



St. Mary's Hospital School of Medical Imaging

Procedure for Implementation of Radiation Safety Program

Objective: To administer the radiation safety program in accordance with St. Mary's Hospital radiation safety policies as well as State and Federal Guidelines in order to assure that ALARA principles are being observed.

Scope: The radiation safety program affects students and faculty during their time associated with the program.

General Concept: Personnel Monitoring Devices (PMDs) are utilized by students and faculty of the imaging program to monitor their exposure to occupational ionizing radiation. The PMDs are exchanged quarterly. The Radiation Dosimeter report is received from St. Mary's Hospital and reviewed by the Radiation Safety Officer for the School of Medical Imaging. Once the reports are received, they are shared with the students and faculty within 30 days. While in the presence of the students, the Radiation Safety Officer for the School of Medical Imaging reviews the ALARA concept for which the reports support and counsels any student whose dosimeter readings fall outside predetermined acceptable range. A Radiation Safety Guidance form documents the counseling session. The Radiation Safety Officer for the School of Medical Imaging maintains copies of guidance forms as well as the Radiation Dosimetry reports in a secure location.

Policies referenced:

- St. Mary's Hospital Radiation Safety Program
- Student handbook policies:
 - G 28 Pregnancy
 - C 8 Radiation Exposure & Repeats
- National Council on Radiation Protection and Measurement (NCRP) recommended dose limits for education and training

I. Radiation Safety Program Structure and Organization

1. The Bon Secours St. Mary's Hospital School of Medical Imaging is sponsored by St. Mary's Hospital and receives administrative support for the initiation and record keeping for the PMDs.

2. As the sponsoring agency, the St. Mary's Hospital Radiation Safety Officer reviews the Radiation Dosimeter report according to their radiation safety program and implements actions if necessary based on the findings.
3. The School of Medical Imaging receives Radiation Dosimetry reports from St. Mary's Hospital and maintains these records as part of its own radiation safety program.
4. The Radiation Dosimetry reports are reviewed by the program radiation safety officer and disseminated to the students within 30 days.

II. Entrance into the Medical Imaging program

1. Students and Faculty entering the clinical portion of a Medical Imaging Program (to include modality interns) will submit a request for PMD forms as needed.
2. All new students must complete the Request for PMD form and one of the following:
 - "No Prior Exposure" form for students who have never been monitored for ionizing radiation.
 - "Previous Record of Exposure" forms for students who have been monitored for ionizing radiation.
3. The program radiation safety officer forwards the information to the St. Mary's Hospital radiation safety officer for ordering of the PMDs.
4. The program radiation safety officer will receive the new PMDs from the St. Mary's Hospital radiation safety officer and distribute the PMDs to the new students during orientation.

III. Exchange of PMDs

1. PMDs are exchanged quarterly in accordance with established policies.
2. The program radiation safety officer (PRSO) insures collection of PMDs and delivers to the St. Mary's Hospital Radiation Safety Officer (RSO).
3. The PRSO insures delivery of the new PMDs to the school for distribution to the students usually in the Clinical Seminar Lab course.

IV. Records and ALARA

Records:

1. The RSO notifies the PRSO that the Radiation Dosimetry reports are ready.
2. The PRSO will disseminate Radiation Dosimeter report readings to the students within 30 days of their delivery to the School of Medical Imaging.

3. Students will initial their readings signifying that they are aware of their exposure for the recorded period.
4. The Radiation Dosimetry reports are stored by the Program Radiation Safety Officer in a secure location.

ALARA:

1. In accordance with ALARA policy, the dosimeter readings are reviewed by the St. Mary's Hospital Radiation Safety Officer (RSO) for ALARA investigational level 1 or level 2 alerts.
2. Participants of the Medical Imaging Program radiation dose should be maintained below the NCRP occupation recommended level. Participants of the Medical Imaging Program follow the dose limits recommended by the NCRP Annual Education and Training exposures of 100 mrem (1 mSv) per year. This equates to a monthly dose limit for students of 8 mrem/month (0.08mSv).
3. The SOMI radiation safety officer reviews the Radiation Dosimetry reports for additional information:
4. A reading over 24 mrem (.24 mSv) using the Deep Dose Equivalent (DDE) measurement in any quarter will require an administrative check on radiation practices of that student. Occasionally the student does not fully appreciate the dangers of radiation at the start of their career and every effort should be made to impress upon them the need for diligence. This extra measure allows for discussion and an opportunity to review safe practices around radiation sources. A radiation safety guidance form is used for this purpose.
5. The total dose for a participant enrolled in the 18 month Medical Imaging Program should not exceed 144 mrem (1.44 mSv). If a participant is required to repeat a clinical semester an additional quarterly dose of 24 mrem (.24 mSv) is permitted.

V. Pregnancy

1. Students wishing to declare pregnancy will complete the Pregnancy Declaration Forms as delineated in Policy G 28 (Pregnancy Policy). The program radiation safety officer will forward the Pregnancy Declaration Forms to the St. Mary's Hospital radiation Safety Officer for action.
2. The Program Radiation Safety officer will verify that the fetal PMD is received and exchanged on a monthly basis,
3. The Program Radiation Safety officer will insure that interim Radiation Dosimeter reports are forwarded by SMH to SOMI.
4. Students with fetal badges will review and initial Radiation Dosimeter reports signifying their awareness of the radiation exposure received by the fetus in comparison to published standards of allowable fetal exposure.

VI. Guidelines for when students or faculty discontinue with SOMI.

1. Guideline

- a. The student or faculty member will turn in their PMD to the PRSO
- b. The PRSO will notify the St. Mary's Hospital Radiation Safety Officer of the change in status.
- c. The student or faculty member will be removed from the active PMD roster and will be no longer monitored for exposure by the SOMI
- d. If a student or faculty member receiving fetal monitoring discontinues with SOMI during the pregnancy, both the individual monitoring and fetal monitoring will end.

2. Requests for dosimeter records

- a. Any current or former student or faculty member may request their Radiation Dosimeter report reading records.
- b. Requests received for Radiation Dosimeter report reading records will be forwarded to the St. Mary's Hospital Radiation Safety Officer for action.

8.2.2013, 8.2014, 8/2015, 4/2017, 11/2017, 3/2018, 5/2018, 6/2019