

# ENTRY-LEVEL COMPETENCIES: DENTO-MAXILLOFACIAL RADIOLOGY

This document describes the entry-level competency standard for dento-maxillofacial radiology expected of applicants for registration with the Dental Board of Australia (the Board).

## How will the competencies be used?

The competencies will be used to support a number of regulatory functions by the Board. These functions include:

- **Accreditation**<sup>1</sup>, to determine if approved specialist qualifications in Australia:
  - is at the expected qualification level
  - produces graduates at the expected level of competence for dental specialist registration
- **Registration** of overseas qualified applicants to:
  - assess qualifications for equivalence to an approved specialist qualifications in Australia
  - develop assessments or examinations to determine if candidates are at the expected level of competence for dental specialist registration, and
- **Evaluating the competence of dental specialists in the context of regulatory processes** such as those returning to practice and in the management of a notification.

<sup>1</sup> The Australian Dental Council is the assigned accreditation authority for the dental profession in Australia and undertakes accreditation functions on behalf of the Board.

## Assumptions

The following assumptions have been made when developing these competencies.

The competencies:

- build on the Australian Dental Council's *Professional competencies of the newly qualified dentist*<sup>2</sup>
- are not intended to define the scope of the specialty but rather the knowledge and competence of the graduate specialist
- are not intended to define a national curriculum for the education and training in the specialty
- describe the broad areas of competence and assume that other documents such as program curricula will describe the detail under each broad area to accommodate innovation and change in practice over time
- use language and descriptors consistent with those of the Australian Qualifications Framework's<sup>3</sup> (AQF) Level 9 Masters Degree (Extended) to differentiate specialist practice from that of a general dentist, and
- do not replace other descriptors of the specialty such as those published by specialist academies and colleges that may describe the standard expected of specialists post entry-level.

<sup>2</sup> Refer to Australian Dental Council's document [Professional Competencies of the Newly Qualified Dentist](#). Note these apply in Australia only.

<sup>3</sup> Published at [www.aqf.edu.au](http://www.aqf.edu.au)

## How to read the competencies

The competencies should be read:

- with an understanding of how they are to be used, and
- in the context of how they are relevant to the particular specialty – this will mean that competencies generic to all specialties may be demonstrated differently in each specialty.

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## Definition

### Australia

Dental Board of Australia *List of approved specialties*<sup>4</sup>.

Dento-Maxillofacial Radiology is defined as:

*The branch of dentistry that deals with diagnostic imaging procedures applicable to the hard and soft tissues of the oral and maxillofacial region, and to other structures that are relevant for the proper assessment of oral conditions.*

### This specialty is not recognised in New Zealand

<sup>4</sup> Published at [www.dentalboard.gov.au/Registration-Standards](http://www.dentalboard.gov.au/Registration-Standards)

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Domain	Competencies
<p><b>1. Professionalism</b></p> <p>On graduation a dental specialist will have the knowledge and skills to demonstrate autonomy, expert judgement, adaptability and responsibility as a practitioner and show leadership in the dental profession.</p>	<p><b>Generic</b></p> <p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <ol style="list-style-type: none"> <li>a. recognising the personal limitations and scope of the specialty and knowing when to refer or seek advice appropriately</li> <li>b. practising with personal and professional integrity, honesty and trustworthiness</li> <li>c. providing patient-centred care, including selecting and prioritising treatment options that are compassionate and respectful of patients' best interests, dignity and choices and which seek to improve community oral health</li> <li>d. understanding and applying the moral, cultural, ethical principles and legal responsibilities involved in the provision of specialist dental care to individual patients, to communities and populations</li> <li>e. displaying appropriate professional behaviour and communication towards all members of the dental team and referring health practitioner/s</li> <li>f. understanding and applying legislation including that related to record-keeping</li> <li>g. demonstrating specialist professional growth and development through research and learning</li> <li>h. supporting the professional development and education for all members of the dental and/or health community, and</li> <li>i. demonstrating leadership in the profession.</li> </ol>
<p><b>2. Communication and social skills</b></p> <p>On graduation a dental specialist will be able to interpret and transmit knowledge, skills and ideas to dental and non-dental audiences.</p>	<p><b>Generic</b></p> <p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <ol style="list-style-type: none"> <li>a. identifying and understanding a patient's, or their parent's, guardian's or carer's expectations, desires and attitudes when planning and delivering specialist treatment</li> <li>b. communicating effectively with patients, their families, relatives and carers in a manner that takes into account factors such as their age, intellectual development, social and cultural background</li> <li>c. use of technological and telecommunication aids in planning and delivering specialist treatment</li> <li>d. communicating effectively in all forms of health and legal reporting, and</li> <li>e. interpreting and communicating knowledge, skills and ideas.</li> </ol>

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Domain	Competencies
<p><b>3. Critical thinking</b></p> <p>On graduation a dental specialist will have the expert, specialised cognitive and technical skills in a body of knowledge or practice to independently analyse critically, reflect on and synthesise complex information, problems, concepts and theories and research and apply established theories to a body of knowledge or practice.</p>	<p><b>Generic</b></p> <p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <ol style="list-style-type: none"> <li>critically evaluating scientific research and literature, products and techniques to inform evidence-based specialist practice, and</li> <li>synthesising complex information, problems, concepts and theories.</li> </ol>
<p><b>4. Scientific and clinical knowledge</b></p> <p>On graduation a dental specialist will have a body of knowledge that includes the extended understanding of recent developments in a discipline and its professional practice, as well as knowledge of research principles and methods applicable to the specialty and its professional practice.</p>	<p><b>Generic</b></p> <p>A graduate specialist is expected to be competent in the following areas of knowledge, as relevant to the specialty:</p> <ol style="list-style-type: none"> <li>historical and contemporary literature</li> <li>the scientific basis of dentistry including the relevant biological, medical and psychosocial sciences</li> <li>development, anatomy, physiology and pathology of hard and soft tissues of the head and neck</li> <li>the range of investigative, technical and clinical procedures, and</li> <li>management and treatment planning with multidisciplinary engagement for complex cases, including compromised patients.</li> </ol> <p><b>Specific</b></p> <p>A graduate specialist is expected to be competent in the following areas of knowledge, as relevant to the specialty:</p> <ol style="list-style-type: none"> <li>anatomy and pathology of the dento-maxillofacial region</li> <li>radiation physics associated with the production and safe use of ionizing radiation including biological effects</li> <li>diagnostic imaging techniques and procedures including indications and limitations of available imaging modalities</li> <li>interpretation of radiological studies of the dento-maxillofacial region, and</li> <li>the principles and application of pharmacology.</li> </ol>

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Domain	Competencies
<p><b>5. Patient care</b></p> <p>On graduation a dental specialist will, with a high level of personal autonomy and accountability, be able to apply highly specialised knowledge and skills within a discipline or professional practice. This includes clinical information gathering, diagnosis and management planning, clinical treatment and evaluation.</p>	<p><b>Generic</b></p> <p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <ol style="list-style-type: none"><li>applying decision-making, clinical reasoning and judgement to develop a comprehensive diagnosis and treatment plan by interpreting and correlating findings from the history, clinical examinations, imaging and other diagnostic tests</li><li>managing complex cases, including compromised patients with multidisciplinary management, and</li><li>managing complications.</li></ol> <p><b>Specific</b></p> <p>A graduate specialist is expected to be competent in the following, as relevant to the specialty:</p> <ol style="list-style-type: none"><li>undertaking diagnostic imaging procedures</li><li>interpreting diagnostic imaging procedures, and</li><li>writing reports.</li></ol>