**Lead Matters [QSI Ref: XR-303]**

**Descriptor:**

Auditing the appropriate storage of lead equipment in the Interventional Radiology and fluoroscopy suites.

**Background:**

Lead aprons and thyroid collars are an important factor in efforts to reduce radiation dose to staff. The proper use and care of personal protective equipment is mandated [1]. Additionally, manufacturers of radiation protective equipment are required to provide information to radiation employers as to the proper care and storage for the equipment [1,2]. This should be defined in local rules by radiology departments. Poor care of radiation protective equipment leads to damage which along with the cost implications, may also increase staff dose unnecessarily.

## The Cycle

**The standard:**

A locally agreed standard

All lead aprons and thyroid collars not in use in the IR suite and fluoroscopy rooms should be properly stored in the designated storage area

**Target:**

100% compliance

## Assess local practice

**Indicators:**

Percentage of lead coats and thyroid collars inappropriately stored as a proportion of the total available for that room

Lead aprons and thyroid collars classed as inappropriately stored if they are not neatly placed back on their hangers

**Data items to be collected:**

The number of staff present in the suite during fluoroscopy should be recorded. After each procedure, a quick sweep should be made noting any inappropriately stored or folded aprons and thyroid collars.

**Suggested number:**

All fluoroscopy/interventional rooms, for at least a half-day session. A half day session means that the lunch break or day close can be included as staff are likely to all take their aprons and collars off at these points.

**Suggestions for change if target not met:**

The audit should be presented to the relevant department. The lead apron manufacturer and/or the radiation protection supervisor should be invited to demonstrate the relationship between damaged lead aprons/collars and staff dosage. The yearly cost of replacement should also be emphasised.

**Resources:**

Assistance of the local radiology protection supervisor

Data collection (4 hours)

Data analysis and report writing (2 hours)

**References:**

1. Ionising Radiations Regulation (2017)  - IRR17
2. Health and safety executive, equipment used in connection with radiation protection. ([www.hse.gov.uk](http://www.hse.gov.uk/))

**Editor's comments:**

This audit could be expanded by also checking that all types of appropriate protective lead equipment are available in each room, checked and that scheduled formal testing of condition has been carried out.

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