

## **REPORT OF THE REVIEW COMMITTEE ON ORAL AND MAXILLOFACIAL RADIOLOGY EDUCATION TO THE COMMISSION ON DENTAL ACCREDITATION**

Committee Chair: Dr. Sanjay Mallya. Committee Members: Dr. Boris Bacanurschi, Dr. King Chong Chan, Dr. Gene Kelber, and Dr. Sindhura Anamali Reddy. Guests (Open Session Only): Dr. Sheila Brear, chief learning officer, American Dental Education Association, Ms. Lisa Mikita, executive director, American Academy of Oral and Maxillofacial Radiology, and Dr. Edwin Parks, president, American Board of Oral and Maxillofacial Radiology attended the policy portion of the meeting. Staff Members: Ms. Kirsten Nadler, manager, Advanced Dental Education, and Ms. Jennifer Snow, manager, Advanced Dental Education, Commission on Dental Accreditation. The meeting of the Review Committee on Oral and Maxillofacial Radiology Education (OMR RC) was held on July 11, 2022 via a virtual meeting.

### **CONSIDERATION OF MATTERS RELATED TO ORAL AND MAXILLOFACIAL RADIOLOGY EDUCATION**

**Informational Report on Frequency of Citings of Accreditation Standards for Advanced Dental Education Programs in Oral and Maxillofacial Radiology (p. 900)**: The Review Committee on Oral and Maxillofacial Radiology Education (OMR RC) considered the annual report on the frequency of citings of the Accreditation Standards for Advanced Dental Education Programs in Oral and Maxillofacial Radiology implemented August 2, 2019. The OMR RC noted that one (1) oral and maxillofacial radiology site visit has been conducted from August 2, 2019 through October 31, 2021. To ensure confidentiality, Frequency of Citings reports will not be made available where a limited number (three or less) of programs have been site visited.

**Recommendation**: This report is informational in nature and no action is required.

**Consideration of Proposed Revisions to the Accreditation Standards for Advanced Dental Education Programs in Oral and Maxillofacial Radiology (p. 901)**: The Review Committee on Oral and Maxillofacial Radiology Education (OMR RC) considered a proposed revision to the Accreditation Standards for Advanced Dental Education Programs in Oral and Maxillofacial Radiology submitted by the American Association of Oral and Maxillofacial Radiologists (AAOMR) related to assurance that graduates are familiar with intended applications and limitations of artificial and augmented intelligence-based approaches in dentomaxillofacial imaging (**Appendix 1, Policy Report p. 901**). The OMR RC discussed artificial and augmented intelligence (AI), noting that it is a growing field with applications in dentistry and oral and maxillofacial radiology. Further, the committee considered the potential uses of AI including clinical data-driven decision making, identification of radiologic anatomy and disease manifestations, as well as image enhancement to reduce artifacts and noise. In addition, the OMR RC noted that as the use of AI-based systems increases, oral and maxillofacial radiologists will need to be familiar with the basic principles of artificial intelligence (AI)/machine learning (ML), the accuracy and performance of AI-based systems and models, the common training errors and evaluation methods for these systems, and the liabilities associated with detection and identification of dentomaxillofacial pathoses.

The OMR RC concluded that the addition of this concept within the Accreditation Standards is appropriate, and determined that graduates of oral and maxillofacial radiology programs must have an understanding of the intended applications and limitations of artificial and augmented intelligence-based approaches in dentomaxillofacial imaging. In doing so, the Committee believed that programs would receive additional clarity from an intent statement indicating that graduates “will be prepared to serve as a resource to the referring clinician with respect to guiding and discussing optimal application of artificial and augmented intelligence-based approaches in radiology practice.” The OMS RC noted that the addition of a new Standard 4-16 would necessitate renumbering of the subsequent standard, as found in **Appendix 1**.

In summary, the OMR RC recommended the proposed addition of a new Standard 4-16 to the Accreditation Standards for Advanced Dental Education Programs in Oral and Maxillofacial Radiology (**Appendix 1**) be circulated to the communities of interest for review and comment, with Hearings conducted in conjunction with the October 2022 American Dental Association and March 2023 American Dental Education Association meetings, with comments reviewed at the Commission’s Summer 2023 meetings.

**Recommendation:** It is recommended that the Commission on Dental Accreditation direct circulation of the proposed addition of a new Standard 4-16 to the Accreditation Standards for Advanced Dental Education Programs in Oral and Maxillofacial Radiology, found in **Appendix 1**, to the communities of interest for review and comment, with Hearings conducted in conjunction with the October 2022 American Dental Association and March 2023 American Dental Education Association meetings, with comments reviewed at the Commission’s Summer 2023 meetings.

#### **CONSIDERATION OF MATTERS RELATING TO MORE THAN ONE REVIEW COMMITTEE**

Matters related to more than one review committee are included in a separate report.

#### **CONSIDERATION OF MATTERS RELATED TO ACCREDITATION STATUS**

Matters related to accreditation status of programs are included in a separate report.

