

Commission on Dental Accreditation

Accreditation Standards for Advanced Dental Education Programs in Endodontics

Accreditation Standards for Advanced Dental Education Programs in Endodontics

**Commission on Dental Accreditation
211 East Chicago Avenue
Chicago, Illinois 60611
(312) 440-4653
www.ada.org/coda**

Copyright ©2021

Commission on Dental Accreditation

All rights reserved. Reproduction is strictly prohibited without prior written permission.

Document Revision History

Date	Item	Action
February 12, 2021	Accreditation Standards for Advanced Dental Education Programs in Endodontics	Adopted
July 1, 2022	Accreditation Standards for Advanced Dental Education Programs in Endodontics	Implemented

Table of Contents

ACCREDITATION STATUS DEFINITIONS	6
STANDARD 1 - INSTITUTIONAL COMMITMENT/PROGRAM EFFECTIVENESS	14
USE OF SITES WHERE EDUCATIONAL ACTIVITY OCCURS	16
STANDARD 2 - PROGRAM DIRECTOR AND TEACHING STAFF	17
STANDARD 3 - FACILITIES AND RESOURCES	19
STANDARD 4 - CURRICULUM AND PROGRAM DURATION	22
BIOMEDICAL SCIENCES	23
CLINICAL SCIENCES.....	24
TEACHING/MENTORING.....	26
STANDARD 5 - ADVANCED DENTAL EDUCATION STUDENTS/RESIDENTS.....	27
ELIGIBILITY AND SELECTION	27
EVALUATION	28
DUE PROCESS.....	29
RIGHTS AND RESPONSIBILITIES	29
STANDARD 6 - RESEARCH	30

Mission Statement of the Commission on Dental Accreditation

The Commission on Dental Accreditation serves the public and profession by developing and implementing accreditation standards that promote and monitor the continuous quality and improvement of dental education programs.

Commission on Dental Accreditation
Adopted: August 5, 2016

ACCREDITATION STATUS DEFINITIONS

Programs That Are Fully Operational:

Approval (*without reporting requirements*): An accreditation classification granted to an educational program indicating that the program achieves or exceeds the basic requirements for accreditation.

Approval (*with reporting requirements*): An accreditation classification granted to an educational program indicating that specific deficiencies or weaknesses exist in one or more areas of the program. Evidence of compliance with the cited standards or policies must be demonstrated within a timeframe not to exceed eighteen (18) months if the program is between one and two years in length or two years if the program is at least two years in length. If the deficiencies are not corrected within the specified time period, accreditation will be withdrawn, unless the Commission extends the period for achieving compliance for good cause. Identification of new deficiencies during the reporting time period will not result in a modification of the specified deadline for compliance with prior deficiencies.

Circumstances under which an extension for good cause would be granted include, but are not limited to:

- sudden changes in institutional commitment;
- natural disaster which affects affiliated agreements between institutions; faculty support; or facilities;
- changes in institutional accreditation;
- interruption of an educational program due to unforeseen circumstances that take faculty, administrators or students away from the program.

Revised: 8/17; 2/16; 5/12; 1/99; Reaffirmed: 8/18; 8/13; 8/10, 7/05; Adopted: 1/98

Programs That Are Not Fully Operational: A program which has not enrolled and graduated at least one class of students/residents and does not have students/residents enrolled in each year of the program is defined by the Commission as not fully operational. The accreditation classification granted by the Commission on Dental Accreditation to programs which are not fully operational is “initial accreditation.” When initial accreditation status is granted to a developing education program, it is in effect through the projected enrollment date. However, if enrollment of the first class is delayed for two consecutive years following the projected enrollment date, the program’s accreditation will be discontinued, and the institution must reapply for initial accreditation and update pertinent information on program development. Following this, the Commission will reconsider granting initial accreditation status.

Initial Accreditation is the accreditation classification granted to any dental, advanced dental or allied dental education program which is not yet fully operational. This accreditation classification provides evidence to educational institutions, licensing bodies, government or other granting agencies that, at the time of initial evaluation(s), the developing education program has the potential for meeting the standards set forth in the requirements for an accredited educational program for the

specific occupational area. The classification “initial accreditation” is granted based upon one or more site evaluation visit(s).

Revised: 7/08; Reaffirmed: 8/18; 8/13; 8/10; Adopted: 2/02

Other Accreditation Actions:

Teach-Out: An action taken by the Commission on Dental Accreditation to notify an accredited program and the communities of interest that the program is in the process of voluntarily terminating its accreditation due to a planned discontinuance or program closure. The Commission monitors the program until students/residents who matriculated into the program prior to the reported discontinuance or closure effective date are no longer enrolled.

Reaffirmed: 8/18; Adopted: 2/16

Discontinued: An action taken by the Commission on Dental Accreditation to affirm a program’s reported discontinuance effective date or planned closure date and to remove a program from the Commission’s accredited program listing, when a program either 1) voluntarily discontinues its participation in the accreditation program and no longer enrolls students/residents who matriculated prior to the program’s reported discontinuance effective date or 2) is closed by the sponsoring institution.

