

Compliance to IR(ME)R guidelines for dental pantomogram reporting

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Abstract

Purpose: The aim of this audit was to improve clinician compliance to IR(ME)R 2017 guidance for radiograph reporting.

Method: A sample of 100 patients who had a dental pantomogram radiograph taken in the Oral & Maxillofacial Surgery department had their notes assessed for a radiograph justification, grading and report.

Results: The results of audit cycle 1 indicated a need for engagement from the clinicians to improve adherence to the IR(ME)R guidelines. The results were discussed at various departmental meetings and a poster was developed and strategically placed throughout the department as a reminder of elements required to be recorded in notes. Cycle 2 showed great improvements in compliance to IR(ME)R guidance. This will continue to be audited until 100% compliance is attained.

Conclusion: IR(ME)R guidelines are in place in order to protect patients and ensure there is no unnecessary radiation exposure and that all exposures are clearly documented and justified. The audit has shown improvements in clinicians compliance to radiograph justification, grading and reporting.

Highlights

- IRMER '17 requires x-ray reporting- in cycle 1, results showed 9% compliance.
- Following interventions, compliance to IRMER 2017 regulations improved by 65%.

Introduction

There are two sets of regulations in the UK governing the use of ionizing radiation.

The Ionising Radiations Regulations 2017 and The Ionising Radiation (Medical Exposure) Regulations 2017. The Care Quality Commission (CQC) in England requires that clinicians abide by these.

IR(ME)R states the necessity of a clinical evaluation of each medical exposure is to be recorded. This must include information regarding the resulting diagnostic findings or therapeutic implications. In the absence of a report, the exposure would not be justified and unlawful [1].

The Faculty of General Dental Practice produced guidance for record keeping. This paper reinforces the legal requirement for reporting a radiograph and outlines the contents of an ideal report. A report should include a grade for the quality of the radiograph taken. This is for quality assurance and data contributes to a national audit of dental radiographic quality. Other details to be included are the date of the exposure, justification and any repeat radiographs taken, where a grade three radiograph was deemed undiagnostic. Finally, the outcome of the exposure should also be stated in the report to aid diagnosis [2].

Dental Pantomograms are routinely taken to assess developing dentition, maxillary/mandibular alveolar bone loss and peri-apical pathology. They are used both in Hospital and in the primary dental care setting. Dental Pantomograms are particularly used in Orthodontics and Oral/ Oral & Maxillofacial Surgery [3].

Aims and objectives

It was highlighted that within the Oral & Maxillofacial department, there was inconsistency and occasional absence of radiographic reporting in the notes. This highlighted a lack of adherence to current guidelines and prompted the need for an audit. The focus of the audit was Dental Pantomograms taken in the Oral & Maxillofacial Surgery department.

Aim: A retrospective audit was conducted to review the quality of clinicians' reporting of Dental Pantomograms.

Objectives: The objective of this audit was to ensure our department practice of radiograph reporting fell within the principles of good practice set by IR (ME)R 2017 regulations.

Method

A retrospective audit was conducted to review the quality and presence of radiographic reporting in patient notes. A sample of one hundred patient notes was selected and the first audit cycle of data collection began in June 2018. The inclusion criteria was all Oral & Maxillofacial Surgery patients who had a Dental Pantomogram taken. The sample of patients was identified by the use of code 'XOPTBO' in the PACS Radiograph software. A list of patients who were exposed to Dental Pantomograms was generated, along with the date of exposure and referring consultant.

The patient notes were obtained and assessed for a radiograph justification, grading and report. This data was inputted into an excel spreadsheet to be analysed for compliance with IR(ME)R 2017 guidelines.

Results of audit cycle 1

Radiographs are requested by a clinician depending on clinical requirement and this is then taken by a general radiographer in the radiography department. Following this, the radiograph is reported on by the clinician and used in diagnosis and treatment planning.

A sample of 100 patient records was assessed and it was found that only 9% of notes included all 3 elements expected of a radiographic report: justification, grading and a report of findings. 18% notes had none of these elements recorded.

