



Health Information and Quality Authority

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

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| Name of Medical Radiological Installation: | Dental Care Ireland Killarney |
| Undertaking Name: | Dental Care Ireland Management Ltd |
| Address of Ionising Radiation Installation: | Silverton, St Anne's Road, Moyeightragh, Killarney, Kerry |
| Type of inspection: | Announced |
| Date of inspection: | 17 January 2024 |
| Medical Radiological Installation Service ID: | OSV-0008470 |
| Fieldwork ID: | MON-0042281 |

About the medical radiological installation:

Dental Care Ireland Killarney is a 3-surgery dental practice located in Killarney, Co. Kerry. The Practice was first established in 1982, but was acquired by Dental Care Ireland in 2023. Dental Care Ireland is a network of general and specialist dental practices across Ireland. The practice at Dental Care Ireland Killarney has 3 general dentists and provides a full range of dental treatment for patients of all ages from the local community. There are 2 intra-oral x-ray machines and 1 orthopantomogram (OPG) machine on site, which are used to provide dental radiological exposures via conventional film and a developer machine. The practice is scheduled for upgrade of conventional x-ray system to a digital system in 2024, in line with other practices in the DCI group. As part of its dental service offering, the practice takes approximately 420 intra oral x-rays and 23 orthopantomographs (OPG) x-rays each year, on average.

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 17 January 2024 | 11:50hrs to 13:05hrs | Noelle Neville | Lead |

Summary of findings

An inspection was carried out at Dental Care Ireland Killarney on 17 January 2024 by an inspector to assess compliance with the regulations at the facility. As part of this inspection, the inspector visited the clinical areas, spoke with staff and management and reviewed documentation. The inspector noted compliance with each regulation reviewed, namely Regulations 4, 5, 6, 8, 10, 11, 13, 14, 17, 19, 20 and 21.

The inspector found that the undertaking, Dental Care Ireland Management Ltd, had good governance arrangements in place to ensure the safe delivery of medical exposures at Dental Care Ireland Killarney. Only individuals entitled to act as referrer and practitioner referred and took clinical responsibility for medical radiological procedures at Dental Care Ireland Killarney. The inspector was also satisfied that the undertaking had arrangements in place to ensure access to and continuity of medical physics expert (MPE) services at the facility.

Overall, the inspector was satisfied that a culture of radiation protection was embedded at Dental Care Ireland Killarney and clear and effective management structures were in place to ensure the radiation protection of service users.

Regulation 4: Referrers

From a review of documentation and speaking with staff and management at Dental Care Ireland Killarney, the inspector was satisfied that referrals were from staff working within this dental facility, where the referrer and practitioner was the same person and entitled to act as referrer and practitioner as per the regulations.

Judgment: Compliant

Regulation 5: Practitioners

The inspector was satisfied from a review of documentation and speaking with staff that only individuals entitled to act as practitioner as per Regulation 5 took clinical responsibility for medical exposures at Dental Care Ireland Killarney.

Judgment: Compliant

Regulation 6: Undertaking

The inspector found that there was a clear allocation of responsibilities for the protection of service users from medical exposure to ionising radiation as required by Regulation 6(3). The inspector reviewed documentation including a governance structure organogram (organisational chart that shows the structure and relationships of departments in an organisation) and spoke with staff and management in relation to governance arrangements in place at Dental Care Ireland Killarney. The inspector noted involvement in, and oversight of, radiation protection by the medical physics expert (MPE) across a range of responsibilities at the facility. In addition, the inspector noted that responsibilities were clearly allocated to referrers and practitioners with regard to medical radiological exposures taking place at Dental Care Ireland Killarney.

Dental Care Ireland Killarney had a radiation safety committee which met at least twice a year. The inspector reviewed the terms of reference for this committee and noted that it had a multi-disciplinary membership including an MPE, clinical and compliance officer and the facility's undertaking representative. The committee had a standing agenda which includes staff training, equipment and clinical audit review.

Overall, the inspector was satisfied that the undertaking, Dental Care Ireland Management Ltd, had clear and effective governance and management structures in place to ensure the radiation protection of service users and a culture of radiation protection was embedded at the facility.

