Commission on Dental Accreditation

Accreditation Standards for Advanced Specialty Education Programs in Prosthodontics

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Commission on Dental Accreditation
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Prosthodontics is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation and maintenance of the oral function, comfort, appearance and health of patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitutes. *(Adopted April 2003)*

Document Revision History

Date	***Item***	***Action***
August 7, 2015	*Accreditation Standards for Advanced Specialty Education Programs in Prosthodontics*	*Adopted*
August 7, 2015	*Revision to Policy on Reporting Program Changes in Accredited Programs*	*Adopted and Implemented*
August 7, 2015	*Revised Policy on Enrollment Increases in Advanced Dental Specialty Program*	*Adopted and Implemented*
February 5, 2016	*Revised Accreditation Status Definition*	*Adopted and Implemented*
February 5, 2016	*Revised Policy on Program Changes*	*Adopted and Implemented*
February 5, 2016	*Revised Policy on Enrollment Increases in Advanced Dental Specialty Programs*	*Adopted and Implemented*
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August 5, 2016	*Revised Policy on Program Changes*	*Adopted and Implemented*
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August 4, 2017	*Revised Accreditation Status Definitions*	*Adopted and Implemented*
August 4, 2017	*Revised Policy on Program Changes*	*Adopted and Implemented*
August 4, 2017	*Revision Standard 1, Affiliations- New Standards 1-1 and 1-2*	*Adopted*
August 4, 2017	*Revision Standard 2, Program Director and Teaching Staff- New Standard 2-5*	*Adopted*
August 4, 2017	*Revisions Standard 4, Didactic Program Standards 4-10, 4-11,4-13* *Revisions Standard 4, Clinical Program New Standards 4-17, 4-26*	*Adopted*
July 1, 2018	*Revision Standard 1, Affiliations- New Standards 1-1 and 1-2*	*Implemented*
July 1, 2018	*Revision Standard 2, Program Director and Teaching Staff- New Standard 2-5*	*Implemented*
July 1, 2018	*Revisions Standard 4, Didactic Program Standards 4-10, 4-11,4-13* *Revisions Standard 4, Clinical Program New Standards 4-17, 4-26*	*Implemented*

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Mission Statement of the Commission on Dental Accreditation

The Commission on Dental Accreditation serves the oral health care needs of the public through the development and administration of standards that foster continuous quality improvement of dental and dental related educational programs.

Commission on Dental Accreditation
Revised: August 10, 2012

Accreditation Status Definitions

Programs That Are Fully Operational:

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

Approval *(<u>with</u> 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: 8/13; 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).

Preface

Maintaining and improving the quality of advanced education in the nationally recognized specialty areas of dentistry 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 specialty education programs is a voluntary effort of all parties involved. The process of accreditation assures students/residents, specialty boards and the public that accredited training programs are in compliance with published standards.

Accreditation is extended to institutions offering acceptable programs in the following recognized specialty areas of dental practice: dental public health, endodontics, oral and maxillofacial pathology, oral and maxillofacial radiology, oral and maxillofacial surgery, orthodontics and dentofacial orthopedics, pediatric dentistry, periodontics and prosthodontics. Program accreditation will be withdrawn when the training program no longer conforms to the standards as specified in this document, when all first-year positions remain vacant for a period of two years or when a program fails to respond to requests for program information. Exceptions for non-enrollment may be made by the Commission for programs with "approval without reporting requirements" status upon receipt of a formal request from an institution stating reasons why the status of the program should not be withdrawn.

Advanced education in a recognized specialty area of dentistry 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 consultants. 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 form 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 consultants will evaluate advanced programs in each specialty for accreditation purposes. The Commission on Dental Accreditation establishes general standards which are common to all dental specialties, institution and programs regardless of specialty. Each specialty develops specialty-specific standards for education programs in its specialty. The general and specialty-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 specialty.

