



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

Health Information and Quality Authority

Report of the assessment of compliance with medical exposure to ionising radiation regulations

Name of Medical Radiological Installation:	Campbells Dentists Service
Undertaking Name:	Joseph Hanley
Address of Ionising Radiation Installation:	25 St Patricks Terrace, Castlemaine Street, Athlone, Westmeath
Type of inspection:	Announced
Date of inspection:	23 November 2022
Medical Radiological Installation Service ID:	OSV-0006810
Fieldwork ID:	MON-0037798

About the medical radiological installation:

Campbells Dentists Service is a general dental practice located in Athlone, Co. Westmeath. The practice has two surgeries both of which have dental X-ray equipment. The practice only carries out intra-oral radiography, which includes bitewing and periapical radiographs (X-rays).

How we inspect

This inspection was carried out to assess compliance with the European Union (Basic Safety Standards for Protection against Dangers Arising from Medical Exposure to Ionising Radiation) Regulations 2018 and 2019. The regulations set the minimum standards for the protection of service users exposed to ionising radiation for clinical or research purposes. These regulations must be met by each undertaking carrying out such practices. To prepare for this inspection, the inspector¹ reviewed all information about this medical radiological installation². This includes any previous inspection findings, information submitted by the undertaking, undertaking representative or designated manager to HIQA³ and any unsolicited information since the last inspection.

As part of our inspection, where possible, we:

- talk with staff to find out how they plan, deliver and monitor the services that are provided to service users
- speak with service users⁴ to find out their experience of the service
- observe practice to see if it reflects what people tell us
- review documents to see if appropriate records are kept and that they reflect practice and what people tell us.

About the inspection report

In order to summarise our inspection findings and to describe how well a service is doing, we describe the overall effectiveness of an undertaking in ensuring the quality and safe conduct of medical exposures. It examines how the undertaking provides the technical systems and processes so service users only undergo medical exposures to ionising radiation where the potential benefits outweigh any potential

¹ Inspector refers to an Authorised Person appointed by HIQA under Regulation 24 of S.I. No. 256 of 2018 for the purpose of ensuring compliance with the regulations.

² A medical radiological installation means a facility where medical radiological procedures are performed.

³ HIQA refers to the Health Information and Quality Authority as defined in Section 2 of S.I. No. 256 of 2018.

⁴ Service users include patients, asymptomatic individuals, carers and comforters and volunteers in medical or biomedical research.

risks and such exposures are kept as low as reasonably possible in order to meet the objectives of the medical exposure.

A full list of all regulations and the dimension they are reported under can be seen in Appendix 1.

This inspection was carried out during the following times:

Date	Times of Inspection	Inspector	Role
Wednesday 23 November 2022	12:00hrs to 13:15hrs	Kirsten O'Brien	Lead

Summary of findings

An inspection of Campbells Dentists Service was carried out on the 23 November 2022 to assess compliance against the regulations. As part of the inspection the inspector visited the dental practice and spoke with the undertaking, in addition to reviewing documentation and a sample of records of dental radiological procedures.

On the day of inspection, the undertaking, Joseph Hanley, clearly described the allocation of responsibility for the radiation protection of service users at Campbells Dentists Service. Records of dental radiological procedures were also reviewed by the inspector on-site. All dental radiological procedures were conducted under the clinical responsibility of a dentist, registered with the dental council, as per the regulations. A recognised medical physics expert (MPE) was appropriately involved and provided medical physics expertise as required by the regulations at the dental practice. The MPE and the practitioner were also involved in the optimisation process for all dental exposures.

The inspector found that audits for image quality had been carried out at the practice and the practitioner and the MPE had reviewed the exposure parameters for dental exposures. Following this audit, dental radiological procedures were further optimised and this was noted as an example of good practice in ensuring that all exposures are performed in line with the ALARA (as low as reasonable achievable) principle of radiation protection.

Written protocols were available for each type of standard dental procedure carried out at the practice. Furthermore, information relating to the exposure was included in patients' reports. Diagnostic reference levels (DRLs) had also been established and compared with the national DRLs. In addition, the inspector found that a quality assurance programme had been implemented and maintained at the practice. Preventative maintenance and servicing of dental radiological equipment had been carried out at the practice as well as regular quality assurance testing by an MPE.

Overall, there was a high level of compliance at Campbells Dentists Service which provides assurance regarding the safe delivery of dental exposures at the practice.

Regulation 4: Referrers

From reviewing a sample of referrals and other documentation on the day of inspection, the inspector was satisfied that only referrals from referrers as defined in the regulations, were carried out at the practice.

Judgment: Compliant

Regulation 5: Practitioners

An inspector spoke with staff and reviewed a sample of records and other documentation and found that only registered dentists took clinical responsibility for dental radiological exposures at the practice.

Judgment: Compliant

Regulation 6: Undertaking

A clear allocation of responsibility was found to be in place for the radiation protection of patients and service users at the practice on the day of inspection. The inspector reviewed documentation provided, including a diagram of the allocation of responsibility, and spoke with the undertaking who clearly communicated the management and oversight structure in place for dental exposures to ionising radiation at the practice. Documentation reviewed included the allocation of responsibility to each practitioner and included dental council registration information. The allocation of responsibility also included the role of the MPE within the undertaking's radiation protection structure.