Intent to Withdraw: A formal warning utilized by the Commission on Dental Accreditation to notify an accredited program and the communities of interest that the program’s accreditation will be withdrawn if compliance with accreditation standards or policies cannot be demonstrated by a specified date. The warning is usually for a six-month period, unless the Commission extends for good cause. The Commission advises programs that the intent to withdraw accreditation may have legal implications for the program and suggests that the institution’s legal counsel be consulted regarding how and when to advise applicants and students of the Commission’s accreditation actions. The Commission reserves the right to require a period of non-enrollment for programs that have been issued the Intent to Withdraw warning.

Revised: 2/16; 8/13; Reaffirmed: 8/18

Withdraw: An action taken by the Commission when a program has been unable to demonstrate compliance with the accreditation standards or policies within the time period specified. A final action to withdraw accreditation is communicated to the program and announced to the communities of interest. A statement summarizing the reasons for the Commission’s decision and comments, if any, that the affected program has made with regard to this decision, is available upon request from the Commission office. Upon withdrawal of accreditation by the Commission, the program is no longer recognized by the United States Department of Education. In the event the Commission withdraws accreditation from a program, students currently enrolled in the program at the time accreditation is withdrawn and who successfully complete the program, will be considered graduates of an accredited program. Students who enroll in a program after the accreditation has been withdrawn will not be considered graduates of a Commission accredited program. Such graduates may be ineligible for certification/licensure examinations.

Revised 6/17; Reaffirmed: 8/18; 8/13; 8/10, 7/07, 7/01; CODA: 12/87:9

Denial: An action by the Commission that denies accreditation to a developing program (without enrollment) or to a fully operational program (with enrollment) that has applied for accreditation. Reasons for the denial are provided. Denial of accreditation is considered an adverse action.

Reaffirmed: 8/18; 8/13; Adopted: 8/11

Preface

Maintaining and improving the quality of advanced dental education programs is a primary aim of the Commission on Dental Accreditation. The Commission is recognized by the public, the profession, and the United States Department of Education as the specialized accrediting agency in dentistry.

Accreditation of advanced dental education programs is a voluntary effort of all parties involved. The process of accreditation ensures students/residents, the dental profession, specialty boards and the public that accredited training programs are in compliance with published standards.

Accreditation actions by the Commission on Dental Accreditation are based upon information gained through written submissions by program directors and evaluations made on site by assigned site visitors. The Commission has established review committees to review site visit and progress reports and make recommendations to the Commission. Review committees are composed of representatives nominated by dental organizations and nationally accepted certifying boards. The Commission has the ultimate responsibility for determining a program's accreditation status. The Commission is also responsible for adjudication of appeals of adverse decisions and has established policies and procedures for appeal. A copy of policies and procedures may be obtained from the Director, Commission on Dental Accreditation, 211 East Chicago Avenue, Chicago, Illinois 60611.

Advanced dental education may be offered on either a certificate-only or certificate and degree-granting basis.

Accreditation actions by the Commission on Dental Accreditation are based upon information gained through written submissions by program directors and evaluations made on site by assigned site visitors. The Commission has established review committees in each of the recognized specialties to review site visit and progress reports and make recommendations to the Commission. Review committees are composed of representatives selected by the specialties and their certifying boards. The Commission has the ultimate responsibility for determining a program's accreditation status. The Commission is also responsible for adjudication of appeals of adverse decisions and has established policies and procedures for appeal. A copy of policies and procedures may be obtained from the Director, Commission on Dental Accreditation, 211 East Chicago Avenue, Chicago, Illinois 60611.

This document constitutes the standards by which the Commission on Dental Accreditation and its site visitors will evaluate advanced dental education programs in each discipline for accreditation purposes. The Commission on Dental Accreditation establishes general standards which are common to all disciplines of advanced dental education, institution and programs. Each discipline develops discipline-specific standards for education programs in its discipline. The general and discipline-specific standards, subsequent to approval by the Commission on Dental Accreditation, set forth the

standards for the education content, instructional activities, patient care responsibilities, supervision and facilities that should be provided by programs in the particular discipline.

As a learned profession entrusted by the public to provide for its oral health and general well-being, the profession provides care without regard to race, color, religion, gender, national origin, age, disability, sexual orientation, status with respect to public assistance, or marital status.

The profession has a duty to consider patients' preferences, and their social, economic and emotional circumstances when providing care, as well as to attend to patients whose medical, physical and psychological or social situation make it necessary to modify normal dental routines in order to provide dental treatment. These individuals include, but are not limited to, people with developmental disabilities, cognitive impairments, complex medical problems, significant physical limitations, and the vulnerable elderly. The Standards reconfirm and emphasize the importance of educational processes and goals for comprehensive patient care and encourage patient-centered approaches in teaching, research and oral health care delivery.