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). Specialty-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 Prosthodontics 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 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 specialty education programs in prosthodontics in the application of and in connection with compliance with the Accreditation Standards for Advanced Specialty Education Programs in Prosthodontics. 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 standards.

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

Graduates of specialty 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 specialty programs for independent practice should not be viewed as a continuum from general dentistry. Each specialty defines the educational experience best suited to prepare its graduates to provide that unique specialty service.

Competencies: Statements in the specialty standards describing the knowledge, skills and values expected of graduates of specialty programs.

Competent: Having the knowledge, skills and values required of the graduates to begin independent, unsupervised specialty 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 specialty education.

Sponsoring institution: primary responsibility for advanced specialty education programs.

Affiliated institution: support responsibility for advanced specialty education programs.

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

A degree-granting program is 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 a specialty recognized by the American Dental Association.

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

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.

Prosthodontic Specific Terms:

Removable Prosthodontics – is that branch of prosthodontics concerned with the replacement of teeth and contiguous structures for edentulous or partially edentulous patients by artificial substitutes that are removable from the mouth.

Fixed Prosthodontics – is that branch of prosthodontics concerned with the replacement and/or restoration of teeth by artificial substitutes that are not removable from the mouth.

Implant Prosthodontics – is that branch of prosthodontics concerned with the replacement of teeth and contiguous structures by artificial substitutes partially or completely supported and/or retained by alloplastic implants.

Maxillofacial Prosthetics – is that branch of prosthodontics concerned with the restoration and/or replacement of stomatognathic and associated craniofacial structures by artificial substitutes.

Educationally Qualified: An individual is considered Educationally Qualified after the successful completion of an advanced educational prosthodontics program, which is accredited by the Commission on Dental Accreditation.

Board Eligible: An individual is Board Eligible when his/her application has been submitted to and approved by the Board and his/her eligibility has not expired.

Diplomate: Any dentist who has successfully met the requirements of the Board for certification and remains in good standing.

STANDARD 1 - INSTITUTIONAL COMMITMENT/PROGRAM EFFECTIVENESS

The program **must** develop clearly stated goals and objectives appropriate to advanced specialty 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 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 prosthodontics and that one of the program goals is to comprehensively prepare competent individuals to initially practice prosthodontics. 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 specialty 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.

<u>Examples of evidence to demonstrate compliance may include</u>:

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

Advanced specialty 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 specialty education programs **must** be accredited by an accreditation organization recognized by the Centers for Medicare and Medicaid Services (CMS). Educational institutions that sponsor advanced specialty 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 specialty education programs **must** ensure 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 authority and final responsibility for curriculum development and approval, student/resident selection, faculty selection and administrative matters **must** rest within the sponsoring institution.

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

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.

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.

1-1 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 such as:

a. Designation of a single program director;
b. The teaching staff;
c. The educational objectives of the program;
d. The period of assignment of students/residents; and
e. Each institution's financial commitment.

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).*

1-2 For each site, including those at major and minor educational activity sites, there **must** be an on-site clinical supervisor who is an educationally qualified specialist in the curriculum areas for which he/she is responsible.

Intent: *Students/Residents engaging in prosthodontic related experiences should be supervised by an educationally qualified prosthodontist.*

If the program utilizes educational activity sites for clinical experiences or didactic instruction, please review the Commission's Policy on Reporting and Approval of Sites Where Educational Activity Occurs 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 specialty 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 specialty education program is to be certified by an ADA-recognized certifying board in the specialty. 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 specialty 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 program director **must** have primary responsibility for the organization and execution of the educational and administrative components to the program.

2-1.1 The program director **must** devote sufficient time to:

a. Participate in the student/resident selection process, unless the program is sponsored by federal services utilizing a centralized student/resident selection process;
b. Develop and implement the curriculum plan to provide a diverse educational experience in biomedical and clinical sciences;
c. Maintain a current copy of the curriculum's goals, objectives, and content outlines;
d. Maintain a record of the number and variety of clinical experiences accomplished by each student/resident;
e. Ensure that the majority of faculty assigned to the program are educationally qualified prosthodontists;
f. Provide written faculty evaluations at least annually to determine the effectiveness of the faculty in the educational program;

g. Conduct periodic staff meetings for the proper administration of the educational program; and
h. Maintain adequate records of clinical supervision.