The graph in figure 1 shows that only 12% notes had a radiograph justification recorded. A justification is required on the radiograph request form however, this slip is not scanned into patient notes. As this is not present in the notes, a justification written directly

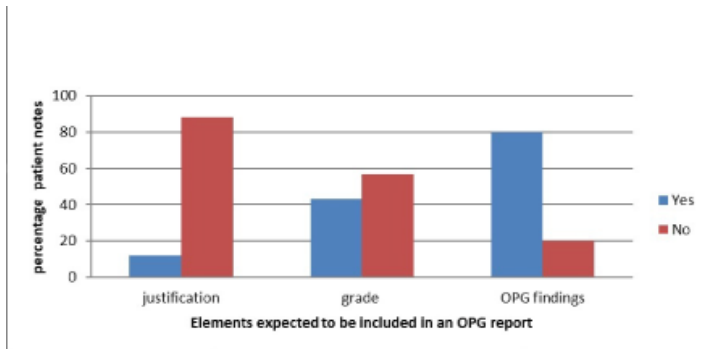


Figure 1. The number of patient notes with a radiographic report that included elements expected as per IR(ME)R Guidelines. The key elements to be included were a radiograph justification, quality grading and radiograph findings.

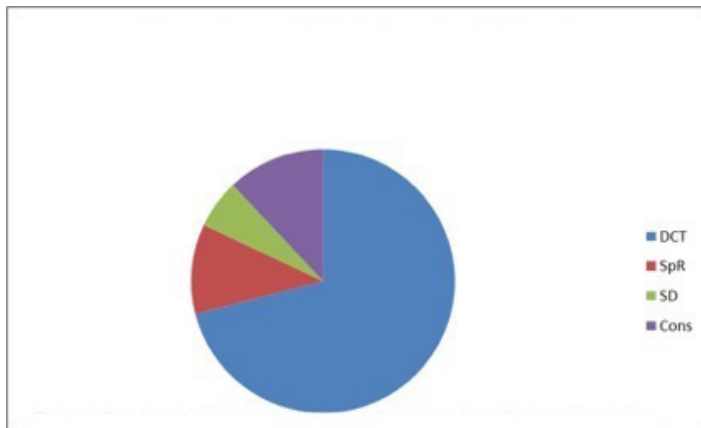


Figure 2. Figure showing percentage of Orthopantomograms- OPGs, otherwise known as Dental Pantomograms, taken by different clinicians in the Oral and Maxillofacial Department. The various dental grades include Dental Core trainees (DCT), Specialty Registrars (SpR), Specialist Dentist (SD) and Consultants (Cons).

in the notes is required. Radiographs also require grading in order to assess diagnostic quality and this was only documented in 43% of the notes.

80% patient notes included a radiographic report of findings however, the depth of discussion varied greatly. It is not adequate to only discuss findings related to the tooth of interest as other findings/ pathologies should also be noted.

The pie chart in figure 2 shows that 71% radiographs are requested by Dental Core Trainees. This reflects the distribution of clinicians seeing patients in consultant clinics and where the focus on reinforcing radiographic reporting requirements should be.

Suggested improvements

Given the low level of compliance to IR(ME)R 2017 guidelines for radiograph reporting, improvements in clinical practice were required. The results of cycle 1 were discussed at the Departmental Clinical Governance meeting as well as the monthly audit meeting. The omissions in radiograph record keeping were highlighted and discussed.

Figure 3 shows the posters which were created and strategically placed in each clinical room as a reminder to clinicians, of elements required to be recorded in notes.

