

General Dental Council

Education Quality Assurance Report Standards for Specialty Education

Examination Provider	Specialty Examination
Royal College of Radiologists	Diploma in Dental and Maxillofacial Radiology (DDMFR)

Outcome of Specialty Examination self-assessment against the Standards for Specialty Education.	Two GDC actions have been identified for the examination provider
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Full details of the process can be found in the annex

Summary

Remit and purpose	To quality assure the Diploma in Dental and Maxillofacial Radiology (DDMFR) examination delivered by the Royal College of Radiologists.
Standards for Specialty Education	E1-E8
Date of submission	May/June 2022
Date of inspection	21 October 2022
GDC Staff	Marlene Ledgister (Education Quality Assurance Officer) Martin McElvanna (Education Quality Assurance Officer) Gail Fleming (Head of Education)
Education associates	Kevin Seymour Tom Thayer

This report sets out the GDC analysis of the self-assessment and evidence submission by the Royal College of Radiologists (hereafter referred to as “the College” or “RCR”) against the *Standards for Specialty Education*.

The report is published against a background of ongoing GDC policy development for the quality assurance of specialty training and next steps for the College following this submission.

The College alone delivers and manages the specialty diploma examination leading to the award of a Diploma in Dental and Maxillofacial Radiology (DDMFR). Candidates who pass this examination following the approved programme of specialty training can enter the GDC’s Specialist List in Dental and Maxillofacial Radiology.

Of the eight Requirements under the Standards for Specialty Training, the GDC considers that the submission from RCR demonstrates:

	No. of Requirements	Requirements
Met	6	E1, E2, E4, E5, E6 and E8
Partly Met	1	E3
Not Met	1	E7

Requirements that were considered to be Partly Met and Not Met have resulted in two actions which RCR must address by the end of Q2 of 2023 or demonstrate progress against these Requirements.

Outcome of relevant Requirements¹

Standard One	
E1	Met
E2	Met
E3	Partly Met
Standard Two	
E4	Met
E5	Met
E6	Met
E7	Not Met
E8	Met

STANDARD 1 – QUALITY EVALUATION AND REVIEW OF THE EXAMINATION: The provider must have in place effective policy and procedures for the monitoring and review of the examination leading to the award of a membership qualification.

E1: Examination providers must have a quality framework in place that details how the quality of the examination is managed. This will include ensuring necessary development to programmes that maps across to the GDC approved curriculum/latest learning outcomes for the relevant specialty and adapts to changing legislation and external guidance. There must be a clear statement about where responsibility lies for this quality function. (Requirement Met)

The College explained it manages the summative exams; Fellowship of the Royal College of Radiology (FRCR) Part 1 exam and the DDMFR exam. The DDMFR exam is a compulsory component for attaining a Certificate of Completion of Specialty Training (CCST) following completion of an approved UK training programme.

Evidence submitted and assessed by the panel confirmed that the FRCR Part 1 and DDMFR examinations are managed by the DDMFR Examination Board. This Board in turn reports to the RCR's Specialty Training Board (STB).

In the narrative provided, the College explained that the DDMFR Examination Board is responsible for the two exam parts overall. This includes ensuring that the exams cover the relevant scope of the curriculum and current practice, identifying potential improvements and making recommendations within the wider RCR governance structure for changes to the format and structure of DDMFR exams.

Minutes of the previous DDMFR Examination Board were presented which evidenced a comprehensive review of all aspects of the process including:

- Examination developments
- Delivery, standard setting, and feedback
- Question bank update

In addition, the College presented evidence demonstrating that exam boards are thorough and encourage robust discussion. A DDMFR action sheet was included in the documentation, referring to one identified action. However, there was no update or clear measurement of progress included.

RCR's STB is responsible for all aspects of specialty training, including matters of recruitment, setting the specialty training curriculum and oversight of the assessment system, as well as quality assurance of training and providing support to trainers and trainees.