2-2 The program director **must** encourage students/residents to seek certification by the American Board of Prosthodontics.

2-3 The number and time commitment of the teaching staff **must** be sufficient to
a. Provide didactic and clinical instruction to meet curriculum goals and objectives; and
b. Provide supervision of all treatment provided by students/residents through specific and regularly scheduled clinic assignments.

2-4 The program **must** show evidence of an ongoing faculty development process.

Intent: *Ongoing faculty development is a requirement to improve teaching and learning, to foster curricular change, to enhance retention and job satisfaction of faculty, and to maintain the vitality of academic dentistry as the wellspring of a learned profession.*

Examples of evidence to demonstrate compliance may include:
Participation in development activities related to teaching, learning, and assessment
Attendance at regional and national meetings that address contemporary issues in education and patient care
Mentored experiences for new faculty
Scholarly productivity
Presentations at regional and national meetings
Examples of curriculum innovation
Maintenance of existing and development of new and/or emerging clinical skills
Documented understanding of relevant aspects of teaching methodology
Curriculum design and development
Curriculum evaluation
Student/Resident assessment
Cultural Competency
Ability to work with students/residents of varying ages and backgrounds
Use of technology in didactic and clinical components of the curriculum
Evidence of participation in continuing education activities

2-5 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 of 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 specialty education is only approved when the specialty has included language that defines the use of such facilities in its specialty-specific standards.

Intent: *Required prosthodontic clinical experiences do not occur in private office facilities unless affiliated with the sponsoring institution.*

3-1 Physical facilities **must** permit students/residents to operate under circumstances prevailing in the practice of prosthodontics.

3-1.1 The clinical facilities **must** be specifically identified for the advanced education program in prosthodontics.

3-1.2 There **must** be sufficient number of completely equipped operatories to accommodate the number of students/residents enrolled.

3-1.3 Laboratory facilities **must** be specifically identified for the advanced education program in prosthodontics.

3-1.4 The laboratory **must** be equipped to support the fabrication of most prostheses required in the program.

3-1.5 There **must** be sufficient laboratory space to accommodate the number of students/residents enrolled in the program, including provisions for storage of personal and laboratory armamentaria.

3-2 Radiographic equipment for extra-and intraoral radiographs **must** be accessible to the student/resident.

3-3 Lecture, seminar, study space and administrative office space **must** be available for the conduct of the educational program.

3-4 Library resources **must** include access to a diversified selection of current dental, biomedical, and other pertinent reference material.

3-4.1 Library resources **must** also include access to appropriate current and back issues of major scientific journals as well as equipment for retrieval and duplication of information.

3-5 Facilities **must** include access to computer, photographic, and audiovisual resources for educational, administrative, and research support.

3-6 Adequate allied dental personnel **must** be assigned to the program to ensure clinical and laboratory technical support.

3-7 Secretarial and clerical assistance **must** be sufficient to meet the educational and administrative needs of the program.

3-8 Laboratory technical support **must** be sufficient to ensure efficient operation of the clinical program and meet the educational needs of the program.

STANDARD 4 – CURRICULUM AND PROGRAM DURATION

The advanced specialty 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 specialty practice as set forth in specific standards contained in this document.

Intent: *The intent is 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 specialty.*

Advanced specialty 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 specialty area instruction in certificate and degree-granting programs **must** be comparable.

Intent: *The intent is to ensure that the students/residents of these programs receive the same educational requirements as set forth in these Standards.*

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

If an institution and/or program enrolls part-time students/residents, the institution/program **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** ensure 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.

PROGRAM DURATION

4-1 A postdoctoral program in prosthodontics **must** encompass a minimum of 34 months.

