"> • Engage the patient in the discussion of the findings, diagnoses, etiology, risks, benefits, time requirements, costs, responsibilities, and prognoses of the treatment options. (CBDP 20,22) (KSA 1.3.4) • Obtain and record informed consent. (CBDP 23) (KSA 1.3.6)

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Components of Competency 3 Communication and Collaboration	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
	<ul style="list-style-type: none"> e. Engage patients in a way that recognizes diversity, is respectful, non-judgmental, and ensures cultural safety. (CMF2015) f. Assist patients and others to identify and make use of information and communication technologies to support their care and manage their dental health. (CMF2015) g. Use counselling skills and decision aids to help patients make informed choices regarding their dental health care. (CMF2015) h. Disclose adverse events to patients and/or their families accurately and appropriately. (CMF2015) 	
<p>3.4 Document and share written and electronic information about the dental encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy. (CMF2015)</p>	<ul style="list-style-type: none"> a. Maintain accurate and complete patient records. (CBDP 7) (KSA 14.2) b. Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with legal and regulatory requirements. (CMF2015) c. Communicate effectively using an electronic dental health record or other digital technology. (CMF2015) d. Share information with patients and appropriate others in a manner that respects patient privacy and confidentiality and in compliance with legal and regulatory requirements. (CMF2015) 	<ul style="list-style-type: none"> • Maintain accurate and complete patient records. (CBDP 7) (KSA 14.2)
<p>3.5 Work effectively with other dentists and other health care professionals. (CMF2015)</p>	<ul style="list-style-type: none"> a. Communicate relevant patient information for consultation/referral with health care professionals. (CBDP 18b) (KSA 1.3.2) b. Establish and maintain healthy inter- and intraprofessional working relationships for collaborative care. (CMF2015) c. Negotiate overlapping and shared responsibilities with inter- and intraprofessional health care providers for episodic or ongoing care of patients. (CMF2015) d. Engage in effective and respectful shared decision-making with other care providers. (CMF2015) 	<ul style="list-style-type: none"> • Communicate relevant patient information for consultation/referral with health care professionals. (CBDP 18b) (KSA 1.3.2)
<p>3.6 Work with dentists and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts. (CMF2015)</p>	<ul style="list-style-type: none"> a. Communicate relevant patient information for consultation/referral with health care professionals. (CBDP 18b) (KSA 1.3.2) b. Communicate effectively with patients, parents, guardians, staff, peers, other health professionals and the public. (CBDP 4) (KSA 13.1) c. Show respect toward collaborators. (CMF2015) d. Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports a collaborative culture. (CMF2015) 	<ul style="list-style-type: none"> • Communicate relevant patient information for consultation/referral with health care professionals. (CBDP 18b) (KSA 1.3.2) • Communicate effectively with patients, parents, guardians, staff, peers, other health professionals and the public. (CBDP 4) (KSA 13.1)
<p>3.7 Hand over the care of a patient to another health care professional to facilitate continuity of safe patient</p>	<ul style="list-style-type: none"> a. Communicate relevant patient information for consultation/referral with health care professionals. (CBDP 18b) (KSA 1.3.2) 	<ul style="list-style-type: none"> • Communicate relevant patient information for consultation/referral with health care professionals. (CBDP 18b) (KSA 1.3.2)

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Components of Competency 3 Communication and Collaboration	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
care. (CMF2015)	<ul style="list-style-type: none"> b. Determine when care should be transferred to another dentist or health care professional. (CMF2015) c. Demonstrate safe handover of care, using both verbal and written communication, during a patient transition to a different health care professional, setting, or stage of care. (CMF2015) 	

COMPETENCY 4 – PRACTICE AND INFORMATION MANAGEMENT: The assessment of information and the management of a general dental practice to facilitate patient-centered care. (CMF2005)