Purpose Statements for both parts of the DDMFR are available on RCR's website, and these help exam candidates and trainers to understand the purpose and scope of each exam. Clarity about the purpose of the exam, the level of training of candidates and the application of results is an important mechanism that justifies the choice of assessment, test format and spread of the assessment sample.

The College explained that examiners set, review, and mark DDMFR exams supported by office staff responsible for the candidate journey, and associated administrative processes, including awarding of results. Information presented by the College outlined the higher-level governance roles and responsibilities. The Chair sets part A of the examination and also chairs the examination board.

The role of the STB is one of decision-making rather than advisory. The examination board can make recommendations for changes, but only the STB are able to approve.

Exam questions are shared on dedicated DDMFR Teams site for validation of the question bank for written papers and acceptance of new questions by examiners. A demonstration of the Practique database was given showing how the system generates exam questions and associated images. 'Practique' is used as the platform for the Anatomy Image Viewing (DDMFR Part A) and Rapid and Long Case Reporting (Part B DDMFR) components of the exams. Images and questions for the Anatomy Image Viewing and Rapid and Long Case Reporting are viewed and accepted for uploading to Practique. Practique allows for online delivery of the exam and blueprinting of images/question to the curriculum. RCR explained that the next stage of Practique will be making more use of the bank function.

A detailed exam-setting flow diagram was submitted which included clear reference to blueprinting.

RCR explained that there are checks in place within the wider committee in terms of examination content, but considered that the process could be reviewed, especially the first stage and involve more expertise at that point.

Candidate feedback is collected through a range of sources to support quality improvement including incident forms, formal complaints and appeals and through the Chair of the DDMFR Examinations Board. There is also a Specialist Registrar representative on the SAC for the Additional Dental Specialties.

Regarding feedback, there are on average 2-3 candidates per examination. RCR stated that as a development in customer service, there is an intention to collect feedback from trainees regarding their examination experience to support improvements and support the quality framework.

The panel considered that the Requirement is Met.

E2: Any concerns identified through the operation of this quality framework, including internal and external reports relating to quality, must be addressed as soon as possible. (Requirement Met)

The panel reviewed documentation evidencing that the mechanism for raising concerns appears to be primarily through the Examination Board. The College provided examples of this during the inspection, such as feedback from trainees regarding returning to face-to-face exams.

The Appeals Procedure for FRCR Examinations document outlines the process for reviewing candidates' results in the event of a challenge against results. RCR have stated that there have been no complaints received in the last five years.

The RCR have stated that an Examiner Code of Conduct is in the process of being developed, which will support examiners in reporting concerns about other Board members in the future.

FRCR exams have remained online. RCR explained that they seek feedback from trainees by emailing the candidates directly regarding online or on-site conduct of exams.

Feedback obtained from trainees includes surveys, internal data from the audit team, and annual membership surveys. Concerns can also be raised this way.

As identified in Requirement E1, RCR explained that a more central process for collecting feedback is under development. A new CRM system has been installed, and there are plans to develop ways to obtain feedback from trainees using CRM as a much more routine exercise in 2023.

The panel considered that this Requirement is Met.

E3: Quality Frameworks must be subject to rigorous internal and external quality management procedures. External assessors must be utilised and must be familiar with GDC approved curriculum/latest learning outcomes and their context. (Requirement Partly Met)

Overall, review and identification of improvements and recommendations is undertaken by the internal DDMFR Examination Board. The Part A exams are set by the Chair, who also chairs the exam board. An internal assessor provides feedback for each question however, there is no formal external scrutiny of the exams, in particular from an education viewpoint. For example, consistent agreement, standard setting, and banking of cases needs to be in place. The DDMFR exam has followed the same process as for the FRCR with no external input. The College are encouraged to review this and are keen to view job descriptions and person specifications for external examiners to support to develop this.

Overall, the absence of the external oversight and feedback which would support a more robust quality management system did not assure the panel of how issues would be identified and recorded, or how these were addressed or managed.

