



SAIDEEP HOSPITAL

RADIOLOGY SERVICES

MANUAL

Radiation Safety Policy with Pregnancy Guidelines

Doc No	SDH/RAD/01
Issue No	0
Rev No.	0
Date	26 July 2024
Pages	1 of 4

Purpose:

To ensure the safety of patients, healthcare workers, and visitors from the harmful effects of radiation, with a special focus on protecting pregnant women and fetuses, in compliance with NABH AAC 11 standard and AERB guidelines.

Scope:

This policy applies to all personnel working with or around radiation sources within the hospital, including radiology, nuclear medicine, and radiation therapy departments, with specific guidelines for pregnant staff and patients.

Policy Statement:

The hospital is committed to maintaining radiation exposure As Low As Reasonably Achievable (ALARA) for patients, staff, and the public, including specific measures to protect pregnant women and fetuses. This policy outlines the procedures and safety measures to be followed to minimize radiation risks.

Definitions:

1. **ALARA:** As Low As Reasonably Achievable.
2. **Radiation Worker:** Any individual who works with or around radiation sources.
3. **Non-Radiation Worker:** Any individual within the hospital who does not directly work with radiation sources but may be exposed.
4. **Declared Pregnant Worker:** A radiation worker who has voluntarily informed her employer of her pregnancy.
5. **Fetus:** The developing human from conception to birth.

Responsibilities:

1. **Radiation Safety Officer (RSO):**
 - Ensure compliance with radiation safety regulations and guidelines.
 - Conduct regular training and education for staff.
 - Perform routine inspections and maintenance of radiation equipment.
 - Monitor radiation exposure levels of staff and implement corrective actions as necessary.
 - Provide specific guidance and monitoring for declared pregnant workers.

Recommended By	Signature	Approved By	Signature
Dr. Hrishikesh Kalgaonkar		Dr. S.S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	



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2. Department Heads:

- Ensure departmental adherence to radiation safety protocols.
- Facilitate regular safety audits and compliance checks.

3. All Staff:

- Adhere to radiation safety protocols.
- Report any incidents or unsafe conditions to the RSO immediately.

4. Pregnant Workers:

- Inform the RSO or department head upon confirmation of pregnancy.
- Follow specific radiation safety measures provided by the RSO.

Procedures:

1. Radiation Protection Principles:

- **Justification:** Ensure that any exposure to radiation is justified by the benefits.
- **Optimization:** Apply ALARA principle to minimize exposure.
- **Dose Limitation:** Ensure exposure levels do not exceed the prescribed limits.

2. Radiation Monitoring and Dosimetry:

- Use personal dosimeters for all radiation workers.
- Maintain records of radiation exposure for each worker.
- Conduct regular dose assessments and provide reports to individuals.
- Provide additional monitoring for declared pregnant workers to ensure fetal dose limits are not exceeded.

3. Equipment and Facility Requirements:

- Regularly calibrate and maintain radiation equipment.
- Ensure shielding and safety barriers are in place.
- Conduct routine safety checks and audits.

4. Training and Education:

- Provide initial and annual radiation safety training for all staff.
- Include topics on biological effects of radiation, safe handling procedures, emergency response, and use of personal protective equipment (PPE).
- Provide additional training for pregnant workers on minimizing exposure.

5. Emergency Procedures:

- Develop and implement emergency response procedures for radiation incidents.
- Conduct regular drills and training on emergency procedures.

6. Patient Safety:

- Ensure proper identification and justification of each radiological procedure.
- Use protective shielding for patients wherever possible.
- Provide information to patients about the risks and benefits of radiation exposure.

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- For pregnant patients, assess the necessity of the procedure and explore alternative methods if possible. Use the lowest possible dose if the procedure is essential.
7. **Waste Management:**
- Follow AERB guidelines for disposal of radioactive waste.
 - Ensure proper labeling, storage, and disposal methods are used.
8. **Audit and Review:**
- Conduct regular audits of radiation safety practices.
 - Review and update the radiation safety policy annually or as needed based on new regulations or incidents.

Pregnancy Guidelines:

1. **Declared Pregnant Workers:**
- Upon declaration of pregnancy, the RSO will provide specific guidance to minimize radiation exposure.
 - The fetal dose limit must not exceed 1 mSv during the entire pregnancy.
 - Reassign pregnant workers to tasks with lower radiation exposure if necessary.
 - Ensure additional shielding and monitoring for pregnant workers.
2. **Pregnant Patients:**
- Evaluate the necessity of radiological procedures for pregnant patients and consider alternative methods.
 - If radiological procedures are essential, use the lowest effective dose and apply protective shielding.
 - Inform pregnant patients about potential risks and obtain informed consent.
 - Document all radiation exposure details in the patient's medical record.

Compliance and Reporting:

- Ensure compliance with AERB regulations and NABH standards.
- Report any incidents of radiation overexposure or safety breaches to the RSO and regulatory authorities as required.

References:

- NABH 5th Edition Standards: AAC 11.
- AERB document: "2-Biological-effects-of-radiation-and-operational-quantities.pdf"
- WHO Radiation Protection Guidelines.
- Leonie Munro's "Basics of Radiation Protection: How to Achieve ALARA".

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Appendix:

1. Radiation Safety Training Checklist
2. Incident Report Form
3. Radiation Dosimetry Record Form
4. Audit Checklist for Radiation Safety

This policy should be reviewed periodically and updated in line with new research, technological advancements, and changes in regulations to ensure ongoing compliance and safety.



Approval:

This SOP is approved by

Dr. Kiran Deepak, Radiation Safety Officer
Dr. H.A. Kalgaonkar, Head Of Quality & Safety

Effective Date:

Implementation Will Commence on (26/7/2024), with initial Training sessions scheduled for (30/7/2024)

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Dr. Hrishikesh Kalgaonkar		Dr. S.S. Deepak	
Chief Medical Administrator		Chairman & Managing Director	