The profession adheres to ethical principles of honesty, compassion, kindness, respect, integrity, fairness and charity, as exemplified in the ADA Principles of Ethics and Code of Professional Conduct and the ADEA Statement on Professionalism in Dental Education.

General standards are identified by the use of a single numerical listing (e.g., 1). Discipline-specific standards are identified by the use of multiple numerical listings (e.g. 1-1, 1-1.2, 1-2).

Definitions of Terms Used in Endodontics Accreditation Standards

The terms used in this document (i.e., shall, must, should, can and may) were selected carefully and indicate the relative weight that the Commission attaches to each statement. The definitions of these words as used in the Standards are as follows:

Must or Shall: Indicates an imperative need and/or duty; an essential or indispensable item; mandatory.

Intent: Intent statements are presented to provide clarification to the advanced dental education programs in endodontics in the application of and in connection with compliance with the Accreditation Standards for Advanced Dental Education Programs in Endodontics. The statements of intent set forth some of the reasons and purposes for the particular Standards. As such, these statements are not exclusive or exhaustive. Other purposes may apply.

Examples of evidence to demonstrate compliance include: Desirable condition, practice or documentation indicating the freedom or liberty to follow a suggested alternative.

Should: Indicates a method to achieve the standard; highly desirable but not mandatory.

May or Could: Indicates freedom or liberty to follow a suggested alternative.

Graduates of discipline-specific advanced dental education programs provide unique services to the public. While there is some commonality with services provided by specialists and general dentists, as well as commonalities among the specialties, the educational standards developed to prepare graduates of discipline-specific advanced dental education programs for independent practice should not be viewed as a continuum from general dentistry. Each discipline defines the educational experience best suited to prepare its graduates to provide that unique service.

Competencies: Statements in the advanced dental education standards describing the knowledge, skills and values expected of graduates of discipline-specific advanced dental education programs.

Competent: Having the knowledge, skills and values required of the graduates to begin independent, unsupervised discipline-specific practice.

In-depth: Characterized by thorough knowledge of concepts and theories for the purpose of critical analysis and synthesis.

Understanding: Knowledge and recognition of the principles and procedures involved in a particular concept or activity.

Other Terms:

Institution (or organizational unit of an institution): a dental, medical or public health school, patient care facility, or other entity that engages in advanced dental education.

Sponsoring institution: primary responsibility for advanced dental education programs.

Affiliated institution: support responsibility for advanced dental education programs.

Advanced dental education student/resident: a student/resident enrolled in an accredited advanced dental education program.

A degree-granting program a planned sequence of advanced courses leading to a master's or doctoral degree granted by a recognized and accredited educational institution.

A certificate program is a planned sequence of advanced courses that leads to a certificate of completion in an advanced dental education program.

Student/Resident: The individual enrolled in an accredited advanced dental education program.

Resident: The individual enrolled in an accredited advanced dental education program in oral and maxillofacial surgery.

International Dental School: A dental school located outside the United States and Canada.

Evidence-based dentistry: Evidence-based dentistry is an approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient's oral and medical condition and history, with the dentist's clinical expertise and the patient's treatment needs and preferences.

Formative Assessment*: guiding future learning, providing reassurance, promoting reflection, and shaping values; providing benchmarks to orient the learner who is approaching a relatively unstructured body of knowledge; and reinforcing students' intrinsic motivation to learn and inspire them to set higher standards for themselves.

Summative Assessment*: making an overall judgment about competence, fitness to practice, or qualification for advancement to higher levels of responsibility; and providing professional self-regulation and accountability.

*Epstein, R.M. (2007) *Assessment in Medical Education*. The New England Journal of Medicine, 387-96.

Endodontic Terms:

(The first four terms are approved by the American Board of Endodontics [ABE].)

Prospective Board Candidate: A student enrolled in their final year of an advanced education program of endodontics accredited by the Commission of Dental Accreditation of the ADA whose application and payment of the Written Examination fee have been accepted and approved by the Board.

Educationally Qualified Endodontist: An endodontist who has successfully completed an advanced education program in endodontics accredited by the Commission on Dental Accreditation of the ADA.

Board-Eligible Endodontist: An educationally qualified endodontist whose application and credentials have the approval of the ABE.

Board Certified Endodontist: An endodontist who has satisfied all requirements of the certification process of the ABE, has been declared Board Certified by the Directors of the ABE, and maintains Board certification. This individual is a Diplomate of the ABE.

Evidence-based Endodontics (EBE): The integration of the best research evidence with clinician expertise and patient values.

- best research evidence refers to relevant research from basic and applied sciences including clinical, in vivo animal, or in vitro laboratory trials.
- clinician expertise refers to the clinical skills and past experience that allows efficient and accurate assessment of the risks and benefits of potential interventions.
- patient values refer to the unique preferences, concerns and expectations of each patient, which must be integrated into clinical decisions.