RCR state that examiners involved in training of trainees for particular diets of exams are not involved in their assessment. External quality management is further detailed in Requirement E7.

The panel considered that the Requirement is Partly Met.

STANDARD E2 – SPECIALTY TRAINEE ASSESSMENT. Assessment must be reliable and valid. The choice of assessment method must be appropriate to demonstrate achievement of the GDC learning outcomes. Assessors must be fit to perform the assessment task.

E4: Examination providers must demonstrate that assessments are fit for purpose and deliver results which are valid and reliable. Where appropriate, assessment conclusions should include more than one sample of performance. (Requirement Met)

As explained at E1, the panel had access to Purpose of Assessment statements which had been submitted. These gave details of the wide range of assessment methods for each part of the exams.

Responsibility for ensuring that the DDMFR examination provides an appropriate assessment of the knowledge, skills and some of the required behaviours lies with the DDMFR Examination Board who meet at least once a year. A record of any improvements and updates to exams is maintained.

The DDMFR exam had been revised in 2020 to ensure that it is fit for purpose, with the DDMFR Part B specifically assessing different aspects of skills considered necessary for safe and effective radiological practice.

RCR explained that as there are typically only 2-3 candidates for each sitting of the DDMFR exam statistical analysis is not reliable, however, a set of procedures are routinely applied. These were described as blue printing to ensure that the scope of the specialty specific aspect of the curriculum is assessed using a wide range of assessment methods and using multiple and pairs of examiners to assess candidates, with cross over for specific assessments.

Information presented by RCR also demonstrated how examiners discuss and review results and performance at granular, individual and candidate level. Cronbach's alpha is used to demonstrate exam reliability along with other methods to reduce examiner variability including

training, standard setting, and calibration meetings. Post hoc review of items allows for removal/amendment of exam questions. Questions are reviewed by different examiners to identify errors and ambiguity, and assessment types are tried and tested. Evidence submitted also included examples of student achievement in the form of redacted student notification letters.

The RCR Standard Setting Guidance for Examiners document submitted demonstrated the use of the Angoff method to criterion reference each question item. Evidence was also submitted detailing pre-and post-standard setting meeting data with the concluding pass mark identified. Double blind marking is used throughout.

The panel noted that the attempts made to enhance reliability are stringent and present some good practice. The cohorts are very small, and as such it is difficult to use meaningful statistics to demonstrate the effectiveness and reliability of the assessment. It has been identified that a psychometrician has been appointed to support with this, however, this does not in itself enhance reliability.

The RCR has have recently introduced and approved a new exam format for DDMFR which fits with the assessment blueprint. The Chair of the Exam Board also has a role on the Curriculum Review Working group.

The panel considered that this Requirement is Met.

E5: Assessment must involve a range of methods appropriate to the learning outcomes and these should be in line with current and best practice and be routinely developed, refined, monitored and quality managed. (Requirement Met)

The Purpose of Examination Statements submitted by RCR are clearly stated and available externally via RCR website and through the curriculum documentation.

Due to the nature of the specialty, most of the assessment is digital in nature, and the panel noted that the platform demonstrated on RCR website works well and is highly appropriate to the needs of the assessment. Other aspects of assessment are also appropriate in format, although it was identified that some are weak in their ability to determine higher order thinking.

DDMFR Part A contains an anatomy section which is very appropriate, and the rationale for this is well described. However, the panel felt that the format for this is very simplistic, relying on basic recall.

There were assessment components that related to daily activity as a specialist, in the form of a rapid reporting assessment, and an oral assessment that sought to replicate complex clinical discussions. The panel noted that this is excellent practice and highly relevant.

The assessment methods are regularly reviewed as part of DDMFR exam board meetings and any suggestions for development/improvement are taken to STB for further review and approval.

Although review of assessment has been indicated in documentation, there was no example presented as to how this is achieved and how the process is managed. During the inspection, RCR illustrated how blueprinting is carried out on their Practique system. However, the absence of a clear quality assurance process including external scrutiny, curriculum, and assessment review impact on the ability to fully meet the Requirement.