Components of Competency 4 Practice and Information Management	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
4.1 Implement processes to improve professional practice. (CMF2005)	a. Implement measures to prevent medical emergencies from occurring in dental practice. (KSA 2.1.3) b. Manage occupational hazards related to the practice of dentistry. (CDBP 27) (KSA 14.3) c. Know principles of practice administration, financial and personnel management. (CDBP 46) (KSA 14.5) d. Evaluate practice possibilities (e.g. associateship, partnership, and proprietorship agreements). (AAC) e. Describe effective business, financial management, and human resource skills. (ADEA 5.4)	<ul style="list-style-type: none"> • Implement measures to prevent medical emergencies from occurring in dental practice. (KSA 2.1.3) • Manage occupational hazards related to the practice of dentistry. (CDBP 27) (KSA 14.3) • Know principles of practice administration, financial and personnel management. (CDBP 46) (KSA 14.5)
4.2 Employ information technology appropriately for patient care. (CMF2005)	a. Maintain accurate and complete patient records. (CDBP 7) (KSA 14.2) b. Evaluate the scientific literature and justify management recommendations based on the level of evidence available. (CDBP 3) (KSA 12.1)	<ul style="list-style-type: none"> • Maintain accurate and complete patient records. (CDBP 7) (KSA 14.2) • Evaluate the scientific literature and justify management recommendations based on the level of evidence available. (CDBP 3) (KSA 12.1)
4.3 Apply the principles of evidence-based decision making into practice. (AAC)	a. Evaluate the scientific literature and justify management recommendations based on the level of evidence available. (CDBP 3) (KSA 12.1) b. Utilize critical thinking and problem-solving skills. (ADEA) c. Describe the principles of critical appraisal. (CMF2005) d. Critically appraise retrieved evidence in order to address a clinical question. (CMF2005) e. Integrate critical appraisal conclusions into patient care. (CMF2005)	<ul style="list-style-type: none"> • Evaluate the scientific literature and justify management recommendations based on the level of evidence available. (CDBP 3) (KSA 12.1)

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COMPETENCY 5 – HEALTH PROMOTION: The responsible use of professional expertise and influence to advance the health and well-being of individual patients, communities and populations. (CMF2005)

Components of Competency 5 Health Promotion	EXAMPLES of Indicators observed during dental education	Knowledge, Skills and Abilities (KSA) for the beginning general dentist
5.1 Work with patients to address social determinants of health that affect them. (CMF2015)	a. Recognize the determinants (influencing factors) of oral health. (CDBP 1) (KSA 15.1) b. Justify recommendations based on the level of evidence available. (CDBP 3b) c. Describe the ethical and professional issues inherent in health advocacy, including altruism, social justice, autonomy, integrity and idealism. (CMF2005) d. Describe the role of the dental profession in advocating collectively for health and patient safety. (CMF2005)	<ul style="list-style-type: none"> Recognize the determinants (influencing factors) of oral health. (CDBP 1) (KSA 15.1)
5.2 Work with patients and their families to increase opportunities to improve or maintain their health. (CMF2015)	a. Promote measures to prevent oral disease/injury in response to identified risk. (CDBP 25) (KSA 2.1.1) b. Recognize the relationship between general health and oral health. (CDBP 2) c. Advocate, promote health and prevent disease for individual patients. (CMF2005) d. Identify the social determinants of health affecting an individual and their family. (CMF2005)	<ul style="list-style-type: none"> Promote measures to prevent oral disease/injury in response to identified risk. (CDBP 25) (KSA 2.1.1)
5.3 Respond to the oral health promotion needs of a community or population. (CMF2015)	a. Promote oral health within communities. (KSA 15.2) b. Recognize the relationship between general health and oral health. (CDBP 2) c. Identify the social determinants of health for a given population, including barriers to access to care and resources. (CMF2005) d. Identify vulnerable or marginalized populations within those served and respond appropriately. (CMF2005) e. Identify points of influence in the healthcare system and its structure that impact on oral health care. (CMF2005) f. Advocate, promote health and prevent disease within the community. (CMF2005) g. Describe an approach to affecting change in the various determinants of health affecting a population served. (CMF2005) h. Describe how public policy impacts on the health of the populations served. (CMF2005)	<ul style="list-style-type: none"> Promote oral health within communities. (KSA 15.2)

Appendix

- Quick view of the ACFD educational framework for the development of competency in dental programs
- NDEB KSAs and corresponding ACFD Competencies
- Competencies for the Beginning Dental Practitioner and corresponding NDEB KSAs and ACFD Competencies
- REFERENCES