4-2 A postdoctoral program in prosthodontics that includes integrated maxillofacial training **must** encompass a minimum of 45 months.

4-3 A 12-month postdoctoral program in maxillofacial prosthetics **must** be preceded by successful completion of an accredited prosthodontics program.

CURRICULUM

4-4 Students/Residents **must** have the didactic/clinical background that supports successful completion of the prosthodontic specialty board examination and fosters life-long learning.

***Intent**: Program directors should promote prosthodontic board certification. It is expected that students/residents should continue their life-long professional development by employing the didactic and clinical knowledge acquired during the program.*

4-5 Written goals and objectives, including course outlines for didactic courses, **must** be developed for all instruction included in this curriculum.

***Intent**: The curriculum should be designed to enable the student/resident to attain skills representative of a clinician competent in the theoretical and practical aspects at the specialty level of prosthodontics. Advanced level instruction may be provided through the following: formal courses, seminars, lectures, self-instructional modules, clinical assignments and laboratory.*

4-6 Students/Residents **must** prepare and present diagnostic data, treatment plans and the results of patient treatment.

4-7 The amount of time devoted to didactic instruction and research **must** be at least 30% of the total educational experience.

4-8 A minimum of 60% of the total program time **must** be devoted to providing patient services, including direct patient care and laboratory procedures.

4-9 Time devoted to organized teaching experiences **must** not compromise the didactic and clinical goals and objectives of the overall program.

***Intent**: If time is devoted to teaching experiences for the student/resident, it should be evaluated in relation to the goals and objectives of the overall program and the benefit of the individual student/resident.*

DIDACTIC PROGRAM

4-10 Instruction **must** be provided at the in-depth level for the diagnosis of diseases affecting prosthodontic treatment, including caries risk assessment and intervention.

***Intent**: Students/Residents should receive instruction regarding diagnosis, etiology, pathogenesis and prevention of diseases that directly affect treatment outcomes. Risk assessment and prognosis should be included. It is expected that such foundational learning would be directly supportive of requisite clinical curriculum competencies.*

4-11 Instruction **must** be provided at the in-depth level in each of the following areas as both separate entities and integrated treatment approaches used to address patient needs and expectations.

a. Fixed prosthodontics;
b. Removable prosthodontics;
c. Implants and implant therapy;
d. Occlusion;
e. Esthetics;
f. Biomaterials;
g. Digital technology;
h. Wound healing;
i. Surgical principles;
j. Infection Control;
k. Craniofacial anatomy and physiology related to prosthodontic therapy including dental implant placement;
l. Diagnostic Imaging, including three dimensional imaging related to prosthodontic therapy including dental implant placement; and
m. Prosthodontic diagnosis and treatment planning.

***Intent**: Students/Residents should receive in-depth didactic instruction that supports prosthodontic treatment outcomes. This should include digital dentistry as it relates to assessment and diagnosis for patients. Students/Residents should be able to plan, design, provide restorations, and replace missing teeth and the associated structures applying digital technologies. Didactic learning should directly support clinical decision making and requisite clinical curriculum competencies toward achieving patient esthetics and function. This includes foundational knowledge of surgical principles, procedures, and complications, as they relate to implant placement, as well as biomaterial properties including biocompatibility, biomechanics and biotechnology as they apply to prosthodontic treatment plans.*

4-12 Instruction **must** be provided at the understanding level in each of the following biomedical areas:

a. Oral pathology;
b. Applied pharmacology; and
c. Oral microbiology

4-13 Instruction **must** be provided at the understanding level in each of the following clinical areas:

a. Temporomandibular disorders and orofacial pain;
b. Evidence-based health care principles including identifying, appraising and applying available evidence;
c. Ethics and professionalism;
d. Preprosthetic surgery;
e. Geriatric considerations in prosthodontic care;
f. Maxillofacial prosthetics;
g. Medical emergencies;
h. Research methodology; and
i. Pain control and sedation.