STANDARD 1 - INSTITUTIONAL COMMITMENT/PROGRAM EFFECTIVENESS

The program **must** develop clearly stated goals and objectives appropriate to advanced dental education, addressing education, patient care, research and service. Planning for, evaluation of and improvement of educational quality for the program **must** be broad-based, systematic, continuous and designed to promote achievement of program goals related to education, patient care, research and service.

The program **must** document its effectiveness using a formal and ongoing outcomes assessment process to include measures of advanced dental education student/resident achievement.

Intent: The Commission on Dental Accreditation expects each program to define its own goals and objectives for preparing individuals for the practice of endodontics and that one of the program goals is to comprehensively prepare competent individuals to initially practice endodontics. The outcomes process includes steps to: (a) develop clear, measurable goals and objectives consistent with the program's purpose/mission; (b) develop procedures for evaluating the extent to which the goals and objectives are met; (c) collect and maintain data in an ongoing and systematic manner; (d) analyze the data collected and share the results with appropriate audiences; (e) identify and implement corrective actions to strengthen the program; and (f) review the assessment plan, revise as appropriate, and continue the cyclical process.

The financial resources **must** be sufficient to support the program's stated goals and objectives.

Intent: The institution should have the financial resources required to develop and sustain the program on a continuing basis. The program should have the ability to employ an adequate number of full-time faculty, purchase and maintain equipment, procure supplies, reference material and teaching aids as reflected in annual budget appropriations. Financial allocations should ensure that the program will be in a competitive position to recruit and retain qualified faculty. Annual appropriations should provide for innovations and changes necessary to reflect current concepts of education in the advanced dental education discipline. The Commission will assess the adequacy of financial support on the basis of current appropriations and the stability of sources of funding for the program.

The sponsoring institution must ensure that support from entities outside of the institution does not compromise the teaching, clinical and research components of the program.

Examples of evidence to demonstrate compliance may include:

- Written agreement(s)
- Contract(s)/Agreement(s) between the institution/program and sponsor(s) related to facilities, funding, and faculty financial support

Advanced dental education programs **must** be sponsored by institutions, which are properly chartered, and licensed to operate and offer instruction leading to degrees, diplomas or

certificates with recognized education validity. Hospitals that sponsor advanced dental education programs **must** be accredited by an accredited organization recognized by the Centers for Medicare and Medicaid Services (CMS). Educational institutions that sponsor advanced dental education programs **must** be accredited by an agency recognized by the United States Department of Education. The bylaws, rules and regulations of hospitals that sponsor or provide a substantial portion of advanced dental education programs **must** assure that dentists are eligible for medical staff membership and privileges including the right to vote, hold office, serve on medical staff committees and admit, manage and discharge patients.

United States military programs not sponsored or co-sponsored by military medical treatment facilities, United States-based educational institutions, hospitals or health care organizations accredited by an agency recognized by the United States Department of Education or accredited by an accreditation organization recognized by the Centers for Medicare and Medicaid Services (CMS) must demonstrate successful achievement of Service-specific organizational inspection criteria.

The institution/program **must** have a formal system of quality assurance for programs that provide patient care.

The authority and final responsibility for curriculum development and approval, student/resident selection, faculty selection and administrative matters **must** rest within the sponsoring institution.

The position of the program in the administrative structure **must** be consistent with that of other parallel programs within the institution and the program director **must** have the authority, responsibility and privileges necessary to manage the program.

Ethics and Professionalism

1-1 Graduates must receive instruction in the application of the principles of ethical reasoning, ethical decision making and professional responsibility as they pertain to the academic environment, research, patient care, and practice management.

Intent: Graduates should know how to draw on a range of resources such as professional codes, regulatory law, and ethical theories to guide judgment and action for issues that are complex, novel, ethically arguable, divisive, or of public concern.

USE OF SITES WHERE EDUCATIONAL ACTIVITY OCCURS

The primary sponsor of the educational program **must** accept full responsibility for the quality of education provided in all sites where educational activity occurs.

1-2 All arrangements with sites where educational activity occurs, not owned by the sponsoring institution, must be formalized by means of current written agreements that clearly define the roles and responsibilities of the parties involved.

Intent: The items that are covered in inter-institutional agreements do not have to be contained in a single document. They may be included in multiple agreements, both formal and informal (e.g., addenda and letters of mutual understanding).

1-3 For each site where educational activity occurs, there must be an on-site clinical supervisor who is qualified by education and/or clinical experience in the curriculum areas for which he/she is responsible.

If the program utilizes off-campus sites for clinical experiences or didactic instruction, please review the Commission's Policy on Reporting and Approval of Sites Where Educational Activity Occurs found in the Evaluation and Operational Policies and Procedures manual (EOPP).

STANDARD 2 - PROGRAM DIRECTOR AND TEACHING STAFF

The program **must** be administered by one director who is board certified in the respective advanced dental education discipline of the program. (All program directors appointed after January 1, 1997, who have not previously served as program directors, **must** be board certified.)

