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## CHAPTER 10 - IMAGING

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## WORK HEALTH AND SAFETY – LIMITING STAFF EXPOSURE TO IONISING RADIATION (PD2019\_044)

**PD2019\_044 rescinds PD2014\_026**

### PURPOSE

The purpose of this Policy Directive is to assist managers, in conjunction with Policy Directive *Work Health and Safety: Better Practice Procedures*, to meet their duty to ensure that occupationally exposed staff are identified, and prevented from being exposed to ionising radiation that exceeds the dose limits set out in Schedule 5 of the *Radiation Control Regulation 2013* (the Regulation).

The Regulation defines an *occupationally exposed person* as one who is exposed to ionising or non-ionising radiation directly arising out of, or in the course of, the person's employment.

### MANDATORY REQUIREMENTS

NSW Health organisations must ensure that:

- Work procedures, which potentially expose staff to ionising radiation, are identified and assessed using a risk management approach as required under the *Work Health and Safety Act 2011* (WHS Act).
- Safe work practices and procedures are documented and implemented so that staff are not exposed to ionising radiation that exceeds the dose limits as set out in Schedule 5 of the Regulation.
- A Radiation Management Plan is developed in accordance with the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) *Radiation Protection in the Medical Applications of Ionizing Radiation Code of Practice* (RPS14).
- Staff who are occupationally exposed to ionising radiation are provided with information and training, as necessary, and are made aware of:
  - The hazards that can arise in connection with the use of regulated material, which is defined under the *Radiation Control Act 1990* as meaning radioactive substances, ionising radiation apparatus, non-ionising radiation apparatus of a kind prescribed by the regulations and sealed source devices
  - The safety arrangements that exist to protect persons from such hazards and the steps the person must take in order to minimise the likelihood that such a hazard will arise
  - The name of the person undertaking the radiation safety officer role or other persons from whom they should obtain advice in connection with any matters relating to the use of radioactive substances and radiation apparatus.
- The requirements as set out in the NSW Environment Protection Authority (EPA) *Radiation Management Licence* are complied with, including the Guidelines and Codes to which the licence refers.
- [Part 4 Division 2 of the Radiation Control Regulation](#) is complied with in relation to occupationally exposed staff, including the provision of an approved personal radiation monitoring device.
- All monitoring devices are checked, maintained and calibrated in accordance with the document entitled *Radiation Guideline 1: Monitoring devices* (clause 32 of the Regulation).
- Radiation accidents are reported, investigated and records of accidents maintained, as required under clause 37 of the Regulation.

- Faults or defects when identified are investigated and rectified and any person(s) who may have been exposed to radiation in quantities in excess of those that would normally be received are informed, as required by Clause 40 of the Regulation.

### Ultrasound

- Prior to ultrasound examination, sonographers are advised by the referring clinician if a radiopharmaceutical dose has been administered to the patient (prior administration of a radiopharmaceutical is not in itself a contraindication to performing an ultrasound examination).
- Staff exposure is minimised by scheduling procedures requiring close patient contact. In general, where practicable, routine ultrasound examinations should not be performed soon after a patient has been injected with a radiopharmaceutical except in those circumstances where the wellbeing of the patient necessitates otherwise. (The clinical requirement for an ultrasound in this instance needs to be discussed with the referring medical specialist.)

### Modified Barium Swallows (MBS)

- Speech pathologists and other staff participating in MBS and associated procedures using fluoroscopy must use personal protective equipment (PPE) as set out in the *NSW Environment Protection Authority (EPA) Policy on X-ray Protective Clothing (2014)* and good radiation practice, as set out in the EPA document *Radiation Guideline 6 Part 2: Registration Requirements & Industry Best Practice for ionising radiation apparatus used in diagnostic imaging*.
- For fluoroscopy procedures including MBS studies where speech pathologists, radiologists or other staff such as nurses are present inside the screening room and not behind a protective shield, a properly fitted lead apron and thyroid collar must be worn. This work practice is considered adequate for pregnant staff, provided the lead apron is properly fitted to cover the abdomen, and the radiation monitor (where applicable) is worn under the apron.
- Staff undertaking studies requiring fluoroscopic examination of the patient should receive proper training in all aspects of these studies. This should include training in radiation safety and the proper use of PPE to ensure that doses to themselves and the patient are minimised.
- X-ray equipment used for fluoroscopy procedures including MBS shall be maintained in a condition that meets the requirements for registration in NSW, and only operated by persons licensed to carry out the proposed procedure.

## IMPLEMENTATION

### Roles and responsibilities:

*Chief Executives, Local Health Districts* are required to ensure:

- The mandatory standards contained in this Policy Directive are communicated to all managers and occupationally exposed staff, and implemented.

*Managers and supervisors* are required to ensure:

- They identify staff who are occupationally exposed to ionising radiation and assess and minimise or eliminate exposure to ionising radiation
- Radiation monitoring devices and the appropriate personal protective equipment is made available to and utilised by relevant staff
- Staff involved in work procedures that involve possible exposure to ionising radiation receive training in radiation safety and the proper use of PPE to ensure that doses to themselves and the patient are minimised.

**Staff** are required to ensure:

- They comply with the safe work practices established in their workplace
- They wear the personal radiation monitor issued and any personal protective equipment required while involved in the use of ionising radiation
- They report to the person undertaking the radiation safety officer role any matter which they are aware of which may compromise radiation protection.