COMPETENCY 1 – PATIENT-CENTERED CARE:

The application of professional knowledge, skills and values in the provision of patient-centered care. (CMF2005)

Components of Competency 1 - Patient-Centered Care

- 1.1 Apply knowledge of the clinical, socio-behavioural, and fundamental biomedical sciences relevant to Dentistry. (CMF2005)
- 1.2 Perform a complete and appropriate assessment of patients. (CMF2005)
- 1.3 Demonstrate appropriate diagnostic and treatment planning skills. (CMF2005)
- 1.4 Demonstrate appropriate preventive skills. (CMF2005)
- 1.5 Demonstrate appropriate therapeutic skills. (CMF2005)
- 1.6 Recognize own limits and seek appropriate consultation from other health professionals where appropriate. (CMF2005)

COMPETENCY 2 – PROFESSIONALISM:

The commitment to the oral health and well-being of individuals and society through ethical practice, reflective learning, self-regulation and high personal standards of behaviour. (CMF2005)

Components of Competency 2 - Professionalism

- 2.1. Demonstrate a commitment to patients and the profession by applying best practices and adhering to high ethical standards. (CMF2015)
- 2.2. Demonstrate a commitment to society by recognizing and responding to the social contract in dental health care. (CMF2015)
- 2.3. Demonstrate a commitment to personal health and well-being to foster optimal patient care. (CMF2015)
- 2.4. Demonstrate a commitment to the profession by adhering to standards and participating in profession-led regulation. (CMF2015)

COMPETENCY 3 – COMMUNICATION and COLLABORATION:

The effective facilitation, both individually and as part of a healthcare team, of the dentist-patient relationship and the dynamic exchanges that occur before, during and after a patient interaction. (CMF2005)

Components of Competency 3 - Communication and Collaboration

- 3.1 Establish professional therapeutic relationships with patients and their families. (CMF2015)
- 3.2 Elicit and synthesize accurate and relevant information along with the perspectives of patients and their families. (CMF2015)
- 3.3 Engage patients and others in developing plans that reflect the patient's dental health care needs and goals. (CMF2015)
- 3.4 Document and share written and electronic information about the dental encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy. (CMF2015)
- 3.5 Work effectively with other dentists and other health care professionals. (CMF2015)
- 3.6 Work with dentists and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts. (CMF2015)
- 3.7 Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care. (CMF2015)

COMPETENCY 4 – PRACTICE AND INFORMATION MANAGEMENT:

The assessment of information and the management of a general dental practice to facilitate patient-centered care. (CMF2005)

Components of Competency 4 - Practice and Information Management

- 4.1 Implement processes to improve professional practice. (CMF2005)
- 4.2 Employ information technology appropriately for patient care. (CMF2005)
- 4.3 Apply the principles of evidence-based decision making into practice. (AAC)

COMPETENCY 5 – HEALTH PROMOTION:

The responsible use of professional expertise and influence to advance the health and well-being of individual patients, communities and populations. (CMF2005)

Components of Competency 5 - Health Promotion

- 5.1 Work with patients to address social determinants of health that affect them. (CMF2015)
- 5.2 Work with patients and their families to increase opportunities to improve or maintain their health. (CMF2015)