Intent: The director of an advanced dental education program is to be certified by a nationally accepted certifying board in the advanced dental education discipline. Board certification is to be active. The board certification requirement of Standard 2 is also applicable to an interim/acting program director. A program with a director who is not board certified but who has previous experience as an interim/acting program director in a Commission-accredited program prior to 1997 is not considered in compliance with Standard 2.

Examples of evidence to demonstrate compliance may include:

- For board certified directors: Copy of board certification certificate; letter from board attesting to current/active board certification
- (For non-board certified directors who served prior to January 1, 1997: Current CV identifying previous directorship in a Commission on Dental Accreditation- or Commission on Dental Accreditation of Canada-accredited advanced dental education program in the respective discipline; letter from the previous employing institution verifying service)

The program director must be appointed to the sponsoring institution and have sufficient authority and time to achieve the educational goals of the program and assess the program's effectiveness in meeting its goals.

Documentation of all program activities must be ensured by the program director and available for review.

- 2-1 The sponsoring institution must appoint a program director who: a) is a full-time faculty member and b) whose time commitment is no less than twenty-four hours per week to the advanced dental education program in endodontics.**

Intent: To ensure that the program director has sufficient time to participate in all aspects of the program including direct student/resident contact in didactic and clinical activities.

- 2-2 Responsibilities of the program director must include:**

- a. Development of mission, goals, and objectives for the program;**
- b. Development and implementation of a curriculum plan;**
- c. Planning for and operation of the facilities used in the endodontic program;**

- d. **Student/resident selection unless the program is sponsored by a federal service utilizing a centralized student/resident selection process;**
- e. **Ensuring ongoing evaluation of student/resident performance and faculty teaching performance;**
- f. **Evaluation of teaching program and faculty supervision in affiliated institutions;**
- g. **Maintenance of records related to the educational program, including written instructional objectives and course outlines;**
- h. **Overall continuity and quality of patient care as it relates to program;**
- i. **Ongoing planning, evaluation and improvement of the quality of the program;**
- j. **Preparation of graduates for certification by the American Board of Endodontics; and**
- k. **Ensuring formal (written) evaluation of faculty members at least annually to assess their performance in the educational program.**

Intent: To ensure that the program director has complete authority to administer all aspects of the advanced education program and that all administrative records are maintained within the institution.

- 2-3 **The number of faculty and the professional education and development of faculty must be sufficient to meet the program's objectives and outcomes.**
- 2-4 **There must be attending faculty responsible for all clinical activities.**
 - 2-4.1 **Attending faculty must have specific and regularly scheduled clinic assignments to provide direct supervision appropriate to a student's/resident's level of training in all patient care.**
- 2-5 **Program directors and full time faculty must be provided time and resources to engage in scholarly pursuits, which may include:**
 - a. **Participation in continuing education in endodontics;**
 - b. **Participation in regional or national endodontic societies;**
 - c. **Participation in research; and**
 - d. **Presentation and publication of scientific/clinical studies.**
- 2-6 **All faculty, including those at major and minor educational activity sites, must be calibrated to ensure consistency in training and evaluation of students/residents that supports the goals and objectives of the program.**

STANDARD 3 - FACILITIES AND RESOURCES

Institutional facilities and resources **must** be adequate to provide the educational experiences and opportunities required to fulfill the needs of the educational program as specified in these Standards. Equipment and supplies for use in managing medical emergencies **must** be readily accessible and functional.

***Intent:** The facilities and resources (e.g., support/secretarial staff, allied personnel and/or technical staff) should permit the attainment of program goals and objectives. To ensure health and safety for patients, students/residents, faculty and staff, the physical facilities and equipment should effectively accommodate the clinic and/or laboratory schedule.*

The program **must** document its compliance with the institution's policy and applicable regulations of local, state and federal agencies, including but not limited to radiation hygiene and protection, ionizing radiation, hazardous materials, and bloodborne and infectious diseases. Policies **must** be provided to all students/residents, faculty and appropriate support staff and continuously monitored for compliance. Additionally, policies on bloodborne and infectious diseases **must** be made available to applicants for admission and patients.

***Intent:** The program may document compliance by including the applicable program policies. The program demonstrates how the policies are provided to the students/residents, faculty and appropriate support staff and who is responsible for monitoring compliance. Applicable policy states how it is made available to applicants for admission and patients should a request to review the policy be made.*

Students/Residents, faculty and appropriate support staff **must** be encouraged to be immunized against and/or tested for infectious diseases, such as mumps, measles, rubella and hepatitis B, prior to contact with patients and/or infectious objects or materials, in an effort to minimize the risk to patients and dental personnel.

***Intent:** The program should have written policy that encourages (e.g., delineates the advantages of) immunization for students/residents, faculty and appropriate support staff.*

All students/residents, faculty and support staff involved in the direct provision of patient care **must** be continuously recognized/certified in basic life support procedures, including cardiopulmonary resuscitation.