The panel considered that this Requirement is Met.

E6: Examiners must have appropriate skills, experience, and training to undertake the task of assessment, including, when necessary, registration with a regulatory body. (Requirement Met)

Documentation reviewed by the panel demonstrated a robust process for the recruitment, induction, and training of examiners. There are currently 14 examiners appointed to the DDMFR Exam Board, and their roles and responsibilities are set out in the job description. Formal training for examiners covers a broad range of relevant topics. Training is delivered either remotely via Teams or face-to-face.

An internal examiner job description was included in documentary evidence reviewed by the panel, which gave a comprehensive insight into the requirements for an examiner. A record of examiners and their suitability was also included. A welcome pack is issued to all new examiners.

Documentation submitted indicated that training for new examiners consists of formal training sessions including:

- Assessment-focussed equality and diversity session covering conscious and unconscious bias
- Human skills for successful face-to-face examining
- General introductory information about the RCR and relevant examiner policies
- Psychometric training session – e.g., guidance on question performance
- Training on how to mark via delivery software.

Additional training includes:

- Exam content session with the Chair.
- Observation with examiner peers before commencing active examining with candidates
- Observation of standard setting process and guided session

The RCR stated that due to the small size of the specialty, examiners are selected for each sitting of the exam to avoid candidates being examined by an examiner who has had a significant input into their training.

The panel considered that the Requirement is Met.

E7: Examination providers must document external examiners' reports on the extent to which examination processes are rigorous, set at the correct standard, ensure equity of treatment for specialty trainees and have been fairly conducted. (Requirement Not Met)

The RCR explain the internal process in place relating to standard setting activity for the exams. Standard setting is carried out using a modified Angoff method for the FRCR Part A anatomy module image viewing paper and the Part B Rapid Reporting component.

Marking criteria are drafted for the remaining criteria by nominated examiners prior to each sitting in conjunction with details of the marking scheme, scoring system and guidance notes. Grade descriptors have been developed for use in oral exams. Review of each sitting of the DDMFR is undertaken at each exam board, and any concerns regarding the exam can be raised at the DDMFR Exam Board or through the Chair of the exam board.

There was evidence of some feedback from internal examiners recorded following DDMFR Part A examination.

however, RCR confirmed that they do not involve external assessors to offer impartial and independent oversight to the exams.

Following induction, including the learning outcomes in the GDC DDMFR curriculum, the external assessor would typically be tasked with the following:

- attendance at the DDMFR Part A and Part B examinations
- observation of:
 - the appropriateness of the standards of the examinations
 - the rigour of the examination process
 - equity of treatment of students and their performance
 - any good practice identified
- recommended improvements to be made
- production of a report to be considered by the Examination Board.

The panel recommended that the College must consider the use of an external assessor.

In the absence of the required evidence, the panel considered that this Requirement was Not Met.

E8: Assessment must be fair and undertaken against clear criteria. The standard expected of specialty trainees in each area to be assessed must be clear and trainees and staff involved in assessment must be aware of this standard. A recognised and justified standard setting process must be employed for summative assessments. (Requirement Met)

In documentation submitted, there was clear evidence of a standard setting process, with a clear statement relating to the minimally competent candidate. The RCR Standard Setting Guidance for Examiners document submitted demonstrated the use of the Angoff method to criterion reference each question item. Example of marking was presented in the Marking the DDMR Anatomy Exam document, which gave instructions and guidance for first and second markers and group marking.

The RCR documentation stated that, where possible, a different group of examiners is used for each round of standard setting, although, as the board is made up of a relatively small number of examiners, there is some overlap and some groups will standard set more than one set at the same time. There was also significant discussion in the documentation regarding mapping the exam to higher level outcomes in the new curriculum, and the effectiveness of assessment to achieve this. The panel were told that candidate's views regarding the assessments are collected via survey, and as stated earlier this is being further developed.