NDEB KSAs and Corresponding ACFD Competencies

GROUP A: Multi-Discipline KSAs		ACFD Competencies
1	PATIENT ASSESSMENT AND TREATMENT PLAN	
1.1	Exam	
1.1.1	Obtain the patient's chief complaint, medical, psychosocial, and dental histories.	Patient-Centered Care/ Communication and Collaboration
1.1.2	Perform a clinical examination.	Patient-Centered Care
1.1.3	Assess patient-specific risk factors for oral disease or injury.	Patient-Centered Care
1.2	Diagnosis	
1.2.1	Differentiate between normal and abnormal hard and soft tissues of the maxillofacial complex.	Patient-Centered Care
1.2.2	Interpret the findings from the patient's chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests.	Patient-Centered Care
1.2.3	Develop a problem list and establish diagnoses.	Patient-Centered Care
1.3	Treatment Plan	
1.3.1	Determine when consultation, referral, and/or further diagnostic testing are indicated.	Patient-Centered Care
1.3.2	Communicate relevant patient information for consultation/referral with health care professionals.	Communication and Collaboration
1.3.3	Develop treatment options based on the evaluation of all relevant data. (i.e., obtained from the patient's chief complaint, medical, psychosocial, and dental histories, along with the clinical and radiographic examinations, and diagnostic tests)	Patient-Centered Care
1.3.4	Engage the patient in the discussion of the findings, diagnoses, etiology, risks, benefits, time requirements, costs, responsibilities, and prognoses of the treatment options.	Communication and Collaboration
1.3.5	Develop a comprehensive, prioritized and sequenced treatment plan.	Patient-Centered Care
1.3.6	Obtain and record informed consent.	Communication and Collaboration
2	MANAGEMENT	
2.1	Prevention	
2.1.1	Promote measures to prevent oral disease/injury in response to identified risk.	Patient-Centered Care/ Health Promotion
2.1.2	Provide therapies for the prevention of oral disease/injury.	Patient-Centered Care
2.1.3	Implement measures to prevent medical emergencies from occurring in dental practice.	Professionalism/ Practice and Information Management
2.1.4	Implement measures to prevent the transmission of infectious diseases.	Professionalism
2.2	Treatment	
2.2.1	Manage the anxious or fearful patient.	Patient-Centered Care
2.2.2	Manage dental emergencies.	Patient-Centered Care
2.2.3	Manage medical emergencies that occur in dental practice.	Patient-Centered Care
2.2.4	Manage trauma to the orofacial complex.	Patient-Centered Care
2.2.5	Manage occlusal function	Patient-Centered Care
2.2.6	Prescribe and administer pharmacotherapeutic agents used in dentistry.	Patient-Centered Care
2.2.7	Manage complications, outcomes and continuity of care.	Patient-Centered Care

GROUP B: Discipline-Specific KSAs

ACFD Competencies (2015)

GROUP B: Discipline-Specific KSAs		ACFD Competencies (2015)
3	ORAL MEDICINE AND PATHOLOGY	
3.1	Manage oral mucosal and osseous diseases.	Patient-Centered Care
4	RADIOLOGY	
4.1	Prescribe, make and interpret radiographs.	Patient-Centered Care
5	PERIODONTICS	
5.1	Manage conditions and diseases of the periodontium.	Patient-Centered Care
6	ENDODONTICS	
6.1	Manage diseases and injury of the pulp.	Patient-Centered Care
7	PROSTHODONTICS	
7.1	Manage partially and completely edentulous patients.	Patient-Centered Care
8	ORTHODONTICS	
8.1	Manage abnormalities of orofacial growth and development.	Patient-Centered Care
9	OPERATIVE	
9.1	Restore carious lesions and manage other defects in teeth.	Patient-Centered Care
10	ORAL SURGERY	
10.1	Manage surgical procedures related to oral soft and hard tissues.	Patient-Centered Care
11	PAIN	
11.1	Achieve local anesthesia for dental procedures.	Patient-Centered Care
11.2	Manage odontogenic pain.	Patient-Centered Care
11.3	Manage non-odontogenic pain.	Patient-Centered Care

GROUP C: General KSAs

ACFD Competencies (2015)

GROUP C: General KSAs		ACFD Competencies (2015)
12	SCIENTIFIC LITERATURE	
12.1	Evaluate the scientific literature and justify management recommendations based on the level of evidence available.	Patient-Centered Care/ Practice and Information Management
13	COMMUNICATION	
13.1	Communicate effectively with patients, parents, guardians, staff, peers, other health professionals and the public.	Communication and Collaboration
14	PROFESSIONALISM AND PRACTICE	
14.1	Know ethical and legal obligations. (e.g., confidentiality requirements, task delegation, commitment to continued professional development, patient-centred care)	Professionalism
14.2	Maintain accurate and complete patient records.	Communication and Collaboration/ Practice and Information Management
14.3	Manage occupational hazards related to the practice of dentistry.	Professionalism/ Practice and Information Management
14.4	Take appropriate action when signs of abuse and/or neglect are identified.	Professionalism
14.5	Know principles of practice administration, financial and personnel management.	Practice and Information Management
15	HEALTH PROMOTION	
15.1	Recognize the determinants (influencing factors) of oral health.	Health Promotion
15.2	Promote oral health within communities.	Health Promotion

