

Livewell Southwest

**Radiation – (Ionising Radiations)
Safety Policy**

Version No 1.4

Notice to staff using a paper copy of this guidance

The policies and procedures page of LSW intranet holds the most recent version of this document and staff must ensure that they are using the most recent guidance.

Author: Health, Safety & Security Manager

Asset Number: 778

Reader Information

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| Title | Radiation – (Ionising Radiations) Safety Policy. V 1.4 |
| Asset number | 778 |
| Rights of access | Limited |
| Type of paper | Policy |
| Category | Corporate |
| Document purpose/summary | The requirements of legislation have been translated into a working policy, rules and procedures where ionising radiation is in use. It is the duty of every employee working in areas using radiations to follow this policy, and to be appropriately trained according to their role. |
| Author | Health and Safety Advisor |
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| Publication date | 28 th April 2016 |
| Review date | 28 th April 2019 Three years after publication, or earlier if there is a change in evidence. |
| Disposal date | The PRG will retain an e-signed copy for the archive in accordance with the Retention and Disposal Schedule, all copies must be destroyed when replaced by a new version or withdrawn from circulation. |
| Job title | Health and Safety Advisor |
| Target audience | Any Livewell Southwest staff working in areas using radiations. |
| Circulation | Electronic: Plymouth Healthnet and LSW website Written: Upon request to the Policy Ratification Secretary on ☎ 01752 435104. Please note if this document is needed in other formats or languages please ask the document author to arrange this. |
| Consultation process | Consultation with Radiation Protection Advisor Radiation Protection Supervisor, Dental. Health and Safety Committee |
| Equality analysis checklist completed | A simple Impact Assessment (IA) has been completed |
| References/sources of information | Please see Appendix A |
| Associated documentation | <ul style="list-style-type: none"> • Risk Management Strategy • Health and Safety Policy • Incident Reporting and Investigation Policy • Management of Waste Policy |

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| Supersedes document | V.1.1 By post: Local Care Centre Mount Gould Hospital, 200 Mount Gould Road, Plymouth, Devon. PL4 7PY. Tel: 0845 155 8085, Fax: 01752 272522 (LCC Reception). |
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Document review history

| Version no. | Type of change | Date | Originator of change | Description of change |
|-------------|-------------------|------------|-----------------------------------|--|
| 0:1 | New Policy | 14/01/2010 | Health, Safety & Security Manager | New Policy |
| 0:2 | New Policy | 07/07/2010 | RPA | Reviewed and amended |
| 0.3 | New Policy | 04/08/2010 | Health, Safety & Security Manager | Reviewed and amended following additional information |
| 1 | Ratified | 19/8/2010 | Policy Ratification Group. | |
| 1.1 | Review and update | 1/8/12 | Health, Safety & Security Manager | Reviewed and minor additions and changes made to reflect organisation changes. |
| 1.2 | Extended | 27/8/14 | Health, Safety & Security Manager | Extended no changes. |
| 1.3 | Extended | 1/5/15 | Health, Safety & Security Manager | Extended no changes. |
| 1.4 | Reviewed | 13/4/16 | Health and Safety Advisor | Reviewed and updated to reflect organisational change |

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Radiation – (Ionising Radiations) Safety Policy. V 1.4

1 Introduction

- 1.1 Livewell Southwest is committed to minimising risks to patients, staff, visitors and contractors and the environment from any of Livewell Southwest's uses of ionising radiation, in accordance with relevant legislation and with approved codes of practice issued by the Health & Safety Executive (HSE) and other statutory agencies.

2 Purpose

- 2.1 This policy addresses the following aspects of work with ionising radiation
- Management arrangements
 - Requirements for the clinical uses of ionising radiation
 - Protection of staff and others working with, or affected by radiation in the workplace
- 2.2 This policy excludes workplace exposure to Radon gas which is covered by a separate policy.

