Machine Produced Radiation Safety Subcommittee (MPRSS)
CHARTER

DATE: November 9, 2016

TO: All Schools, Centers and Divisions of the University & SSM Health Saint Louis University Hospital

SUBJECT: **Radiation Safety Committee - Machine Produced Radiation Safety Subcommittee (MPRSS)**

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I. CHARTER

Saint Louis University ("the University") and SSM-SLUH, Inc., d/b/a SSM Health Saint Louis University Hospital ("the Hospital") endeavor to provide for the safe use of machine produced radiation used in the diagnosis and treatment of patients in University and Hospital facilities, and in research. Key objectives of these safety functions are minimizing radiation dose to patients, clinical faculty and staff, research staff, and the general public. To meet these important radiation safety objectives, the University Radiation Safety Committee (RSC), which serves Saint Louis University and SSM Health Saint Louis University Hospital, has established the Machine Produced Radiation Safety Subcommittee (MPRSS) of the RSC to facilitate comprehensive oversight of the use of machine produced ionizing radiation.

II. SCOPE OF CHARTER

This charter applies to all clinical and research units of the University and the Hospital where machine produced ionizing radiation is used. It extends to physicians, including residents, students, nurses, technologists and other clinical and research staff.

III. AUTHORITY

The President of the University has conferred upon the Vice President for Medical Affairs the authority to appoint a Radiation Safety Committee (RSC) inclusive of a MPRSS for the University. The RSC Chairperson reports to the University President through the Vice President for Medical Affairs and to the Hospital senior management. The MPRSS Chairperson reports to the Vice President for Medical Affairs through the Radiation Safety Committee. The authority to comprehensively review and approve, or disapprove, all radiation safety aspects of clinical and research uses of machine produced ionizing radiation are vested in the MPRSS. The MPRSS also serves as a technical resource for the radiation safety program involving machine produced radiation, including but not limited to:

1. The review, approval and oversight of specific radiation safety procedures, policies, manuals, and other documents intended to serve as tools in implementing the MPRSS radiation safety program.
2. Review of personnel radiation dose reports exceeding As Low As Reasonably Achievable (ALARA) thresholds of monitored individuals potentially exposed to machine produced radiation. This responsibility does not extend to NRC licensed materials.
3. Radiation safety education relevant to machine produced radiation.
4. X-ray, fluoroscopy and all other x-ray machine purchases, including accelerators.

The MPRSS is empowered to develop all of the necessary review tools and documents essential to facilitate review and education functions.

IV. MISSION & IMPLEMENTATION

The MPRSS serves as the technical resource for the University and the Hospital machine (device) produced ionizing radiation used for diagnostic imaging, therapeutic and research purposes. Specific functions include:

A. Equipment Procurement Review: Review planned x-ray, fluoroscope, accelerator and other ionizing radiation equipment purchases for the University and the Hospital.

B. Patient Dose Review: Review of systematic approaches to facilitate documentation and review of radiation doses imparted to patients undergoing fluoroscopic procedures within the scope of available technologies. At a minimum, this shall include documentation of fluoroscopy beam on-time for procedures involving fluoroscopic examination, or other readily available parameters deemed more appropriate by the MPRSS.

C. Physician Training, Education and Credentialing: Oversee implementation of a physician training and education program, including credentialing, to assure

minimum competency in radiation safety principles in the use of fluoroscope equipment, with an emphasis on patient safety. This training shall be applicable to all physicians operating fluoroscopy equipment, including house staff, residents and medical students.

D. Nursing, Technical and Other Clinical Support Training: Assure provision of initial and annual radiation safety training of nursing, technical and other clerical support staff and students working in the vicinity of machine produced radiation.

E. ALARA Report Reviews: Review ALARA reports for worker radiation doses exceeding ALARA investigational thresholds; make recommendations as necessary to facilitate reduction in radiation work doses as applicable.

F. Best Practices: Assure the implementation of best practices consistent with recommendations of the American College of Radiology (ACR), Radiological Society of North America (RSNA), the American Association of Physicists in Medicine (AAPM), the Food and Drug Administration (FDA), the Joint Commission, the Accreditation Association for Ambulatory Health Care (AAAHC) and other applicable accrediting agencies to obtain the best image quality with the lowest possible radiation dose and that in all cases assure that the risk of radiation induced injury is minimized.

G. Machine Safety and Compliance: Assure that radiation producing machines are compliant with applicable safety and regulatory standards.

H. Personnel Protection: Assure that lead aprons and other shields are tested regularly for radiation penetration and leakage and are in compliance with applicable safety and regulatory standards.

I. Machine Produced Ionizing Radiation Safety Policies: Review and approve new or updated institutional policies on radiation protection matters involving machine produced radiation.

J. Communication: Assure the distribution and communication of machine produced ionizing radiation safety policies, bulletins, and other documents to applicable University and Hospital clinical and research units, including University and Hospital senior management.

V. SUBCOMMITTEE MEMBERSHIP

Appointments shall be made to the MPRSS by the University Vice President for Medical Affairs. Hospital members may be recommended by the Hospital Senior Management. At least three members of the MPRSS (inclusive of the RSO) shall have dual appointments, serving also on the RSC.