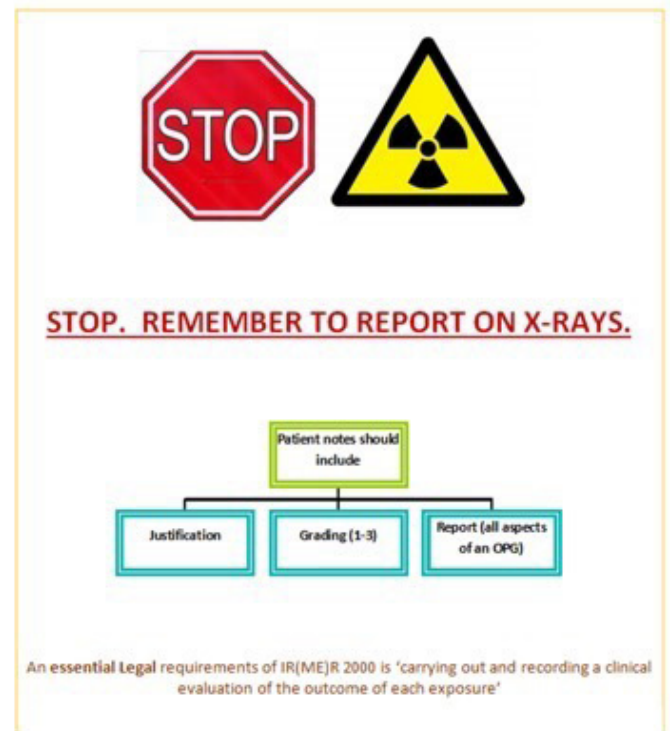


Figure 3. Poster to highlight the key elements of radiographic reporting. This was presented to the Oral and Maxillofacial Surgery Department following analysis of cycle 1 data. The poster was then placed in all surgeries for reinforcement of the key message.

Discussion

As a result of this audit and intervention, clinicians within the Oral & Maxillofacial Surgery department at King's College Hospital have shown increased compliance to IR(ME)R 2017 guidelines for radiograph reporting. The compliance is yet to reach 100% whereby clinicians are documenting adequate radiographic reports in patient notes for every radiograph taken.

Radiographic reporting will continue to be re-audited within the department until 100% compliance is reached.

The data showed that most of the radiographs are requested by Dental Core Trainees. There is a high staff turnover of this position due to the fact that it is a training post. Therefore, it is imperative to highlight the reporting requirements at the Dental Core Trainee induction day.

In conclusion, it is important for clinicians to adhere to national guidelines and meet the gold standard of practice for radiograph reporting. IR(ME)R guidelines have evolved over time however, they consistently mention the need for adequate radiograph reporting. Our department has improved in compliance to IR(ME)R 2017 guidance as a result of this audit and interventions and will continue in order to strive for 100% compliance.

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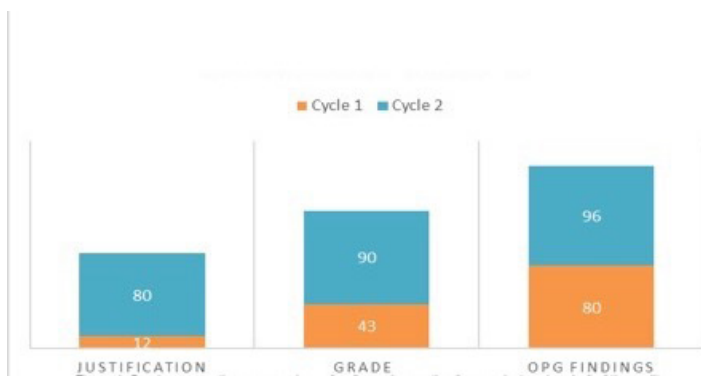


Figure 4. Figure comparing the radiographic reporting quality from cycle one and cycle two of the audit. The key elements of a report to be included as per IR(ME)R guidelines include a radiograph justification, radiograph quality grading and radiographic findings.

Results of audit cycle 2

Following the departmental meetings, suggested improvements in clinical practice and implementation of poster reminders, the second cycle of the audit was carried out. The results showed a great improvement in compliance to IR(ME)R 2017 guidance for radiograph reporting. Figure 4 shows that 74% patient notes demonstrated a complete radiograph report with all three elements included (justification, grading and report of findings). 80% of notes included a justification, 90% of notes included a quality grade for the radiograph and 96% notes included radiograph findings in the report.

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