4-14 Instruction **must** be provided at the understanding level in diagnostic and treatment planning aspects of other recognized dental specialties as they relate to referral, patient treatment and prosthodontic outcomes.

***Intent**: Students/Residents should receive instruction in diagnosis and treatment planning and as a member of interdisciplinary teams in order to develop, implement and assess treatment approaches that optimize therapeutic outcomes. Students/Residents should receive instruction in relating proposed treatments to survival, physiologic, psychological and economic outcomes. Instruction should be provided in risk assessment and prognosis prediction based upon considered treatment options and individual patient needs.*

4-15 Students/Residents **must** receive didactic specialty instruction including but not limited to:

a. Craniofacial growth and development;
b. Biostatistics;
c. Intraoral photography;
d. Practice management;
e. Scientific writing;
f. Sleep disorders;
g. Teaching methodology including public speaking; and
h. Behavioral science.

CLINICAL PROGRAM

Prosthodontics is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation and maintenance of the oral function, comfort, appearance and health of patients with clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitutes (CDEL Approved 2003). At the specialty level, Prosthodontics embraces its role as part of a therapy team. To support this definition and vision, programs will provide appropriate clinical experiences for students/residents to develop the following competencies:

4-16 Students/Residents **must** be competent at the prosthodontic specialty level in the treatment of clinical conditions associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitutes by achieving clinical competence in the following areas:

a. Patient assessment, including medical history, dental history, temporomandibular assessment, extraoral and intraoral examination, radiologic assessment and occlusal analysis;
b. Systemic, infectious and neoplastic disease screening, including patient education for prevention;
c. Diagnosis;
d. Risk assessment and prognosis;
e. Treatment planning;
f. Adjunct referral;
g. Patient Care;
h. Outcomes assessment; and
i. Maintenance.

***Intent**: Students/Residents should use advanced methods including existing and emerging technologies for diagnosis, treatment planning, referral, and prosthodontic treatment to optimize occlusion, masticatory function and esthetics.*

4-17 Students/Residents **must** be competent in the application of principles related to caries risk assessment and intervention.

4-18 Students/Residents **must** be competent in managing and treating a wide scope of complex clinical conditions for edentulous, partially edentulous and dentate patients.

***Intent**: Students/Residents should manage and treat patients with clinical conditions at a level beyond experiences at the predoctoral dental education level. Students/Residents should provide prosthodontic therapy for a wide scope of patients with esthetic and functional needs above the level of general dentistry, including patients with varying degrees of cognitive and physical impairment.*

4-19 Students/Residents **must** be competent in the application of principles associated with fixed prosthodontics, removable prosthodontics and implants, and as members of a treatment team.

***Intent**: Students/Residents should evaluate and use existing and appropriate newly introduced technologies to replace teeth and their associated structures using biologically active and passive therapies for fixed and removable prosthodontic treatment. These experiences should be beyond those learned at the predoctoral level and use natural teeth and dental implants as part of the treatment.*

4-20 Students/Residents **must** be competent in the application of evidence-based health care principles.

***Intent**: Students/Residents should be able to identify, appraise, apply and communicate best evidence as it relates to health care and clinical and translational research, including how such research is conducted, evaluated, applied and communicated to patients and health care providers.*

4-21 Students/Residents **must** be competent regarding principles of ethical decision making pertaining to academic, research, patient care and practice environments.

***Intent**: Students/Residents should be able 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.*

4-22 Students/Residents **must** be competent in the application of principles of esthetic dentistry.

***Intent**: Students/Residents should use existing and newly introduced technologies and apply principles of esthetic dentistry to restore existing teeth and replace missing teeth and their associated structures. These experiences should be beyond those learned at the predoctoral level supported by natural teeth and dental implants as part of the treatment.*

4-23 Students/Residents **must** be competent in the placement and restoration of dental implants, including referral.