Competencies for the Beginning Dental Practitioner and corresponding NDEB KSAs and ACFD Competencies

CBDP	Competencies for the Beginning Dental Practitioner (2005)	KSAs (2014)	ACFD Competencies (2015)
1	recognize the determinants of oral health in individuals and populations and the role of dentists in health promotion, including the disadvantaged.	15.1	Health Promotion
2	recognize the relationship between general health and oral health.	-	Patient-Centered Care / Health Promotion
3a	evaluate the scientific literature, and	12.1	Practice and Information Management
3b	justify management recommendations based on the level of evidence available.	12.1	Patient-Centered Care/ Practice and Information Management/ Health Promotion
4	communicate effectively with patients, parents or guardians, staff, peers, other health professionals and the public	13.1	Communication and Collaboration
5	identify the patient's chief complaint/concern and obtain the associated history.	1.1.1	Patient-Centered Care/ Communication and Collaboration
6	obtain and interpret a medical, dental and psychosocial history, including a review of systems as necessary, and evaluate physical or psychosocial conditions that may affect dental management.	1.1.1	Patient-Centered Care/ Communication and Collaboration
7	maintain accurate and complete patient records in a confidential manner.	14.2	Communication and Collaboration/ Practice and Information Management
8	prevent the transmission of infectious diseases by following current infection control guidelines.	2.1.4	Professionalism
9	perform a clinical examination.	1.1.2	Patient-Centered Care
10	differentiate between normal and abnormal hard and soft tissues of the maxillofacial complex.	1.2.1	Patient-Centered Care
11	prescribe and obtain the required diagnostic tests, considering their risks and benefits.	1.3.1	Patient-Centered Care
12	perform a radiographic examination.	4.1	Patient-Centered Care
13	interpret the findings from a patient's history, clinical examination, radiographic examination and from other diagnostic tests and procedures.	1.2.2	Patient-Centered Care
14	recognize and manage the anxious or fearful dental patient.	2.2.1	Patient-Centered Care
15	recognize signs of abuse and/or neglect and make appropriate reports.	14.4	Professionalism
16	assess patient risk (including, but not limited to, diet and tobacco use) for oral disease or injuries.	1.1.3	Patient-Centered Care
17	develop a problem list and establish diagnoses.	1.2.3	Patient-Centered Care
18a	determine the level of expertise required for treatment, and	1.3.1	Patient-Centered Care
18b	formulate a written request for consultation and/or referral when appropriate.	1.3.2	Communication and Collaboration
19	develop treatment options based on the evaluation of all relevant data.	1.3.3	Patient-Centered Care
20	discuss the findings, diagnoses, etiology, risks, benefits and prognoses of the treatment options, with a view to patient participation in oral health management.	1.3.4	Communication and Collaboration
21	develop an appropriate comprehensive, prioritized and sequenced treatment plan.	1.3.5	Patient-Centered Care
22	present and discuss the sequence of treatment, estimated fees, payment arrangements, time requirements and the patient's responsibilities for treatment.	1.3.4	Communication and Collaboration