Judgment: Compliant

Regulation 8: Justification of medical exposures

The inspector noted that information about the benefits and risks associated with the radiation dose from medical exposures was available to service users by means of posters throughout the facility. The inspector reviewed a sample of records of medical exposures and noted that they were in writing, included the reason for requesting the procedure and justification in advance as required by Regulation 8(8) was recorded as required by Regulation 8(15).

Judgment: Compliant

Regulation 10: Responsibilities

The inspector noted that all medical exposures were found to take place under the clinical responsibility of a practitioner, as defined in the regulations. The practical

aspects of medical radiological procedures were only carried out at Dental Care Ireland Killarney by individuals entitled to act as practitioners in the regulations. Practitioners and the MPE were found to be involved in the optimisation process for medical exposure to ionising radiation. In addition, the inspector was also satisfied that referrers and practitioners, who were the same person, were involved in the justification process for individual medical exposures as required by Regulation 10.

Judgment: Compliant

Regulation 11: Diagnostic reference levels

The inspector was satisfied that diagnostic reference levels (DRLs) had been established, regularly reviewed and used, having regard to national DRLs, as required by Regulation 11(5) at Dental Care Ireland Killarney. In addition, where some facility DRLs had exceeded the national DRL, the undertaking had ensured that appropriate corrective action was taken as required by Regulation 11(6) and the DRL was reduced to closer to the national DRL.

Judgment: Compliant

Regulation 13: Procedures

Written protocols for standard dental radiological procedures were available at Dental Care Ireland Killarney as required by Regulation 13(1). These protocols can provide assurance that medical radiological procedures are carried out in a safe and consistent manner. Information relating to the medical exposure as required by Regulation 13(2) was available in a sample of reports reviewed. Referral guidelines which were available to staff and referrers were adopted by the facility as required by Regulation 13(3). In addition, the inspector reviewed evidence of clinical audit carried out at Dental Care Ireland Killarney which allows for the identification of areas of good practice and areas of improvement to ensure the safe delivery of medical radiological exposures to service users.

Judgment: Compliant

Regulation 14: Equipment

The inspector was satisfied that equipment was kept under strict surveillance at Dental Care Ireland Killarney as required by Regulation 14(1). The inspector received an up-to-date inventory of medical radiological equipment in advance of

the inspection and noted that appropriate quality assurance programmes were in place for equipment as required by Regulation 14(2). Quality assurance assessments were carried out every two years by an MPE, regular quality control checks were carried out by staff at the facility and servicing by the vendor for preventative and maintenance purposes was carried out to ensure that the equipment was maintained in good working condition.

Judgment: Compliant

Regulation 17: Accidental and unintended exposures and significant events

The inspector reviewed documentation outlining the process for the management of accidental and unintended exposures and significant events and was satisfied from discussions with staff and management that an appropriate system for the recording and analysis of events involving or potentially involving accidental or unintended medical exposures had been implemented at Dental Care Ireland Killarney. Although no incidents relating to accidental or unintended exposure had been identified or reported at Dental Care Ireland Killarney, the inspector was satisfied that systems and awareness of staff were adequate to manage an incident or near miss should one occur.

Judgment: Compliant

Regulation 19: Recognition of medical physics experts

The inspector was satisfied from discussions with staff and a review of documentation that the undertaking at Dental Care Ireland Killarney had arrangements in place to ensure access to and continuity of MPE services as required by Regulation 19.

Judgment: Compliant

Regulation 20: Responsibilities of medical physics experts

The inspector reviewed the professional registration certificate of the MPE at Dental Care Ireland Killarney and was satisfied that the MPE gave specialist advice, as appropriate, on matters relating to radiation physics as required by Regulation 20(1).

The inspector noted that the MPE was involved across a range of responsibilities outlined in Regulation 20(2). The MPE was responsible for dosimetry and gave advice on medical radiological equipment. Records reviewed by the inspector demonstrated that the MPE had contributed to quality assurance testing of medical radiological equipment, was involved in optimisation including review and sign-off of facility diagnostic reference levels (DRLs) and attended RSC meetings.

In addition, the MPE had been assigned the role of radiation protection adviser (RPA) at the facility, therefore satisfying the requirements of Regulation 20(3).

Judgment: Compliant

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

From documentation reviewed and discussion with staff, the inspector was satisfied that the level of MPE involvement at Dental Care Ireland Killarney was commensurate with the radiological risk posed by the facility as required by Regulation 21.

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 |