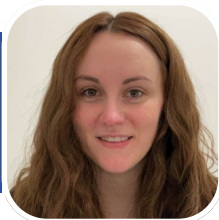




# Extended duties in dental radiography



**Chloe Foxhall**<sup>1</sup> explains the importance

of radiographic imaging in dentistry and why dental nurses might undertake further training in this area.

**I**maging in dentistry is a crucial element to providing patients with the care and treatment they require by detecting carious lesions, monitoring bone level and evaluating treatment options.

Technology has developed so that we are able to use faster, safer and more efficient equipment within practice. Dental nurses with extended duties are able to support the clinicians further by carrying out justified exposures which can speed up appointment times and share the workload. However your practice runs, dental nurses with extended duties in radiography are able to play a huge part in a successful patient journey from providing explanations to patients, preparing for the radiograph, exposing the patient safely and developing and grading the image, always

## Author information

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*‘Dental nurses with extended duties in radiography are able to play a huge part in a successful patient journey from providing explanations to patients, preparing for the radiograph, exposing the patient safely and developing and grading the image, always ensuring that compliance is met by following the local rules.’*

ensuring that compliance is met by following the local rules.

Dental nurses are able to expand their knowledge and progress in their career by undertaking a qualification in dental radiography. Many courses in dental radiography are a possibility for any dental nurses who are considering expanding their skill set, such as the NEBDN post registration certificate in dental radiography. Once gaining this qualification, your CV can become more attractive to potential employers and could lead to a pay rise or further career progression such as head nurse positions, Radiation Protection Supervisor (RPS) or even help you progress towards becoming a dental hygienist or a dental therapist if this is the route you are looking towards.

An RPS is required in a dental practice that holds local rules to ensure that these are adhered to at all times. The local rules contain details of the Radiation Protection Supervisor and Radiation Protection Advisor (RPA), details on which staff are able to operate the equipment and in what manner, details of the controlled areas, dose levels and a range of rules that should be followed at all times. Anyone who is suitably trained can carry out the role of RPS; they should be able to identify if the rules are not followed and correct the errors made to prevent them from happening again.

The RPS ensures all practice staff are adhering to the local rules. If there are any changes to local rules, such as legislation, rule or equipment updates, all staff should be provided a copy to read and sign to say they understand these changes. Local rules have

to be adapted if new equipment is installed, including CBCT equipment. The local rules should contain the following:

- A description of the controlled area, reason for restricting access to the controlled area and any conditions in place
- The name of the Radiation Protection Supervisor (RPS)
- Details on prevention of equipment being operated by unauthorised persons
- Any safety precautions that staff must follow to prevent any unnecessary exposure
- Details of allowances for access to the controlled area (in providing patients support during exposures should they need it)
- The dose levels
- Details on personal dosimetry
- Details on the contingency plan in event of an unforeseen circumstance.

Cone Beam Computed Tomography (CBCT) is a newer technology within dental imaging that has elevated the way we are able to service patient needs. CBCT creates a three-dimensional image of the oral cavity including teeth, bone, soft tissues and nerve pathways and can be used if a radiograph is not sufficient for the clinician but is not routinely used for imaging. With a Cone Beam CT, the image is captured by a cone shaped x-ray beam that is rotated around the patient’s head creating multiple images that can also be referred to as views or slices that are then reconstructed on the computer software to create the final scan image. The image produced by a CBCT will be high

quality. Common uses for CBCT in the dental practice are:

- Surgery planning for impacted teeth or reconstruction
- Assessment of dental implant placement
- Evaluation of the jaw, nerve canals, sinuses and nasal cavity
- Detecting, measuring, and treating jaw tumours
- Determining bone structure, quality and quantity, and tooth orientation
- Locating the origin of pain or pathology.

CBCT imaging comes with many advantages to the dental practice and the patient. The patient’s experience while having this type of image taken will be quick and pain free, with most machines taking under a minute to complete the exposure. In comparison to a traditional CT scanner, the CBCT produces lower radiation and is more cost effective to the practice. The CBCT image aids in diagnosis and treatment planning for many dental procedures such as Implants. The CBCT technology can help detect and measure the available bone and allow virtual implant placement of the correct size and length using the computer software to ensure the correct positioning. It will allow the clinician to analyse where bone is deficient and will require augmentation using bone grafting techniques.

For more information on the NEBDN Certificate in Dental Radiography visit <https://www.nebdn.org/qualifications/post-registration-qualifications/dental-radiography/>.

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