

**OLIVE VIEW-UCLA MEDICAL CENTER
POLICY & PROCEDURE**

NUMBER: 11428

VERSION: 2

SUBJECT/TITLE: STAFF RADIATION EXPOSURE SAFETY PROGRAM

POLICY: To delineate the process of issuing, tracking, and monitoring radiation detection badges and the process of purchasing, testing, care and disposal of lead apparel.
This policy applies to all employees and areas working with radiation emitting equipment or substances at Olive View-UCLA Medical Center and Mid-Valley Comprehensive Health Center.

All impacted areas/departments shall ensure appropriate attendance at the regular Staff Radiation Exposure Safety Meeting.

DEPARTMENTS: All

DEFINITIONS: **Radiation Detection Badge Safety Champion** - The Radiation Detection Badge Safety Champion (RDBS Champion) is responsible for the request, collection, monitoring, and posting of reports within their department and is required to attend all staff radiation exposure safety meetings or send a representative. The RDBS Champion is also responsible for posting staff member radiation exposure reports in a public bulletin board within his/her department. When a radiation detection badge is lost or is missing, the RDBS Champion is responsible for the completion of the "Missing-Damaged Dosimeter Badge Report" form and its submission to the Radiology Detection Badge Safety Coordinator.

Radiology Detection Badge Safety Coordinator - The Radiology Detection Badge Safety Coordinator (RDBS Coordinator) is responsible for issuing new or temporary badges to the RDBS Champion, collecting used badges from RDBS Champion and when applicable the "Missing-Damaged Dosimeter Badge Report" form, and mailing used badges to the vendor. The RDBS Coordinator is also required to attend all staff radiation exposure safety meetings or send a representative.

Radiology Lead Apparel Safety Champion - The Radiology Lead Apparel Safety Champion (RLAS Champion) is responsible for submitting new lead apparel purchase requests to Radiology Lead Apparel Safety Coordinator (RLAS Coordinator), completion of the audit log verifying routine visual inspection and cleaning, submission of the audit log to the RLAS Coordinator, completion and submission of "Lost-Damaged Radiation Protection Apparel Report" form to RLAS Coordinator when lead apparel cannot be found, coordinating the disposal process with RLAS Coordinator, and attending all staff radiation exposure safety meetings or sending a representative.

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Radiology Lead Apparel Safety Coordinator – The Lead Apparel Safety Coordinator (RLAS Coordinator) is responsible for the purchasing and testing of new lead apparel for hospital, collecting audit logs from RLAS Champions and the “Lost-Damaged Radiation Protection Apparel Report” form when lead apparel cannot be found, and conducting an annual test of all lead apparel at Olive View-UCLA Medical Center and Mid-Valley Comprehensive Health Center. The RLAS Champion is also required to attend all staff radiation exposure safety meetings or send a representative

Radiation Safety Officer (RSO) – The Radiation Safety Officer (RSO) is responsible for monitoring radiation exposure reports, investigating exposures that exceed Level II limits and counseling staff as needed. The RSO is also responsible for reporting investigation results and, when applicable, corrective action plans to the Environment of Care Committee and the Radiation Safety Committee. The RSO is also required to attend all staff radiation exposure safety meetings or send a representative.

PROCEDURE:

A. RADIATION DETECTION BADGES

1. Badge Requests and Issuance

If staff members are expected to be exposed to more than 500 mrem/year, then the immediate supervisor or RDBS Champion of each department shall request the issuance of a radiation badge by completing a “Request for Film Badge Service” form. The RDBS Coordinator will issue a temporary badge to the employee and request a permanent badge from the authorized vendor. Employees who have reports of radiation exposures from other facilities are to provide these details at the bottom portion of the form. Staff from temporary registry agencies will be issued badges by their registry agency, and that agency will be responsible for sending a dosimetry report to the RSO.

2. Monthly Badge Collection and Mailing

Each month the RDBS Champion shall submit badges used the previous month or the “Missing or Damaged Dosimetry Badge” form to the RDBS Coordinator who will mail the exposed badges to the vendor.

3. Monitoring of Radiation Exposure

The RSO will review, initial and date each monthly radiation exposure reports for each employee to determine if any exposure exceeds the facility’s Level I or Level II limits. The RSO will investigate all exposures that exceed Level II limits and will counsel impacted employees on the care and use of radiation badges, ALARA (as low as reasonably acceptable) principles for avoiding excessive exposure, and,

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if needed, ensure the provision of adequate shielding. Counseling of employees who exceed Level II limits is to be documented in writing to the employee and their supervisor. The RSO will report all exposures that exceed Level II limits to the Radiation Safety Committee.