***Intent**: Replacement of missing teeth and the associated oral and maxillofacial tissues using biocompatible substitutes is a core component of Prosthodontics and its definition. Students/Residents should perform surgical placement of dental implants in healed edentulous sites with adequate vertical and horizontal osseous tissue as a part of prosthodontic treatment for patients. These experiences should demonstrate the student's/resident's role in the process of assessment, diagnosis, treatment planning, implementation of prosthetic rehabilitation, and referral.*

4-24 Students/Residents **must** be competent in leading and coordinating oral health care with other members of the health care team.

***Intent**: Students/Residents should be able to plan, evaluate and provide direction for patient treatment in consultation with other health care providers in a multi-disciplinary team. Students/Residents should be able to direct laboratory technicians supporting treatment at the prosthodontic specialty level.*

4-25 Students/Residents **must** be competent in selection and application of biomaterials recognizing esthetic, biomechanical and biocompatibility implications of prosthodontic therapies.

Intent: *Students/Residents should be able to treatment plan for clinical predictability based on patient and restoration factors.*

4-26 Students/Residents **must** be competent in the application of digital dentistry and its principles.

Intent: *Students/Residents should be able to apply digital technologies in the assessment and diagnosis of patients. Students/Residents should be able to plan, design, provide restorations, and replace missing teeth and the associated structure applying digital technologies.*

4-27 Student/Residents **must** be competent in laboratory procedures used in the treatment of edentulous, partially edentulous and dentate patients.

Intent*: Students/Residents should be able to use existing technologies to plan, design and fabricate prostheses. They should be capable of directing dental technicians in prosthodontic laboratory procedures. They should be able to evaluate newly introduced technologies and apply these as appropriate.*

4-28 Students/Residents **must** be competent in the prosthodontic management of patients with temporomandibular disorders and/or orofacial pain.

Intent*: Students/Residents should recognize signs and symptoms associated with temporomandibular disorders and/or orofacial pain. Students/Residents should either provide appropriate treatment or refer, consistent with contemporary practice and the best interest of the patient.*

4-29 Students/Residents **must** have experience with patients requiring maxillofacial prosthetic care.

Intent*: Students/Residents should have clinical patient experiences screening, diagnosing, assessing risk, treatment planning, referring and following-up patients requiring maxillofacial services.*

MAXILLOFACIAL PROSTHETICS

Note: Application of these Standards to programs of various scope/length is as follows:

a. Prosthodontic programs that encompass a minimum of forty-five months that include integrated maxillofacial prosthetic training: all sections of these Standards apply;
b. Prosthodontic programs that encompass a minimum of thirty-four months: all sections of these Standards apply except sections 4-30 through 4-38 inclusive; and
c. Twelve-month maxillofacial prosthetic programs: all sections of these Standards apply except sections 4-4 and 4-10 through 4-29, inclusive.

PROGRAM DURATION

4-30 An advanced education program in maxillofacial prosthetics **must** be provided with a forty-five month integrated prosthodontic program which includes fixed prosthodontic, removable prosthodontic, implant prosthodontic and maxillofacial prosthetic experiences; or

a one-year program devoted specifically to maxillofacial prosthetics which follows completion of a prosthodontic program.

DIDACTIC PROGRAM

4-31 Instruction **must** be provided at the in-depth level in each of the following:

a. Etiology, multidisciplinary treatments, treatment sequela, and prosthetic treatment planning of defects of the craniofacial complex that are the result of disease, trauma and developmental/congenital processes;
b. Implant therapy in the patients described in 4-30;
c. Intra-oral and extra-oral prosthetic considerations for patients receiving surgical, radiation or drug therapies that impact the health of the craniofacial structures.

Intent: *Students/Residents should have the biomedical and clinical didactic background that supports the various aspects of prosthodontic therapy they provide and guide during their clinical experiences in treating patients with craniofacial deformities. Students/Residents should receive instruction in the advantages, disadvantages, indications and outcome assessments of multidisciplinary care of these patients and the impact this has on prosthetic interventions. This fundamental didactic background is necessary whether the student/resident provides therapy or serves as the referral source to other providers. This includes surgical and postsurgical management of patients requiring implant therapy. It is expected that such foundational learning would be directly supportive of requisite clinical curriculum competencies.*

4-32 Students/Residents **must** have the didactic/clinical background that supports successful completion of the prosthodontic specialty board examination and fosters life-long learning.