***Intent:** Continuously recognized/certified in basic life support procedures means the appropriate individuals are currently recognized/certified.*

The use of private office facilities as a means of providing clinical experiences in advanced dental education is only approved when the discipline has included language that defines the use of such facilities in its discipline-specific standards.

Intent: Required endodontic clinical experiences do not occur in private office facilities. Practice management and elective experiences may be undertaken in private office facilities.

3-1 The clinical facilities for students/residents in endodontics must be specifically identified and readily available.

3-1.1 The design of units must be suitable for all endodontic clinical procedures, including four-handed dentistry.

Intent: To ensure that students/residents, faculty, and clinical support personnel have the facilities/resources necessary to conduct the clinical phase of the program; that clinical operatories and surrounding space are sufficient to perform all endodontic procedures, including surgery, and to allow for patient comfort, access and space for clinical support personnel, and students/residents/faculty maneuverability.

3-2 Radiographic or imaging equipment and equipment specific for endodontic procedures must be readily available.

3-3 Lecture and seminar rooms, as well as audiovisual aids, must be available.

3-4 Appropriate information resources must be available, including access to biomedical textbooks, dental journals, the Internet and other sources pertinent to the area of endodontic practice and research.

3-5 Clinical support personnel must be sufficient to ensure efficient operation of clinical program and to provide students/residents with the opportunity to practice four-handed dentistry techniques.

Intent: To facilitate efficient delivery of dental care; to enhance the normal operation of endodontic practice; and to provide a simulated clinical practice environment; (Clinical support personnel are needed to keep from placing an undue burden of additional duties and responsibilities on the student/resident, potentially compromising the overall educational objectives of the program.)

3-6 Administrative support personnel must be sufficient to permit efficient operation of the program.

Intent: To ensure operations of the program are managed in an efficient and expeditious manner without placing undue hardship on the faculty and students/residents in the program.

3-7 Program resources must exist to support the number of students/residents enrolled.

Examples of evidence to demonstrate compliance may include:

- Annual budget for program including faculty and support staff
- Patient availability through appointment book and waiting lists
- Number of cases treated per student/resident as compared to previous year
- Number of dedicated dental units and their scheduled use
- Number of clinical/clerical support staff
- Number and availability of endodontic faculty and faculty/student/resident ratio
- List of equipment/supplies

STANDARD 4 - CURRICULUM AND PROGRAM DURATION

The advanced dental education program **must** be designed to provide special knowledge and skills beyond the D.D.S. or D.M.D. training and be oriented to the accepted standards of the discipline's practice as set forth in specific standards contained in this document.

Intent: To ensure that the didactic rigor and extent of clinical experience exceeds pre-doctoral, entry level dental training or continuing education requirements and the material and experience satisfies standards for the discipline.

Advanced dental education programs **must** include instruction or learning experiences in evidence-based practice. Evidence-based dentistry is an approach to oral health care that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient's oral and medical condition and history, with the dentist's clinical expertise and the patient's treatment needs and preferences.

Examples of Evidence to demonstrate compliance may include:

- Formal instruction (a module/lecture materials or course syllabi) in evidence-based practice
- Didactic Program course syllabi, course content outlines, or lecture materials that integrate aspects of evidence-based practice
- Literature review seminar(s)
- Multidisciplinary Grand Rounds to illustrate evidence-based practice
- Projects/portfolios that include critical reviews of the literature using evidence-based practice principles (or "searching publication databases and appraisal of the evidence")
- Assignments that include publication database searches and literature appraisal for best evidence to answer patient-focused clinical questions.

The level of discipline-specific instruction in certificate and degree-granting programs must be comparable.

Intent: To ensure that the students/residents of these programs receive the same educational requirements as set forth in these Standards.

If an institution or program enrolls part-time students/residents, the institution **must** have guidelines regarding enrollment of part-time students/residents. Part-time students/residents **must** start and complete the program within a single institution, except when the program is discontinued. The director of an accredited program who enrolls students/residents on a part-time basis **must** assure that: (1) the educational experiences, including the clinical experiences and responsibilities, are the same as required by full-time students/residents; and (2) there are an equivalent number of months spent in the program.

4-1 An advanced dental education program in endodontics must encompass a minimum duration of 24 months of full-time study.

Intent: To ensure that the program's student/resident leave policy and procedure aligns with institutional policies with regard to leave and due process, and complies with a minimum program duration of 24 months.

4-2 The content of all didactic instruction included in the program curriculum must be documented.

Examples of evidence to demonstrate compliance may include:

- Course outlines
- Course objectives
- Lecture/seminar schedules
- Outcomes
- Competency statements

BIOMEDICAL SCIENCES

4-3 Instruction in the biomedical sciences must provide information emphasizing principles and recent developments in order to meet the advanced program's objectives.