Respectfully submitted,

Dr. Sanjay Mallya  
Chair, Review Committee on Oral and Maxillofacial Radiology Education

# Commission on Dental Accreditation

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**Proposed Addition of New Standard 4-16**

Additions are **Underlined**

**~~Strikethroughs~~** indicate Deletions

## Accreditation Standards for Advanced Dental Education Programs in Oral and Maxillofacial Radiology

## 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:** 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 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:** 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 The duration of an advanced oral and maxillofacial radiology program **must** be a minimum of 24 months full-time or its equivalent.
- 4-2 Students/residents **must** be enrolled on, at least, a half-time basis.

### **ETHICS AND PROFESSIONALISM**

- 4-3 Graduates **must** be able to apply 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.*

### **CLINICAL ORAL AND MAXILLOFACIAL RADIOLOGY**

- 4-4 Students/Residents **must** assume major responsibility for interpretations and consultative reports on an adequate number of imaging studies of sufficient variety to be competent, as graduates, in clinical oral and maxillofacial radiology.
- 4-5 Clinical oral and maxillofacial radiology case conferences **must** be held an average of, at least, once every two weeks.

***Intent:** The intent is to ensure that graduates understand and can explain the underlying principles of interpretation of disease processes.*

- 4-6 Students/residents **must** participate in regularly scheduled literature reviews.

***Intent:** Graduates will have an in-depth knowledge of the current literature in oral and maxillofacial radiology.*

### **ORAL AND MAXILLOFACIAL DIAGNOSTIC IMAGING TECHNIQUES**

- 4-7 Training in oral and maxillofacial diagnostic imaging techniques **must** be provided to the students/residents with adequate instruction and supervision.

- 4-8 Graduates **must** be competent in the procedures performed in oral and maxillofacial radiology including, but not limited to: (a) intraoral, (b) panoramic, (c) cephalometric and other skull projections, and (d) cone-beam computed tomography/volumetric imaging.
- 4-9 Graduates **must** have an in-depth knowledge of other imaging techniques applicable to oral and maxillofacial radiology, including, but not limited to: (a) multi-slice/detector computed tomography, (b) magnetic resonance imaging, (c) diagnostic ultrasonography, and (d) nuclear medicine imaging techniques.

*Intent: Programs will provide students/residents with an in-depth knowledge of the technical procedures to acquire these studies but not necessarily experience in independent acquisition of these studies.*

- 4-10 Graduates **must** understand administrative procedures associated with the directorship of an oral and maxillofacial radiology facility.

*Intent: Graduates of oral and maxillofacial radiology programs will be prepared to assume the administrative responsibilities to direct a radiology facility.*

### **ASSOCIATED MEDICAL SCIENCES**

- 4-11 The program **must** provide advanced education in head and neck anatomy, and oral and maxillofacial pathology.

### **EVALUATION AND RADIOLOGIC MANAGEMENT OF PATIENTS**

- 4-12 The program **must** provide students/residents with an understanding of and experience in the clinical manifestations of head and neck diseases and head and neck manifestations of systemic diseases as an important facet of the training and practice of oral and maxillofacial radiology.
- 4-13 Students/Residents **must** attend head and neck tumor board or a similar institutional interdisciplinary conference which includes radiology on a regular basis, but at least monthly.
- 4-14 Graduates **must** be competent in designing appropriate radiologic studies.

*Intent: Graduates of oral and maxillofacial radiology programs will be prepared to serve as a resource to the referring clinician with respect to selecting the optimum examination.*

- 4-15 The clinical training of oral and maxillofacial radiology students/residents in the routine activities of a screening/emergency or treatment planning clinics **must** be minimized.

- 4-16 Graduates **must** understand intended applications and limitations of artificial and augmented intelligence-based approaches in dentomaxillofacial imaging.

*Intent: Graduates of oral and maxillofacial radiology programs will be prepared to serve as a resource to the referring clinician with respect to guiding and discussing optimal application of artificial and augmented intelligence-based approaches in radiology practice.*

## MEDICAL RADIOLOGY

4-1617 The program **must** provide for a meaningful period of education in medical radiology in an active, hospital-based radiology department or other similar facility of, at least, three months duration, or its part-time equivalent.

*Intent: The practice of oral and maxillofacial radiology calls for the association, cooperation and frequent consultation with medical radiologists (general, head and neck, and/or neuroradiology). An understanding of the broad scope of radiology is important.*

## RADIATION AND IMAGING PHYSICS

4-1718 Graduates **must** understand radiation physics including the basic imaging physics of: (a) analog and digital oral and maxillofacial radiography; (b) cone-beam computed tomography/volumetric imaging; (c) multi-slice computed tomography; (d) magnetic resonance imaging; (e) diagnostic ultrasonography; (f) nuclear medicine; and (g) image enhancement analysis concepts associated with diagnostic imaging.

## RADIATION BIOLOGY

4-1819 Graduates **must** have an in-depth knowledge of the biological effects of ionizing radiations.

*Intent: Graduates will be able to describe both the biological changes and the clinical consequences of exposure to ionizing radiations*

## RADIATION PROTECTION

4-1920 Graduates **must** have an in-depth knowledge of radiation protection and/or hygiene.

*Intent: Graduates will be prepared to eliminate unnecessary exposure of patients, operators and the general public*

## TEACHING EXPERIENCE

4-2021 A program in oral and maxillofacial radiology **must** include an organized teaching experience for students/residents with formal evaluation.

4-2122 The amount of time devoted by the student/resident to teaching experience must be carefully evaluated and not exceed ten percent (10%) of the overall program.