Intent*: Program directors should promote prosthodontic board certification to attain the appropriate hospital appointment for the clinical practice of maxillofacial prosthetics. It is expected that students/residents continue their life-long professional development by employing the didactic and clinical knowledge acquired during the maxillofacial program.*

4-33 Instruction **must** be provided at the understanding level in each of the following as they impact health and reconstruction of the craniofacial complex and prosthodontic rehabilitation:

a. Medical oncology;
b. Ablative and reconstructive surgery of the head and neck;
c. Radiation oncology;
d. Speech and deglutition;
e. Developmental and congenital craniofacial anomalies;
f. Advanced digital technology; and
g. Biomaterials used in maxillofacial prosthetics.

CLINICAL PROGRAM

4-34 Students/Residents **must** be competent to perform pre-prosthetic and maxillofacial prosthetic treatment procedures in the hospital operating room.

***Intent**: Students/Residents should be able to perform pre-prosthetic procedures in preparation for maxillofacial rehabilitation as members of an inter-disciplinary treatment team in the hospital operating room that will directly affect the final reconstructive and rehabilitative outcome of patients with craniofacial complex defects.*

4-35 Students/Residents **must** be competent in the hospital operation room to guide and assist multidisciplinary team members in resection and reconstructive treatment procedures that impact prosthetic rehabilitation for patients with maxillofacial and craniofacial complex defects.

***Intent**: Students/Residents should be able to guide and assist multidisciplinary team members in the operating room to enhance the resection contours and selection and positioning of flaps/grafts for reconstruction and rehabilitation of prosthetic patients with various craniofacial complex defects.*

4-36 Students/Residents **must** be competent in the pre-prosthetic, prosthetic and post-prosthetic management and performing treatment of patients with defects of the craniofacial complex.

***Intent**: Students/Residents should be able to deliver care for various deformities restoring/improving functional deficits. Such experiences should be beyond those learned at graduate prosthodontic level, and should use natural teeth and dental and craniofacial implants as part of the treatment.*

4-37 Students/Residents **must** be competent to direct and teach laboratory technicians supporting treatment for the maxillofacial prosthetic patients.

***Intent**: Students/Residents should be able to instruct laboratory technicians and allied health personnel in the unique laboratory and supportive procedures required for intraoral and extraoral maxillofacial prostheses.*

4-38 Students/Residents **must** demonstrate competency in multidisciplinary diagnosis and treatment planning conferences relevant to clinical maxillofacial prosthetics, as it fulfills the mission of the program, which may include:

a. Cleft palate and craniofacial conferences;
b. Clinical pathology conferences;
c. Head and neck cancer treatment planning conferences;
d. Medical oncology treatment planning conferences;
e. Radiation therapy diagnosis and treatment planning conferences;
f. Reconstructive surgery conferences; and
g. Tumor boards.

STANDARD 5 - ADVANCED EDUCATION STUDENTS/RESIDENTS

ELIGIBILITY AND SELECTION

Eligible applicants to advanced specialty 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.

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

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.*

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 specialty 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 specialty-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 specialty 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 specialty 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 specialty education students/residents **must** engage in scholarly activity.

Such evidence may include:

a. presentation of papers at educational meetings outside of the sponsoring institution
b. development and submission of posters for scientific meetings
c. submission of abstracts for presentation at educational meetings or publication in peer reviewed journals
d. active participation in or completion of a research project (basic science or clinical) with mentoring
e. submission of an article for publication in a peer reviewed journal

Intent*: The student/resident is expected to be engaged in scholarly activity. They are encouraged to be involved in the creation of new knowledge, evaluation of research, development of critical thinking skills and furthering the profession of prosthodontics.*