Intent: To ensure that developing new theories and techniques of endodontic treatment are included in the advanced program curriculum. Instruction should include the biologic and technical aspects of maintaining, replacing, and enhancing the natural dentition, including mechanisms for enhanced tissue healing and tissue regeneration.

4-4 Instruction must emphasize the interrelationships among the biomedical sciences and their application to clinical practice.

4-5 Instruction must be provided in:

- a. **Anatomy (gross and micro) of soft and hard tissues of the head and neck;**
- b. **Embryology;**
- c. **Infectious and immunologic processes in oral health and disease;**
- d. **Pathophysiology of pulpal/periradicular disease;**
- e. **Wound healing;**
- f. **Oral medicine and oral pathology;**
- g. **Pharmacotherapeutics;**
- h. **Research methodology and statistics;**

- i. Neurosciences; and
- j. Biomaterials.

CLINICAL SCIENCES

- 4-6 A minimum of 40% and a maximum of 60% of the total clock hours in a two-year (24 months) program must be devoted to clinical care.
- 4-7 Endodontic treatment must be evidence-based. (EBE is the integration of the best research evidence with clinician expertise and patient values).

Examples of evidence to demonstrate compliance may include:

- Endodontic literature applied to clinical treatment decisions
- Integration of current systematic literature reviews with treatment conferences
- Ethics applied to patient management

- 4-8 The educational program must provide in-depth instruction and clinical training so that students/residents are competent in:
 - a. Diagnosis, treatment planning and prognosis;
 - b. Non-surgical and surgical endodontic treatment and retreatment;

Intent: Instruction and training in surgical endodontic treatment and retreatment is to ensure that students/residents are trained to provide comprehensive treatment which may include hard and soft tissue management in the surgical site and the removal of teeth as part of an endodontic treatment plan.

- c. A variety of endodontic techniques;
- d. Outcome evaluation;
- e. Radiography and other diagnostic imaging technologies, including use of Limited Field of View (LFOV) Cone Beam Computed Tomography (CBCT);
- f. Management of endodontic treatment of medically compromised patients;
- g. Emergency treatment for endodontic conditions;
- h. Management of patients with orofacial pain and anxiety;
- i. Preparation of space for intraradicular restorations in endodontically treated teeth;
- j. Communication with patients and health care professionals; and
- k. Use of magnification technologies.

Intent: To ensure that students/residents are trained in the use of instruments that provide magnification and illumination of the operative field beyond that of magnifying eyewear. In

addition to the operating microscope, these instruments may include, but are not limited to, the endoscope, oroscope or other developing magnification technologies.

4-9 The educational program must provide in-depth instruction and clinical training in:

- a. Vital pulp management;**
- b. Endodontic management of developing permanent teeth;**
- c. Revascularization/regenerative endodontics;**
- d. Intracoronal bleaching procedures; and**
- e. Endodontic management of traumatic dental injuries.**

Intent: To ensure that students/residents are trained to manage all aspects of the endodontic care of teeth with traumatic injuries.

Examples of evidence to demonstrate compliance may include:

Procedures performed by students/residents, which may include, but are not limited to:

- Vital pulp therapy in situations in which traumatic crown fractures result in pulpal involvement.
- Root canal therapy for traumatically injured teeth in order to prevent or arrest inflammatory, infection-related root resorption.
- Monitoring and evaluating traumatized teeth and associated tissues to assess the pulpal status and healing over time (reattachment, revascularization, healing of root fractures, etc).
- Diagnosis and root canal treatment for teeth with pulp necrosis as a result of traumatic injuries.
- Induction of apical hard tissue barriers in developing teeth with open apices and necrotic pulps.
- Placement of apical barriers for immediate obturation of teeth with open apices.

4-10 The educational program must provide clinical and didactic instruction in:

- a. Diagnosis and treatment of periodontal conditions and defects in conjunction with the treatment of the specific tooth undergoing endodontic treatment; treatment must be provided in consultation with the individuals who will assume the responsibility for the completion or supervision of any additional periodontal maintenance or therapy; and**
- b. Placement of intraradicular restorations and cores in endodontically treated teeth; when the patient is referred, this treatment is accomplished in consultation with the restorative dentist.**

- 4-11 The educational program must provide instruction in the following areas:**
- a. The history of endodontics;**
 - b. Teaching methodology;**
 - c. Jurisprudence and risk management;**
 - d. Practice management;**
 - e. Medical emergencies;**
 - f. Implant dentistry; and**
 - g. Extrusion procedures.**
- 4-12 Students/Residents must actively participate in seminars or conferences involving literature and textbook reviews.**
- 4-13 Students/Residents must actively participate in endodontic and interdisciplinary seminars and conferences evaluating diagnostic data, treatment plans, treatment procedures, and outcomes assessment.**
- 4-14 The program must include a system for follow-up evaluation of patients to enable students/residents to assess the outcome of their treatment.**
- 4-15 Comprehensive records of history, diagnosis, and treatment must be maintained for each patient.**

TEACHING/MENTORING

- 4-16 Students/Residents must participate in teaching endodontics to predoctoral and/or postdoctoral students/residents.**

4-16.1 In a two-year (24 months) program, this participation must not exceed 10% of the total clock hours.