Judgment: Compliant

Regulation 8: Justification of medical exposures

Information about the risks and benefits of dental radiological procedures was available to service users in the form of a poster in the waiting room. Additionally, a practitioner at the practice informed the inspector how they spoke with service users before an X-ray was conducted and provided further information about dental exposures as necessary.

A sample of patient records and other documentation were reviewed on the day of inspection. All referrals for dental X-rays were in writing and were accompanied by the reason for the exposure and sufficient clinical data. The inspector was informed that the practice did not accept external referrals.

Judgment: Compliant

Regulation 10: Responsibilities

From speaking with the undertaking, and reviewing documents and other records, the inspector was satisfied that only registered dentists took clinical responsibility for dental radiological procedures at Campbells Dentists Service. Similarly, the referrer and practitioner, who were the same person, were involved in the justification process. The MPE and the practitioner were involved in the optimisation process for all dental exposures. Additionally, the inspector found that only those entitled to act as practitioners carried out the practical aspects of dental exposures to ionising radiation at the practice.

Judgment: Compliant

Regulation 11: Diagnostic reference levels

DRLs had been established for dental radiological procedures conducted at the practice. These DRLs reflected national DRLs and were available at the X-ray controls for each surgery.

Judgment: Compliant

Regulation 13: Procedures

Written protocols had been established for standard dental radiological procedures carried out at the practice and were available in each surgery. Written protocols can provide assurance that dental radiological procedures are carried out in a consistent and safe manner at the practice. Referral guidelines (selection criteria) were also available for referrers at Campbells Dentists Service.

Information relating to patient exposure formed part of the report of the sample of records of dental radiological procedure reviewed by the inspector on the day of inspection.

Additionally, a sample of clinical audits conducted to assess image quality at the practice were reviewed by the inspector. An area of good practice was identified on the day of inspection, whereby, following an audit, a review of exposure parameters for dental radiological procedures was carried out by the practitioners and MPE to ensure that all dental exposures were optimised. Clinical audit is an important tool which allows undertakings to identify areas of good practice and areas for improvement in order to ensure safe delivery of dental exposures to service users.

Judgment: Compliant

Regulation 14: Equipment

The inspector reviewed records and documentation and spoke with the undertaking and found that all dental radiological equipment at Campbells Dentists Service was kept under strict surveillance with regards to radiation protection. The undertaking had implemented and maintained an appropriate quality assurance programme which included regular quality assurance assessments by an MPE.

The inspector was informed that servicing by the vendor of dental radiological equipment at the practice, carried out for preventative and maintenance purposes, was carried out in line with MPE recommendations. Records of a recent service by the vendor was reviewed on the day of inspection. Regular preventative maintenance and servicing is important to ensure that all dental radiological equipment is maintained in good working condition.

Judgment: Compliant

Regulation 17: Accidental and unintended exposures and significant events

Documentation and policies relating to the the record keeping of accidental and unintended exposures were reviewed by the inspector. Documentation reviewed included the process for recording and reporting any events involving, or potentially involving, accidental of unintended dental exposures at the practice. The inspector was informed that no events involving, or potentially involving, accidental of unintended dental exposures had occurred in the last year at the practice.

Judgment: Compliant

Regulation 19: Recognition of medical physics experts

The inspector found that appropriate arrangements were in place to ensure the continuity of medical physics expertise at Campbells Dentists Service.

Judgment: Compliant

Regulation 20: Responsibilities of medical physics experts

On the day of inspection, the undertaking, had ensured that an MPE was available to act and give specialist advice on matters relating to radiation protection of service users at Campbells Dentists Service. The MPE was found to contribute to optimisation, including the establishment of DRLs, quality assurance programme and training of staff at the practice.

Judgment: Compliant

Regulation 21: Involvement of medical physics experts in medical radiological practices

The inspector found that an MPE was appropriately involved for consultation and advice on matters relating to radiation protection at Campbells Dentists Service.

Judgment: Compliant

Appendix 1 – Summary table of regulations considered in this report

This inspection was carried out to assess compliance with the European Union (Basic Safety Standards for Protection against Dangers Arising from Medical Exposure to Ionising Radiation) Regulations 2018 and 2019. The regulations considered on this inspection were:

Regulation Title	Judgment
Summary of findings	
Regulation 4: Referrers	Compliant
Regulation 5: Practitioners	Compliant
Regulation 6: Undertaking	Compliant
Regulation 8: Justification of medical exposures	Compliant
Regulation 10: Responsibilities	Compliant
Regulation 11: Diagnostic reference levels	Compliant
Regulation 13: Procedures	Compliant
Regulation 14: Equipment	Compliant
Regulation 17: Accidental and unintended exposures and significant events	Compliant
Regulation 19: Recognition of medical physics experts	Compliant
Regulation 20: Responsibilities of medical physics experts	Compliant
Regulation 21: Involvement of medical physics experts in medical radiological practices	Compliant