A. Selection of Membership: Membership shall include, but is not limited to, the following positions from the specified areas:

1. Administration

a. School of Medicine Administration
b. Hospital Administration

2. **Clinical Departments - Technical Management (Hospital)**
    a. Senior Manager Imaging Services (Alternate: Manager, Radiation Medicine)
    b. Manager, Cardiology Invasive Procedures
    c. Director of Operating Room (OR)
3. **Clinical Departments and Specialties (University) - *(Representation by Department Chairperson or Division Director (or their designee) is required).***
    a. Cardiology Division *(Dept. of Int. Med.)*
    b. Gastroenterology and Hepatology, Division *(Dept. of Int. Med.)*
    c. Nephrology, Divison of *(Dept. of Int. Med.)*
    d. Neurology, Department of
    e. Neurosurgery, Department of
    f. Orthopaedic Surgery, Department of
    g. Pulmonology, Critical Care and Sleep Medicine, Division of *(Dept. of Int. Med.)*
    h. Radiation Medicine, Department of
    i. Radiology, Department of (Chairman)
    j. Radiology – Computed Tomography (CT)
    k. Radiology – Interventional Radiologist (IR)
    l. Surgery, – Trauma Surgery, Division of (Dept. of Surgery)
    m. Surgery – Vascular Surgery, Division of (Dept. of Surgery)
4. **Clinical Engineering (Hospital)** – Manager
5. **Radiation Medicine (University) -** Chief Medical Physicist
6. **Safety Office (Hospital)** – Hospital Safety Officer
7. **University Office of Environmental Health and Safety**
    a. Radiation Safety Officer
    b. Associate Radiation Safety Officer

B. Other ad hoc Members/Consultants: Additional individuals with technical expertise or relevant institutional responsibility will be utilized as consultants or ad hoc members of the committee on an as-needed basis.

C. Chairperson and Vice Chairperson: The Vice President for Medical Affairs shall appoint the MPRSS Chairperson and Vice Chairperson. The Vice Chairperson shall be selected from among the members to fulfill the role of Acting Chairperson if the Chairperson is not available.

D. Alternate MPRSS Members: Under some circumstances alternate MPRSS members may be appointed for certain MPRSS members. Alternate members may

attend all MPRSS meetings, but only have voting privileges when the Primary MPRSS member that they represent is absent from the meeting.

VI. MPRSS MEETING FREQUENCY

A. Regular Meetings: Meetings are scheduled at least quarterly to facilitate ongoing development and updates of the Machine Produced Ionizing Radiation Safety Program, timely review of ALARA reports, patient doses, IRB protocols, equipment acquisitions and to conduct other committee business.

B. Ad hoc Meetings: To enhance expeditious review of research protocol application submissions or resubmissions between regularly scheduled meetings, including human research protocols, ad hoc meetings will be scheduled as practical, taking into consideration MPRSS membership availability.

C. Cancellation of Regular Meetings: In the event there is no subcommittee business to discuss, the regularly scheduled MPRSS meeting may be cancelled prior to the meeting. Notwithstanding cancellation of a regularly scheduled meeting, ad hoc meetings will be scheduled if needed.

D. Quorum: A quorum is required in order to conduct routine committee business. In order to establish a quorum:

1. The number of committee members present must equal at least six.
2. The Committee Chairperson or Vice Chairperson must be present.
3. The Radiation Safety Officer, or his designee, must be present.
4. A University Management representative must be present.
5. A Hospital Management representative must be present.

E. Electronic Mail Balloting/Voting: The MPRSS may implement an electronic mail (Email) ballot procedure when it is necessary to act on matters between subcommittee meetings. Decisions made via Email ballot shall be discussed and ratified during the next regular meeting. These Email ballot decisions do not constitute a meeting.

VII. MPRSS REPORTING

A. Meeting Minutes: Minutes of the MPRSS Meetings shall be provided to the MPRSS Membership, the RSC, the University's Vice President for Medical Affairs and Hospital Senior Management.

B. Annual Reports: Annual Reports regarding the MPRSS issues during the year shall be provided to the RSC, the Vice President for Medical Affairs, and Hospital senior management.

VIII. CONFIDENTIALITY

Each member of the Machine Produced Radiation Safety Subcommittee will adhere to a written confidentiality agreement.

IX. CONFLICT OF INTEREST

Each member of the MPRSS is subject to the provisions of applicable University and/or Hospital Conflict of Interest Policies.

X. MEMBERSHIP TERMS

Appointments to the MPRSS shall generally be for three-year renewable terms.

XI. REFERENCES

1. University Policy on Radiation Safety Committee (RSC) dated September 3, 2015 and approved on September 10, 2015; http://www.slu.edu/Documents/research/Research_Home/Policies/RadiationSafetyCommitteePolicy2015Sept10.pdf
2. American College of Radiology White Paper on Radiation Dose in Medicine, 2007: http://www.acr.org/~/media/ACR/Documents/PDF/QualitySafety/Radiation%20Safety/WhitePaperRadiationDose.pdff
3. Food and Drug Administration (FDA):
   A. Fluoroscopy: http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/MedicalImaging/MedicalX-Rays/ucm115354.htm#benefitsrisks
   B. Medical Imaging: http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/MedicalImaging/MedicalX-Rays/default.htm
   C. Computed Tomography (CT): http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/MedicalImaging/MedicalX-Rays/ucm115317.htm
   D. Mammography: http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/MedicalImaging/MedicalX-Rays/ucm115355.htm
4. The Joint Commission Sentinel Event Alert, Issue 47, August 24, 2011: https://www.jointcommission.org/sea_issue_47/
5. FDA Initiative to Reduce Unnecessary Radiation Exposure from Medical Imaging, February 2010: http://www.fda.gov/Radiation-EmittingProducts/RadiationSafety/RadiationDoseReduction/ucm199994.htm

XII. RECISSION

None

XIII. REVIEW DATE

This charter will be reviewed every 3 years or as-needed. In all cases, Federal and state requirements take precedence over particular provisions of this charter.

APPROVED:

(Signed Copy on File)
Paul Loewenstein
Chairman
Radiation Safety Committee

Date Approved: *November 9, 2016*

APPROVED:

(Signed Copy on File)
Philip O. Alderson, M.D.
Vice President for Medical Affairs
Saint Louis University

Date Approved: *November 10, 2016*