3 Duties

- 3.1 The **Chief Executive** is responsible for ensuring implementation of the employer's legal duties surrounding the use of ionising radiations within Livewell Southwest.
- 3.2 The **Executive Director with responsibility for Health & Safety** has the delegated responsibility for the strategic management of radiation within Livewell Southwest.
- 3.3 Livewell Southwest's **Radiation Protection Committee**, reports to the Livewell Southwest Board via the Health, Safety and Security Committee. The Committee reports on Livewell Southwest's responsibilities regarding compliance with legislation and best practice regarding the use of ionising and non-ionising radiations within the premises of Livewell Southwest. The role and membership is defined in the Terms of Reference.
- 3.4 **Directors** and **Service / Unit / Ward Managers** are responsible for:
- 3.4.1 Operational management of Radiation Protection for users of ionising radiation in the area for which they are responsible, including implementation and review of relevant policies and procedures.
- 3.4.2 Risk management surrounding the use of radiations, including ensuring Prior Risk Assessments are performed when introducing new or modified equipment and techniques, and are subject to appropriate review.

- 3.4.3 The safety of all staff, public and contractors in their directorates and departments from exposure to ionising radiation.
 - 3.4.4 Must seek advice from specialist advisors on compliance, and in particular with regard to risk assessment for new or modified equipment and facilities and for new or modified techniques where there is significant risk of staff or public exposure.
 - 3.4.5 Implementation of Departmental Operating Procedures concerning medical exposures in accordance with the Ionising Radiations (Medical Exposure) Regulations 2000.
 - 3.4.6 All staff acting as duty holders under the Ionising Radiations (Medical Exposure) Regulations 2000 are adequately trained, and maintain records of such training.
 - 3.4.7 Safe management of radioactive sources used.
 - 3.4.8 Management of equipment used in relation with work utilising ionising radiation.
 - 3.4.9 Ensuring adequate supervision of work with ionising radiation, and the appointment by the Director of Workforce Development of suitable Radiation Protection Supervisors.
 - 3.4.10 All staff working with ionising radiations receive appropriate training in the nature of the risks to which they may be exposed, and the necessary measures which they must take in accordance with this policy.
 - 3.4.11 Performance of audits to demonstrate compliance in support of clinical governance standards and to support Livewell Southwest assurance under the Care Quality Commission Regulations. Providing evidence and reports of such audits to the Radiation Protection Committee and other Livewell Southwest bodies as required.
 - 3.4.12 Arrangements for the provision of Radiation Protection and Medical Physics Services via ITA/SLA as appropriate.
- 3.5 **Employees** must ensure that in any work they undertake with or in areas utilising ionising radiation, they:
- 3.5.1 Comply with LSW Policies and procedures and local operational policies.
 - 3.5.2 Attend training programmes as required and maintain own competence via recognised programmes of Continuing Professional Development (CPD).
 - 3.5.3 Only undertake work for which they have been adequately trained

and are entitled to do so.

- 3.5.4 Never use equipment on which they have not been trained.
 - 3.5.5 Must wear as directed, and return as required, any personal dose meter issued.
 - 3.5.6 Report any incident immediately in line with Livewell Southwest's Incident Reporting Policy.
 - 3.5.7 Do not recklessly endanger the safety of others.
 - 3.5.8 Should advise managers as soon as possible that they are pregnant so that appropriate precautions can be taken.
- 3.6 The **Radiation Protection Advisor** (RPA) is a specialist in radiation protection and is formally appointed by Livewell Southwest as required by Ionising Radiations legislation. The RPA is accountable to the Chief Executive to advise Livewell Southwest in respect of Radiation Protection policy formulation and development and to give impartial professional advice to senior management and to employees.
- 3.7 **Radiation Protection Supervisor** (RPS) is responsible for monitoring compliance with Local Rules and safety procedures in the areas which they are appointed, as detailed in relevant job descriptions.
- 3.8 **Medical Physics Experts** are responsible for providing advice on optimisation of medical exposures as detailed in the procedures for medical exposures.
- 3.9 The **Head of Corporate Risk and Compliance** is responsible for ensuring matters relating to the safe use of ionising and non-ionising radiations are considered within Livewell Southwest's contingency arrangements for major incidents.

