



COLLEGE OF
DENTAL HYGIENISTS
OF MANITOBA

INTERPRETATION GUIDELINE: Dental Radiography

March 2024

The College of Dental Hygienists of Manitoba, Professional Practice Committee is responsible for developing professional resource documents for dental hygienists. Council approves these documents, of which, the purpose is to explain, enhance, add, or guide dental hygiene practice in accordance with The Dental Hygienists Act and Regulations. It is the responsibility of the dental hygienist to understand and comply with these documents.

College of Dental Hygienists of Manitoba Interpretation Guideline for Dental Radiography

Purpose

This interpretation guideline is to inform registrants of the College of Dental Hygienists of Manitoba (CDHM) about the current requirements for exposing dental radiographs.

NOTE: Registered Dental Hygienists (RDH's) require additional education before operating CBCT equipment. Review the [CBCT Interpretation Guideline](#) for requirements.

Background

- Dental radiographs are used in dental hygiene practice for the purpose of dental hygiene diagnosis (periodontal and caries risk assessment)¹.
- Ionizing radiation exposure presents some degree of risk to the client receiving it, particularly pediatric clients, as well as individuals in the immediate vicinity.
- The Dental Hygienists Act does not provide any legislative authority to RDH's to own radiography equipment or prescribe radiographs; however, a RDH may operate x-ray equipment under the direction of, and in collaboration with, a dentist.¹

Requirements

A dental hygienist, as an x-ray equipment operator:

- Maintains clinical and theoretical knowledge to operate each type of dental x-ray equipment used for patient images (See requirements for CBCT [here](#))
- Applies the principle of ALARA (As Low As Reasonably Achievable) to all ionizing radiation procedures, given the circumstances of the procedure being performed.^{2, 3}
- Minimizes radiation exposure to patients, e.g., reduce number of retakes.
- Provides protective equipment to each patient receiving ionizing radiation, and ensures the protective equipment is appropriate to the clinical condition of that person.
 - *The patient must be provided with a thyroid shield when it will not interfere with the required diagnostic information of the examination. The use of a thyroid shield is especially important in children, as the thyroid gland in children is particularly sensitive to radiation.*^{2, pg 25}
 - *With the exception of CBCT procedures, the use of a lead apron is not required for the patient during routine dental procedures, if all other recommendations for limiting patient radiation exposure are respected (see section A.3.0 of Health Canada's Safety Code 30), as the dose to the patient will not be significantly affected by abdominal shielding; however a lead apron may be used to aid in patient comfort regarding fears of radiation.*^{2, pg 26}
- Recognizes radiation hazards associated with their work and takes measures to minimize them.
- Wears a personal dosimeter when applying ionizing radiation, unless discontinuation of use has been requested by the dental facility owner and approved by Cancer Care

Manitoba (CCMB). [[MDA E-Alert, Jan 2024 Safety Code 30 – Radiation Protection in Dentistry](#)]

- Assesses the quality of the radiographic image(s).
- Completes the interpretation of the image(s), within the scope of dental hygiene practice¹.
- Provides the following written evidence of the radiographic prescription, exposure and interpretation in the client's chart:
 - Informed consent or refusal to radiographs by the client
 - Date of treatment
 - Type of radiographs (e.g., periapical, bitewing, etc.) exposed
 - Number of radiographs exposed , including retakes
 - Provider of radiographic prescription
 - The dental practitioner should document and specify precisely the clinical indications and information required.^{2, pg 24}
 - Dental Hygiene-related clinical findings
 - A patient's clinical records must contain details of all radiographic examinations carried out, including clinical findings.^{2, pg 24}

Applicable Legislation

According to the CDHM Competencies⁴, registrants of the CDHM have the ability to:

- Assesses the need for radiographs for oral health care. (Assessment # 24)
- Assesses the quality of dental radiographs (e.g., cone cut, overlap, poor developing, presence of artifacts, etc.). (Assessment #25)
- Interpret dental radiographs for the purpose of dental hygiene diagnosis. (Assessment # 26)
- Exposes and processes intra and extra-oral radiographs. (Implementation #27)
- Possesses knowledge of digital radiography. (Implementation #28)

*This interpretation guideline reflects current knowledge and is subject to periodic review and revisions with on-going research.

References

1. The Dental Hygienists Act, 2005. Available at: <https://web2.gov.mb.ca/bills/38-4/b005e.php>
2. Health Canada, Radiation Protection in Dentistry, Safety Code 30 (2022). Available at: [https://www.canada.ca/content/dam/hc-sc/documents/services/environmental-workplace-health/reports-publications/radiation/radiation-protection-dentistry-recommended-safety-procedures-use-dental-equipment-safety-code-30/safety-code-30-\(2022\)-radiation-protection-in-dentistry-en.pdf](https://www.canada.ca/content/dam/hc-sc/documents/services/environmental-workplace-health/reports-publications/radiation/radiation-protection-dentistry-recommended-safety-procedures-use-dental-equipment-safety-code-30/safety-code-30-(2022)-radiation-protection-in-dentistry-en.pdf)
3. The Radiation Protection Act of Manitoba, 2015. Available at: <https://web2.gov.mb.ca/bills/40-4/b037e.php#:~:text=A%20person%20must%20not%20operate,or%20exempt%20from%20being%20registered.&text=The%20main%20function%20of%20the,medical%20radio%20nuclides%20or%20other%20sources>.
4. College of Dental Hygienists of Manitoba, 2007. Dental Hygiene Competencies. [online]. Available at: <https://cdhm.info/practice-resources/>