23	obtain informed consent including the patient's written acceptance of the treatment plan and any modifications.	1.3.6	Communication and Collaboration
24	modify the treatment plan as required during the course of treatment.	-	Patient-Centered Care
25	provide education regarding the risks and prevention of oral disease and injury to encourage the adoption of healthy behaviours.	2.1.1	Patient-Centered Care / Health Promotion
26	provide therapies for the prevention of oral disease and injury.	2.1.2	Patient-Centered Care
27	recognize and institute procedures to minimize occupational hazards related to the practice of dentistry.	14.3	Professionalism / Practice and Information Management
28	achieve local anesthesia for dental procedures and manage related complications.	2.2.6 2.2.7 11.1	Patient-Centered Care
29a	determine the indications and contraindications for the use of drugs used in dental practice, their dosages and routes of administration, and	2.2.6	Patient-Centered Care
29b	write prescriptions for drugs used in dentistry.	2.2.6	Patient-Centered Care
30	manage dental emergencies.	2.2.2	Patient-Centered Care
31	recognize and manage systemic emergencies which may occur in dental practice.	2.2.3	Patient-Centered Care
32a	manage conditions and diseases of the periodontium,	5.1	Patient-Centered Care
32b	provide periodontal treatment when indicated and monitor treatment outcomes.	5.1	Patient-Centered Care
33a	assess the risk, extent and activity of caries, and	1.1.3	Patient-Centered Care
33b	recommend appropriate non-surgical and surgical therapy	-	Patient-Centered Care
34a	manage dental caries, tooth defects and esthetic problems, and	9.1	Patient-Centered Care
34b	when restoration is warranted, use techniques that conserve tooth structure and preserve pulp vitality to restore form and function.	9.1	Patient-Centered Care
35	manage patients with orofacial pain and/or dysfunction.	11.3	Patient-Centered Care
36	manage surgical procedures related to oral soft and hard tissues and their complications	10.1	Patient-Centered Care
37	manage trauma to the orofacial complex.	2.2.4	Patient-Centered Care
38a	manage conditions and pathology of the pulp, and	6.1	Patient-Centered Care
38b	provide endodontic treatment when indicated	6.1	Patient-Centered Care
39a	manage abnormalities of orofacial growth and development, and	8.1	Patient-Centered Care
39b	treat minor orthodontic problems.	8.1	Patient-Centered Care
40	recognize and manage functional and non-functional occlusion.	2.2.5	Patient-Centered Care
41	select and, where indicated, prescribe appropriate biomaterials for patient treatment.	-	Patient-Centered Care
42a	manage partially and completely edentulous patients with prosthodontic needs	7.1	Patient-Centered Care
42b	including the provision of fixed, removable and implant prostheses.	7.1	Patient-Centered Care
43	make records required for use in the laboratory fabrication of dental prostheses and appliances.	-	Patient-Centered Care
44	design a dental prosthesis or appliance, write a laboratory prescription and evaluate laboratory products.	-	Patient-Centered Care

45	apply accepted principles of ethics and jurisprudence to maintain standards and advance knowledge and skills.	14.1	Professionalism
46	apply basic principles of practice administration, financial and personnel management to a dental practice.	14.5	Practice and Information Management
47	demonstrate professional behaviour that is ethical, supersedes self-interest, strives for excellence, is committed to continued professional development and is accountable to individual patients, society and the profession.	-	Professionalism

* KSAs 2.1.3, 3.1, 11,2, 15.2 do not have corresponding CBDP competency statement.

KSAs 2.26, 2.27 are related to CBDP 28.

References

ADEA Competencies for the New General Dentist. J Dent Educ 2011;75(7):932-935.

Chambers DW. Toward a competency-based curriculum. J Dent Educ 1993;57(11):790-3.

Epstein RM, Hundert EM. Defining and assessing professional competence. JAMA 2002;287 (2):226–35.

Frank JR, Jabbour M, et al. editors. Draft CanMEDS 2005 Report of the CanMEDS Phase IV Working Groups. Ottawa: The Royal College of Physicians and Surgeons of Canada; 2005.

Frank JR, Snell LS, Sherbino J, editors. Draft CanMEDS 2015 Physician Competency Framework – Series III. Ottawa: The Royal College of Physicians and Surgeons of Canada; 2014 September.

Lachiver G and Tardif J. Fostering and Managing Curriculum Change and Innovation. 32nd ASEEITEEE Frontiers in Education Conference. Boston, Mass. (2002).

Papadakis MA, Teherani A et al. Disciplinary action by medical boards and prior behavior in medical school. N Engl J Med. 2005 Dec 22;353(25):2673-82.

Tardif J. L'évaluation des compétences: Documenter le parcours de développement. Montréal, QC: Chenelière Éducation 2006;384p.

Teherani A, Hodgson CS, Banach M and Papadakis MA. Domains of unprofessional behavior during medical school associated with future disciplinary action by a state medical board. Acad Med. 2005 Oct;80(10 Suppl):S17-20.

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