***Intent:** To enhance a student's/resident's ability to organize and evaluate teaching material, to communicate information to others, and/or to mentor others. Teaching is to be in the discipline of endodontics or other related disciplines, at the discretion of the program director.*

STANDARD 5 - ADVANCED DENTAL EDUCATION STUDENTS/RESIDENTS ELIGIBILITY AND SELECTION

Eligible applicants to advanced dental education programs accredited by the Commission on Dental Accreditation **must** be graduates from:

- a. Predoctoral dental programs in the U.S. accredited by the Commission on Dental Accreditation; or
- b. Predoctoral dental programs in Canada accredited by the Commission on Dental Accreditation of Canada; or
- c. International dental schools that provide equivalent educational background and standing as determined by the program.

Specific written criteria, policies and procedures must be followed when admitting students/residents.

Intent: Written non-discriminatory policies are to be followed in selecting students/residents. These policies should make clear the methods and criteria used in recruiting and selecting students/residents and how applicants are informed of their status throughout the selection process.

Admission of students/residents with advanced standing **must** be based on the same standards of achievement required by students/residents regularly enrolled in the program. Students/Residents with advanced standing **must** receive an appropriate curriculum that results in the same standards of competence required by students/residents regularly enrolled in the program.

Intent: Advanced standing refers to applicants that may be considered for admission to a training program whose curriculum has been modified after taking into account the applicant's past experience. Examples include transfer from a similar program at another institution, completion of training at a non-CODA accredited program, or documented practice experience in the given discipline. Acceptance of advanced standing students/residents will not result in an increase of the program's approved number of enrollees. Applicants for advanced standing are expected to fulfill all of the admission requirements mandated for students/residents in the conventional program and be held to the same academic standards. Advanced standing students/residents, to be certified for completion, are expected to demonstrate the same standards of competence as those in the conventional program.

Examples of evidence to demonstrate compliance may include:

- Policies and procedures on advanced standing
- Results of appropriate qualifying examinations
- Course equivalency or other measures to demonstrate equal scope and level of knowledge

EVALUATION

A system of ongoing evaluation and advancement **must** ensure that, through the director and faculty, each program:

- a. Periodically, but at least semiannually, assesses the progress toward (formative assessment) and achievement of (summative assessment) the competencies for the discipline using formal evaluation methods;
- b. Provides to students/residents an assessment of their performance, at least semiannually;
- c. Advances students/residents to positions of higher responsibility only on the basis of an evaluation of their readiness for advancement; and
- d. Maintains a personal record of evaluation for each student/resident which is accessible to the student/resident and available for review during site visits.

***Intent:** (a) The evaluation of competence is an ongoing process that requires a variety of assessments that can measure the acquisition of knowledge, skills and values necessary for discipline-specific level practice. It is expected that programs develop and periodically review evaluation methods that include both formative and summative assessments. (b) Student/Resident evaluations should be recorded and available in written form. (c) Deficiencies should be identified in order to institute corrective measures. (d) Student/Resident evaluation is documented in writing and is shared with the student/resident.*

DUE PROCESS

There **must** be specific written due process policies and procedures for adjudication of academic and disciplinary complaints, which parallel those established by the sponsoring institution.

RIGHTS AND RESPONSIBILITIES

At the time of enrollment, the advanced dental education students/residents **must** be apprised in writing of the educational experience to be provided, including the nature of assignments to other departments or institutions and teaching commitments. Additionally, all advanced dental education students/residents **must** be provided with written information which affirms their obligations and responsibilities to the institution, the program and program faculty.

***Intent:** Adjudication procedures should include institutional policy which provides due process for all individuals who may potentially be involved when actions are contemplated or initiated which could result in disciplinary actions, including dismissal of a student/resident (for academic or disciplinary reasons). In addition to information on the program, students/residents should also be provided with written information which affirms their obligations and responsibilities to the institution, the program, and the faculty. The program information provided to the students/residents should include, but not necessarily be limited to, information about tuition, stipend or other compensation; vacation and sick leave; practice privileges and other activity outside the educational program; professional liability coverage; and due process policy and current accreditation status of the program.*

STANDARD 6 - RESEARCH

Advanced dental education students/residents **must** engage in scholarly activity.

6-1 Students/Residents must participate in research.

Intent: To ensure that each student/resident is capable of developing a research protocol and has an active role in conducting a research project.

6-1.1 The research experience and results must be compiled into a document in publishable format.

Examples of evidence to demonstrate compliance may include:

- Manuscript
- Master's thesis
- Ph.D. Dissertation
- Progress report of on-going research activity