4 Definitions

- 4.1 The term "ionising radiation" includes the radiation from external x-ray and electron beam generating equipment, as well as radiopharmaceuticals and other sealed or unsealed ionising radiation sources.
- 4.2 A "Radiation Protection Advisor" is defined by IRR99 as an individual who meets the criteria of competence specified by the Health & Safety Executive.
- 4.3 A "Medical Physics Expert" (MPE) is defined in the Ionising Radiation (Medical Exposure) Regulations IR(ME)R 2000 and in paragraphs 2.41-2.44 of the Medical and Dental Guidance Notes (MDGN) as a registered clinical scientist with the qualifications and experience in the application of physics to diagnostic and therapeutic uses of ionising radiation.
- 4.4 "Radiation Protection Supervisors" are appointed by Livewell Southwest for

the purpose of securing compliance with IRR99 in respect of work carried out in any area made subject to Local Rules.

5 Operational Guidelines

5.1 Matters upon which the RPA should be consulted

- 5.1.1 Appointment of Radiation Protection Supervisors.
- 5.1.2 Details of quality assurance programmes.
- 5.1.3 Implication of changes in equipment performance in relation to doses to patients & others.
- 5.1.4 Instances of suspected or known failures of equipment or systems where staff or patients may have received a significant dose (or a group of people a smaller excess dose).
- 5.1.5 Prior to use of any radioactive materials, or of equipment containing radioactive sources.
- 5.1.6 Precautions required by staff working with radiation and who become pregnant.
- 5.1.7 Design of rooms / facilities where equipment or procedures using ionising radiation are to be carried out.
- 5.1.8 Prior risk assessment before undertaking any new activity involving ionising radiation,
- 5.1.9 Monitoring programmes for controlled and supervised areas.
- 5.1.10 Requirements for protective clothing for staff and others working in controlled areas.
- 5.1.11 Installation and maintenance of new radiation equipment and sources.
- 5.1.12 Personnel monitoring arrangements, results and investigation levels
- 5.1.13 Choice of, checking and calibration of radiation measurement equipment.
- 5.1.14 Staff training.

5.2 Local Rules

- 5.2.1 Local Rules must be implemented in each Controlled or Supervised Area.
- 5.2.2 Local Rules must be drawn up in consultation with the RPS and RPA.

5.2.3 Local Rules must contain the essential requirements, as detailed in Approved Code Of Practice (ACOP) paragraph 278:

- the dose investigation level specified for the purposes of regulation 8(7);
- identification or summary of any contingency arrangements indicating the reasonably foreseeable accidents to which they relate (regulation 12(2));
- name(s) of the appointed radiation protection supervisor(s) (regulation 17(4));
- the identification and description of the area covered, with details of its designation (regulation 18(1)); and
- an appropriate summary of the working instructions, including the written arrangements relating to non-classified persons entering or working in controlled areas (regulation 18(2) and the ACOP advice in paragraph 272).

5.3 X-Ray Equipment

5.3.1 X-ray equipment at each radiological installation must be limited to the amount necessary for the proper carrying out of medical exposures at that installation.

5.3.2 The Medical Physics Expert must be involved in procurement of any x-ray equipment.

5.3.3 All x-ray equipment must be subject to appropriate quality assurance programmes which ensure:

- testing before use
- routine quality control tests
- tests following maintenance and before return to clinical use

5.4 Medical Exposures

5.4.1 Departmental Operating Procedures implemented at local level under IR(ME)R must contain, as a minimum, procedures detailed in Schedule 1 of the regulations:

- procedures to identify correctly the individual to be exposed to ionising radiation;
- procedures to identify individuals entitled to act as referrer or practitioner or operator;
- procedures to be observed in the case of medico-legal exposures;
- procedures for making enquiries of females of childbearing age to establish whether the individual is or may be pregnant or breastfeeding;

- procedures to ensure that quality assurance programmes are followed;
- procedures for the assessment of patient dose and administered activity;
- procedures for the use of diagnostic reference levels established by the employer for radio-diagnostic examinations falling within regulation 3(a), (b), (c) and (e), specifying that these are expected not to be exceeded for standard procedures when good and normal practice regarding diagnostic and technical performance is applied;
- procedures for determining whether the practitioner or operator is required to effect one or more of the matters set out in regulation 7(4) including criteria on how to effect those matters and in particular procedures for the use of dose constraints established by the employer for biomedical and medical research programmes falling within regulation 3(d) where no direct medical benefit for the individual is expected from the exposure;
- procedures for the giving of information and written instructions as referred to in regulation 7(5);
- procedures for the carrying out and recording of an evaluation for each medical exposure including, where appropriate, factors relevant to patient dose;
- procedures to ensure that the probability and magnitude of accidental or unintended doses to patients from radiological practices are reduced so far as reasonably practicable.

