

SENSIZATION WORKSHOP ON RADIATION PROTECTION, SAFETY & SECURITY

Responsibilities of facilities in Radiation protection program (Organizational Responsibilities)

FRIDAY 11TH NOVEMBER, 2016.

CHARLES SEKYAYA
RPO, AEC

Content

- Objective
- Radiation Protection Program (RPP)
- Organisational responsibilities in RRP
- Conclusion

Objective

- ❖ To provide a basic understanding of the organizational structure, management and administration of a Radiation Protection Program in diagnostic and interventional radiology department

Radiation Protection Program

The Radiation Protection Program (RPP):-

- Reflects the management's commitment to radiation protection and safety through the management structure, policies, procedures and organizational arrangement commensurate with the nature and extent of the risk
- However, the information required in a RPP is dependent on the nature of the practice.

Organizational responsibilities

Elements of a RPP

- The responsibilities of registrants and licensees and the **allocation** of **responsibilities** between that person and staff concerning radiation protection of the patient, staff and members of the public.
- The designation of controlled or supervised areas
- **Local rules** for staff to follow and the **supervision** of work
- Arrangements for **monitoring** staff and the work place

Organizational responsibilities

- The system for recording and reporting all information relevant to the control of exposures, decisions relating to measures for the protection and safety of staff, patients and members of the public, and the monitoring of individuals.
- The education and training program related to radiation protection and safety.
- Methods for reviewing and periodically auditing the performance of the program, and
- Health surveillance

Organizational responsibilities

The RPP should be used as a tool

- For the development of a safety culture
- to foster a questioning and learning attitude to protection and safety; and
- to discourage Complacency.

Organizational responsibilities

Individuals responsible for implementation of the RPP

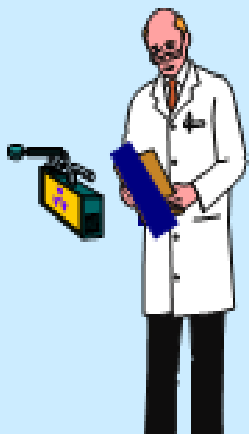
In a dental practice or small radiography facility, effectively only one person might be responsible for the first three positions



Management
(licensee)



Head
Radiology
Department



Radiation Safety
Officer



Staff and
others

Organizational responsibilities

Specific Roles

Licensee/Authorized person

An **Authorized person/licensee** is that person responsible for the **establishment & implementation** of the **technical** and **organizational measures** required for ensuring **protection & safety** for the practices and sources for which the authorization is made and for **compliance** with all applicable legislative requirements.



Organizational responsibilities

Specific roles

Licensee/ Authorized person

- **Establish** the Radiation Protection Program
- **Provide** the necessary **resources** to properly apply the RPP.
- Ensure that the RPP addresses all **phases** of diagnostic and interventional radiology from purchase, installation, maintenance, qualifications and training of users. etc.
- Ensure **appropriate protection** for patients, staff and members of the public

Organizational responsibilities

Specific roles (Licensee/Authorized) cont'd

- Responsible for radiation protection and safety in the organization, including the **appointment** of the **RSO**
- **Delegates** radiation protection and safety functions to the **RSO** and Radiation **Safety Committee**.
- The **RSO** and **Committee**, and other relevant personnel (e.g. qualified expert) have subsidiary responsibilities. However, **overall responsibility remains with the licensees**.

Organizational responsibilities

Radiation Safety Officer (RSO)

A Radiation Safety Officer is an individual who is competent in radiation protection matters as provided for by Section 36 of the AEC Act, to oversee the implementation of the requirements of these regulations and is recognized by Council

Organizational responsibilities

Responsibilities of the RSO

- Supervise operational aspects of the RPP.
- Provide practical advice on the implementation of local rules and procedures.
- Identify training needs and organize training activities.
- Verify that tasks requiring personal accreditation are performed only by staff with that accreditation.
- Identify deficiencies in compliance with the RPP and report them to the registrant or licensee and the Radiation Safety Committee.

Organizational responsibilities

Responsibilities of the RSO (cont)

- Co-operate with Regulatory Authority inspectors and facilitate internal and external audits.
- Participate in selecting and purchasing equipment and in designing facilities (in liaison with the qualified expert)
- Organize and supervise workplace monitoring.
- Maintain records of dose assessment histories and individual exposures.
- Conduct investigations in cases of doses exceeding the prescribed investigation level, and of incidents and accidents

Organizational responsibilities

Responsibilities of Medical Practitioners

Medical practitioners who have been assigned the primary task and obligation of ensuring overall patient protection and safety in the prescription of, and during the delivery of, medical exposure, shall:-

- ensure overall patient protection and safety
- justify diagnostic and interventional procedures using referral criteria.
- establish optimized protocols for diagnostic and interventional procedures in consultations with qualified expert

Organizational responsibilities

Responsibilities of Medical Practitioners (cont)

- Review radiological techniques and examination protocols on a regular basis.
- Determine criteria to manage the examination of pregnant women, pediatric patients, medico-legal procedures, occupational health examinations and medical and biomedical research; and
- Provide evaluation of radiological incidents and accidents from a medical point of view.

Organizational responsibilities

Qualified Expert

“qualified expert” means an individual who by virtue of certification by appropriate boards or societies, professional licence or academic qualification and experience, is **duly recognized by the Council** as having expertise in a relevant field of specialization e.g. **medical physics, radiation protection, occupational health, quality assurance or any relevant engineering or safety specialty;**

Organizational responsibilities

Responsibilities of the Qualified Expert

- Participate in a continuing **review of the radiology facility's resources** (budget, equipment, and staffing), operations, staff training, policies and procedures.
- Participate in **developing requirements and specifications** for the purchase of appropriate x-ray equipment.
- **Plan facilities** in collaboration with the responsible medical practitioner and RSO,.
- Carry out or supervise **equipment acceptance testing**, commissioning and quality control of equipment.

Organizational responsibilities

Responsibilities of the Qualified Expert (cont)

- Establish patient **dose assessment procedures** for the development and assessment of guidance levels
- Advise on and, where necessary, **review x-ray equipment maintenance**
- In conjunction with the RSO, **investigate and evaluate** radiological incidents and accidents.
- Carry out safety assessments related to protection, safety and security of sources

Organizational responsibilities

Maintenance service providers

- Ensure the mechanical and electrical safety of the x-ray equipment.
- Ensure that the x-ray system is maintained to performance standards determined by the manufacturer and/or Council
- Maintain documentation of all work performed on x-ray equipment.

Organizational responsibilities

Manufacturer and Supplier responsibilities

- Demonstrate that the sources and equipment supplied/ manufactured **comply** with International Electrotechnical Commission (IEC) and the International Standards Organization (ISO) or equivalent standards as maybe approved by the Council;
- Ensure that sources and equipment are **tested** to demonstrate compliance with the appropriate specifications

Organizational responsibilities

Suppliers/manufacturers cont'd

- Conduct a **safety assessment**, either generic or specific, for the sources for which they are responsible
- Ensure that performance specifications, operating and maintenance instructions, including protection and safety **instructions**, are provided in **English** and in compliance with the relevant IEC and ISO standards with regard to 'accompanying documents'; and
- Ensure that, the **operating terminology** and **operating values** are displayed on operating consoles or other control systems in the **English** and in the language of the supplier.

Conclusion

- Radiation protection and safety of patients, other workers and the members of the public depends on the commitment by those entrusted to design and implement the RPP
- Everyone must play their roles as documented in the RPP
- Management must provide adequate resources for the effective implementation of the RPP

Apwoyo Matek