

**Dental Radiography Clinical Audit Instructions**

**1. Who is the audit for?**

This audit is suitable for practices or practitioners wishing to review the clinical quality of radiographic images.

**2. Criteria and Standards**

Current regulations for the use of ionising radiation for medical and dental purposes are the Ionising Radiations Regulations 2017 (IRR17) and the Ionising Radiation (Medical Exposure) Regulations 2017 (IRMER17). Guidance is provided in the publications:

* Public Health England (PHE) and Faculty of General Dental Practice (UK) (FGDP[UK]). *Guidance notes for dental practitioners on the safe use of x-ray equipment*. 2nd edition. London, UK: PHE and FGDP(UK); 2020.
* Faculty of General Dental Practice (UK) (FGDP[UK]). *Selection Criteria for Dental Radiography* 3rd edition (updated 2018). London, FGDP(UK); 2018.

FGDP and PHE guidance[[1]](#footnote-1) recommends the use of a two-point grading scale, with images to be recorded as “diagnostically acceptable” (“A”) or “diagnostically not acceptable” (“NA”). The aim of this audit is to measure the image quality of radiographs against the defined target of not less than 95% of digital images graded as “A” and 90% of wet film images as “A”.

In addition, GDC publication Standards for the Dental Team[[2]](#footnote-2) sets out the standards of conduct, performance and ethics that govern you as a dental professional.

**3. What are the possible outcomes of the audit?**

* Improved quality of diagnostic radiographs by greater compliance with current regulations and guidance
* Assisting practices to ensure consistently adequate diagnostic information, whilst radiation doses to patients are kept as low as reasonably possible[[3]](#footnote-3)
* Reduce the number of repeat radiographs
* Improved record keeping for patients where radiographs are taken
* Improved administration for patients where radiographs are taken
* To support the implementation of the overall quality assurance programme for dental radiology and the requirements for clinical audit and/or peer review

**4. How many records should be audited**

Patient records should be selected where radiographs have been taken within the last six months (records should relate to a time when the Performer was practising in a similar way to current practice). The 20 most recent radiographs for each Performer should be considered for inclusion as part of the audit, randomly selected to include bitewings and periapical radiographs. This could include 10 radiographs for Emergency patients and 10 radiographs for patients that have received routine treatment. If a radiograph has been repeated, the repeat radiograph should be reviewed separately as a new radiograph.

**5. How to use the audit**

5.1. Familiarise yourself with the guidelines in Section 2.

Gold standard is that 95% of digital radiographs (90% of wet films), are recorded as 'diagnostically acceptable' (Grade 'A')”.

5.2. For film images an appropriate light box and magnifier should be used for viewing, for digital images low ambient light is required.

5.3. Using the data capture spreadsheet, enter the date of audit, the name of the person undertaking the audit and their GDC number into the boxes provided in row 1. Then enter the name of the person for whom the audit is being undertaken, along with their Performer number into the boxes provided in row 2.

5.4. Enter the patients details on the spreadsheet, numbered 1 – 20 in the columns provided. For each patient, enter their date of birth, their initials, the date of acceptance and the date of completion for each course of treatment. Use the drop-down box to enter the reason for attendance (new patient, routine or emergency).

5.5. For each patient tab, complete the appropriate column using the drop-down options provided.

5.6. Compare the collected data with the gold standard and compliance with the guidelines in Section 2.

5.7. Identify and **list areas for improvement**. This may include some or all of the following:

* Improvement of radiographic image quality - formulation of an action plan e.g. checking equipment such as the condition of plates and sensors, use of positioners
* Recording of justification, grading and reporting in line with guidelines - formulation of an action plan
* Review of training needs
* The findings of the audit may highlight other areas where further audits could be of value, e.g. consider further audits to assess the quality of clinical evaluation reports or to investigate the under-prescription of radiographs.

5.8. Present and discuss the results of the audit with the individual Performer(s), consider the whole team at the practice and implement any appropriate changes.

Consider a repeat of the audit after six months to investigate improvements and verify that any changes have been satisfactorily implemented.

1. Public Health England (PHE) and Faculty of General Dental Practice (UK) (FGDP[UK]). *Guidance notes for dental practitioners on the safe use of x-ray equipment*. 2nd edition. pp91-92 London, UK: PHE and FGDP(UK); 2020. [↑](#footnote-ref-1)
2. Standards for The Dental Team: 2013, General Dental Council, [www.gdc-uk.org](http://www.gdc-uk.org) [↑](#footnote-ref-2)
3. Faculty of General Dental Practice (UK) (FGDP[UK]). *Selection Criteria for Dental Radiography* 3rd edition (updated 2018). pp82 London, FGDP(UK); 2018. [↑](#footnote-ref-3)