5.5 Incidents involving suspected or known over-exposure of staff or patients

5.5.1 Any case of a suspected or known over-exposure of a patient or a member of staff must be brought to the immediate attention of the RPS and the relevant Head of Service and Locality Manager. The RPA must be informed as soon as possible. All information concerning the incident must be written down by those involved and an incident report completed and notified immediately to the Risk Management Team.

5.5.2 To facilitate the management of 'radiation incidents':

- All incidents must be immediately investigated by the RPS in consultation with the RPA and the Head of Service. The RPS shall produce and incident report for the Risk Management Team.
- The RPA will provide any urgent advice to The Livewell Southwest Board. The RPA will produce a report detailing recommendations and provide this report to Livewell Southwest Board and the Radiation Protection Committee;

- The advice and recommendations to be considered promptly by Livewell Southwest Board and for the agreed course of action to mitigate the future occurrence of such incidents;
- The Chief Executive (through the Corporate Risk and Compliance Team) will notify any regulatory agency if this is required and on the basis of advice from the RPA.

5.6 Uses of Radioactive Sources

5.6.1 There is currently no use of radioactive sources on LSW premises, and as such no LSW premises are licensed by the Environment Agency in accordance with the Environmental Permitting (England and Wales) Regulations 2010. Any intended use of radioactive sources must be approved by the **Executive Director with responsibility for Health & Safety**, and subject to the necessary permits and regulatory compliance being implemented. The RPA must be consulted on any plans for use of radioactive sources.

6 Monitoring Compliance and Effectiveness

- 6.1 The Radiation Protection Committee conducting its constitutional business will perform an annual review of this policy.
- 6.2 Managers will provide assurance data as requested by the Radiation Protection Committee.
- 6.3 Annual reports received by the Radiation Protection Committee are detailed in the terms of reference.
- 6.4 Managers will ensure that radiation protection responsibilities are included in the appraisals and personal development plans of their staff, and ensure clinical audit programmes within services consider matters relating to the safe use of ionising radiation.
- 6.5 All written procedures relating to radiation work must be controlled documentation within an appropriate quality system, with a version, issue date and authorising signature on them. For high risk areas, external accreditation of the quality system is desirable (i.e. inter-departmental audit, ISO2001:2000).
- 6.6 All written procedures relating to work with ionising and non-ionising radiations must be reviewed at least once every two years or sooner if changes occur.

All policies are required to be electronically signed by the Lead Director. Proof of the electronic signature is stored in the policies database.

The Lead Director approves this document and any attached appendices. For operational policies this will be the Locality Manager.

The Executive signature is subject to the understanding that the policy owner has followed the organisation process for policy Ratification.

Signed: Director of Professional Practice Safety & Quality

Date: 26th April 2016

Appendix A

References

- The Health and Safety at Work Act 1974
- The Ionising Radiation Regulations 1999
- The Ionising Radiation (Medical Exposure) Regulations 2000 and Amendment Regulations 2006
- The Environmental Permitting (England and Wales) Regulations 2010
- The Medicines (Administration of Radioactive Substances) Regulations 1978
- The Activity Sealed Radioactive Sources and Orphan Sources Regulations 2005
- The High Activity Sealed Sources and Orphan Sources Regulations 2005
- The Radiation (Emergency Preparedness and Public Information) Regulations 2001
- The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009
- “Working with Ionising Radiation” (L121) – Approved Code of Practice for the Ionising Radiations Regulations 1999
- Notes for Guidance on the Clinical Administration of Radiopharmaceuticals and Use of Sealed Radioactive Sources – March 2006
- Medical & Dental Guidance Notes