Evidence demonstrated that all examiners receive induction training which includes managing bias. Comprehensive information about the RCR approach to equality, diversity inclusion is accessible and clear on the RCR website. The panel considered the Requirement to be Met.

Summary of Action for the Royal College of Radiologists

Req. number	Action	Observations & response from the Royal College of Radiologists RCR	Due date
E2	RCR must implement a mechanism for collection and use of trainee feedback to identify quality issues and ensure these are addressed in the quality framework.	As is outlined in the requirement E2 section of the Inspection Report the RCR has plans to improve gathering and processing of candidate feedback.	Q2 2023
E7	RCR must ensure there is external scrutiny of the whole examination and consider the appointment of an external assessor for involvement in Part A and Part B of the DDMFR examination.	The RCR accepts the findings of the Inspection Report in relation to external oversight of the DDMFR assessment process and will work towards addressing this.	

Observations from The Royal College of Radiologists on the content of the report

The RCR would like to thank the GDC for the Education Quality Assurance Report for the DDMFR Examination and for highlighting areas of good practice. During the inspection the dialogue between the inspection panel and the RCR representatives was very positive and the resulting report will help the RCR to continue to maintain and improve the quality of the DDMFR assessment.

Annex 1: Education Quality assurance process and purpose of activity

1. As part of its duty to protect patients and promote high standards within the professions it regulates, the General Dental Council's (GDC) Strategic Review of Education (2008) recommended that the Council should actively quality assure all training and awards which lead to entry to all GDC registers and listings (Dentist, Dental Care Professionals (DCP) and Specialist).
2. The aim of this quality assurance activity is to ensure that dentist registrants, at the point of inclusion upon one of the GDC's specialist lists, have demonstrated, on completion of their training, that they have met the outcomes required for specialist listing on the dentists register with the GDC. This will underpin and add value to the GDC's responsibility in issuing a Certificate of Completion of Specialist Training (CCST) as part of the listing process.
3. Consideration and development of our quality assurance processes therefore apply to training programmes in all 13 current specialties. Whilst our statutory responsibilities (see section 17 below) focus on orthodontics and oral surgery we do not currently possess an evidence base, drawing upon public protection arguments to differentiate between the specialties in quality assurance activity.

Specialty training

4. The primary route by which specialists join the Specialist lists, and the route upon which the GDC focusses its quality assurance activity, is successful completion of a national training programme in the individual UK specialties, where training is based upon a GDC-approved curriculum², overseen by the regional training commissioners, and where the trainee also passes the relevant Royal College examination.
5. Following these successes, the trainee is recommended for entry to the GDC Specialist Lists by award of a Certificate of Completion of Specialist Training (CCST). The regional training commissioner recommends the award and the GDC awards the CCST.
6. Training in the dental specialties under the route described above is, typically, a three-year full-time hospital-based programme. This can involve trainees receiving training in a variety of hospital settings and other clinical environments. This form of delivery, together with the provision of exit examinations by a further provider has required changes to the GDC's model of pre-registration QA inspection which is typically based on a single training centre under the auspices of a university or other educational body.

The GDC's powers

7. The GDC's powers in relation to specialist education and training differ from its powers for pre-registration training:
8. The Dentist Act 1984 (the Act) restricts our ability to require training providers to provide information to those with Dental Authority (DA) Status. Of postgraduate providers, the Royal Colleges possess dental authority status as do universities undertaking postgraduate or specialist dental training. We can request information

from other postgraduate training providers such as regional training commissioners who do not hold such status in connection with section 1(2)(a) of the Act.

9. We have powers under Section 9 of the Act to appoint visitors to inspect programmes and examinations of both undergraduate and postgraduate/specialist programmes. However, the concept of “sufficiency” applies only to DAs and there is no formal mechanism to approve or withdraw approval from postgraduate/specialist training commissioners who do not possess such status.
10. The Specialist List Regulations provide us with powers to determine who is eligible to join the lists.
11. The GDC is, in relation to specialist dental qualifications in orthodontics and oral surgery, the competent authority in the United Kingdom for the purposes of the Recognition Directive and the Dental Training Directive. The Council has a statutory duty to supervise training in these two specialties.
12. We have taken legal advice and have established that our statutory duty to supervise training in orthodontics and oral surgery can support quality assurance activity across the 13 specialties.