4. Exposure Report Availability

Each employee is entitled to review his/her exposure levels. Reports are available from the RSO. Employees terminating employment may submit a written request to the RSO for their exposure data. When employee exposure data is displayed on a public bulletin board, the confidentiality of employees is to be protected by “blacking out” of the social security number and the date of birth of each employee.

B. LEAD APPAREL

1. Lead Apparel Requests, Purchasing and Testing

The RLAS Coordinator shall maintain an inventory of the hospital’s lead apparel. All lead apparel purchasing requests will be submitted by the RLAS Champion to the RLAS Coordinator.

Although the required minimum is 0.25 mm lead equivalent, Olive View-UCLA Medical Center’s standard practice is to purchase aprons with 0.50 mm lead equivalent, since aprons are also used for gonadal shielding. Different types of aprons include frontal, wrap-around and skirt/vests. A frontal apron provides protection when facing the radiation source. The front of the lead aprons usually contains a thicker layer of lead than the backside. Employees are to face the radiation beam as often as possible. If an employee is required to move about the room and turn their body so that their back faces the radiation source, then a wrap-around or a skirt/vest apron provides better protection. All new aprons with additional shield protection accessories (e.g., skirts, vests, thyroid collars) must be permanently attached. California regulations (Title 17) require that lead aprons have a minimum of ¼ mm (0.25) lead or equivalent. Some aprons are made without any lead inside, but they must be able to absorb radiation equal to ¼ mm of lead. California regulations require that ½ mm (0.50) of lead must be used for gonadal shielding on patients.

The testing of all new lead apparel is necessary to detect cracks and/or holes that may develop in the rubberized lead which may cause increased radiation exposure. A crack or hole in the lead apparel is not visible to the naked eye on inspection as it is detected only under fluoroscopy. Upon receipt of new lead apparel, the RLAS Coordinator will fluoroscope the apparel, issue a serial number, and add the item(s) to the inventory list prior to use and will arrange release and pick-up details with RLAS Champion.

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The RLAS Coordinator will conduct annual testing of all inventory and report results to the Environment of Care and Radiation Safety Committees. During the annual testing, the RLAS Champions are responsible for providing all lead aprons to the RLAS Coordinator.

2. Lead Apparel Visual Inspection and Care

The RLAS Champion is responsible for conducting routine visual inspection and cleaning of his/her area's lead apparel and documenting the inspection information on the required audit log and submitting the completed audit log to the RLAS Coordinator as instructed. The visual inspection shall consist of looking for damage on the outer sides of the apron. If lead apparel cannot be located, the RLAS Champion is responsible for completing the "Lost-Damaged Radiation Protection Apparel Report" form and submitting it to the RLAS Coordinator.

The lead apparel will be wiped by the assigned RLAS Champion using disinfectant wipes after each use or as needed (e.g., when contaminated with bodily fluids or liquids or when apparel has been in contact with contaminated surfaces). Any excess moisture should be wiped away with dry damp cloth and the process should be repeated until the apparel is dry and clean. All lead apparel should be stored in their respective areas. If lead apparel is found from a different area, the RLAS Champion is responsible for returning it to the proper department. Lead apparel should always be hung on a rack or lay flat when not in use. The apparel should never be folded in half, rolled up, or tossed on top of a counter, desk or trash can.

3. Lead Apparel Disposal

Lead apparel must be properly disposed of whenever it is no longer being used or is damaged. Lead is a toxic substance and must not be thrown in the trash. Upon notification by the RLAS Champion, the RLAS Coordinator will remove the damaged apparel, will contact the Environmental Health and Safety Department for proper disposal, and will update the inventory accordingly.

C. PREGNANT RADIATION WORKER

The pregnant radiation worker shall not receive more than 500 mrem during the gestation period or more than 40 mrem in any single month.

A pregnant employee working with fluoroscopy or portable radiography may request a second film badge to be worn inside the protective lead apron at waist level.

It is recommended that any radiation worker attempting to conceive a child or newly aware of pregnancy status seek consultation with the Radiation Safety Officer or designate at extension 74094 regarding precautionary measures that can be taken to minimize risks from radiation exposure.

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References: California Code of Regulations: Title 17 DIV1 CH5 30307(a)(4)(A)	
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