

Standards of Practice



IONIZING RADIATION

Dental hygienists on the General and Courtesy Registers are authorized to **order** and/or **apply** any form of ionizing radiation in medical radiography. Authorization to perform this restricted activity is for the purpose of ordering **dental X-ray imaging procedures** and/or applying ionizing radiation for dental X-ray imaging procedures as a part of the practice of dental hygiene.

STANDARD STATEMENT

The dental hygienist orders and/or applies ionizing radiation safely and appropriately for the purpose of dental X-ray imaging procedures.

PERFORMANCE EXPECTATIONS

The dental hygienist who orders ionizing radiation for a dental X-ray imaging procedure must...

1. Protect the patient from excessive radiation exposure in accordance with applicable **legislation**, policies, and guidelines, including [Safety Code 30](#).
2. Base the order on the clinical history and clinical assessment of the patient, professional judgment, and consideration of current, **evidence-informed** guidelines for prescribing radiographs.
3. Justify that the results of the ordered procedure could inform their dental hygiene treatment decision to a degree that the benefits outweigh any risks.
4. Confirm that there are no previous images available which would avoid the need for additional dental X-ray imaging procedures.
5. Document the clinical objective for the order, including the clinical rationale and specific information required from the dental X-ray imaging procedure.
6. Keep the number of ordered dental X-ray imaging procedures to a minimum, consistent with the clinical objective for the order.
7. Only prescribe a higher dose X-ray imaging procedure if the clinical objective cannot be satisfactorily met by other lower dose dental X-ray modalities.
8. Support the patient's informed choices and obtain informed consent in accordance with the College's [Informed Consent Standard of Practice](#). This also includes discussing the following with the patient:
 - a) The clinical rationale for recommending the procedure; and

- b) How the results will be used by the dental hygienist.
9. Ensure that the ordered image(s) are fully interpreted, and all abnormal, atypical or unhealthy radiographic findings are documented in the patient record by either:
 - a) Interpreting the image themselves; or
 - b) Consulting with or referring to another health professional.
 10. Explain the relevant radiographic findings to the patient, provide the necessary follow-up, and refer the patient to an appropriate health professional when required.

The dental hygienist who applies ionizing radiation for a dental X-ray imaging procedure must...

11. Only apply ionizing radiation when there is a patient-specific order from an authorized health professional, including when the dental hygienist has ordered it themselves in accordance with this Standard of Practice.
12. Consult with the ordering health professional and take reasonable steps if an order is unclear, incomplete, outdated, illegible, inappropriate, or unsafe.
13. Protect the patient and others from radiation in accordance with applicable legislation, policies, and guidelines, including [Safety Code 30](#).
14. Maintain records of retakes to facilitate a radiation quality assurance program.

The dental hygienist who owns ionizing radiation equipment must...

15. Ensure radiation equipment is inspected and registered according to applicable legislation and provide evidence of current registration to the College.
16. Ensure that a radiation protection program is developed, implemented, and maintained for the facility.
17. Fulfill the responsibilities of a dental X-ray equipment owner as described in [Safety Code 30](#).

PATIENT EXPECTATION

The patient can expect that the dental hygienist discusses the risks and benefits of dental X-ray imaging procedures and safely takes X-ray images only when necessary for detecting or diagnosing oral health conditions.

GLOSSARY

APPLY: To expose a patient to ionizing radiation for the purpose of a dental X-ray imaging procedure.

DENTAL X-RAY IMAGING PROCEDURE: A technique that uses dental X-ray equipment in dental radiography, including the use of intra-oral (conventional, transportable, and hand-held) or extra-oral (panoramic, cephalometric and cone-beam computed tomography) modalities. It does not include the ordering and/or applying of ionizing radiation for any other medical diagnostic purpose or for any form of dental or medical radiation therapy.

EVIDENCE-INFORMED: The integration of best available evidence with clinical expertise and patient values¹. This approach involves identifying, searching for, and interpreting the result of the best available evidence to inform decision-making processes.²

INFORMED CONSENT: Receiving the patient's written or verbal permission to proceed with a proposed service following a process of decision-making leading to an informed choice. Informed consent involves ongoing communication between the parties involved. In the case of a minor or others who do not have the capacity to provide informed consent, the agreement must come from a legal guardian or substitute decision-maker legally authorized to act on behalf of a patient.

LEGISLATION: Federal or provincial acts, regulations, or codes.

ORDER: To prescribe a dental X-ray imaging procedure for a patient.

RECORD: As defined in the [Health Information Act](#), means a record of health information in any form and includes notes, images, audiovisual recordings, x-rays, books, documents, maps, drawings, photographs, letters, vouchers and papers, and any other information that is written, photographed, recorded, or stored in any manner, but does not include software or any mechanism that produces records.

¹Straus, S. E., Glasziou, P., Richardson, W. S., & Haynes, R. B. (2019). Evidence-Based Medicine: How to Practice and Teach EBM (5th ed). Elsevier.

² Federation of Dental Hygiene Regulators of Canada. (2021) Entry-to-Practice Canadian Competencies for Dental Hygienists. Accessed from: www.fdhrc.ca/wp/wp-content/uploads/2021/12/EPCCoDH_FDHCRC_November_2021.pdf