Annex 2: The EQA Process

13. The quality assurance activity focuses on two Standards for examination providers, with a total of 8 underlying requirements. These are contained in the document *Standards for Specialty Education* (current iteration published 2019 and available [here](#)).

General Principles

14. Our historic consultation and stakeholder engagement on the Standards signalled the GDC’s expectations in relation to specialty education. Publishing the first iteration of Standards for Specialty Education in 2015 was seen to send a clear message to the sector about the quality the GDC expects in order to protect patients and the public.
15. In addition to publishing the GDC standards, we recognised that the UK Committee of Postgraduate Dental Deans and Directors (COPDEND) already publishes a quality management tool in the form of *The Gold Guide*. We also recognised that specialty trainees are in the main already GDC registrants; and that we needed to be sensitive to the fact that specialty training (where it takes place in NHS Trusts and roles) operates in an already highly regulated environment.
16. We have been mindful that that our regulatory approach, both in its piloting and in its current operational introduction, must not introduce disproportionate or unnecessary burdens on providers.
17. The second iteration of Standards for Dental Education, referenced above, maintains this proportionate approach whilst also containing two major developments:
 - a. Separating the Standards so there are discrete requirements for training commissioners and examination providers.
 - b. Introducing an overarching requirement to provide evidence (of the examination provider’s choosing) to support their self-assessment.

Collection of evidence

18. Therefore, the process remains based upon moderated self-assessment and includes:

- a. a self-assessment questionnaire giving examination providers the opportunity to indicate their performance in the context of the Standards and Requirements.
- b. the requirement to provide illustrative and supporting evidence to support the contents of the completed self-assessment questionnaire.

19. The following descriptors are employed as a means of reference for establishing an examination provider's compliance with the individual requirements.

A Requirement is **Met** if:

There is sufficient appropriate evidence derived from the pilot process. This evidence provides the GDC with broad confidence that the examination provider demonstrates compliance with the requirement. The provider's narrative and documentary evidence are robust, consistent, and not contradictory. There may be minor deficiencies in the evidence supplied but these are likely to be inconsequential."

A Requirement is **Partly Met** if:

Evidence derived from the pilot process is either incomplete or lacks detail and, as such, fails to convince the GDC that the examination provider fully demonstrates compliance with the requirement. There may be contradictory information in the evidence provided.

There is, however, some evidence of compliance and it is likely that either (a) the appropriate evidence can be supplied in a short time frame, or (b) any deficiencies identified can be addressed and evidenced in follow-up processes.

A Requirement is **Not Met** if:

The examination provider cannot provide evidence to demonstrate compliance with a requirement or the narrative and evidence provided are not convincing.

The evidence is inconsistent and/or incompatible with other findings. The deficiencies identified are such as to give rise to concern and will require an action plan from the examination provider.

Other:

Use of this descriptor is exceptional and will usually be applied if the examination provider's narrative and evidence would be considered **Partly Met** but it appears to the GDC that evidence and/or indications across the breadth of the submission mean that during the observations period of the QA process this requirement can be **Met**.

20. The significance of not demonstrating compliance with a requirement will depend upon the compliance of the examination provider across the range of requirements and any possible implications for public protection.

21. Outcomes from the pilot specialty EQA exercise typically fell into two categories of follow-up action:

- a. Where requirements were not fully met, the need for follow-up action (either submission of further evidence or clarification of self-assessment) that could normally be addressed by ongoing specialty monitoring.
- b. Joint action between the examination provider and the GDC to capture good practice (where requirements were met) to further inform the evidence prompts within the Standards and so to provide additional guidance for future specialty EQA activity.