# Measure an individual's healthcare radiation exposure to minimise risk



#### **Overview**

This standard relates to the use of a range of methods to measure and record radiation exposure to individuals to minimise the risks. These individuals include staff, and individuals receiving radiation during diagnostic or therapeutic activities. Individuals undertaking this function may liaise closely with their relevant others to confirm accuracy of information and compliance with relevant legislation.

Users of this standard will need to ensure that practice reflects up to date information and policies.

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## Performance criteria

#### You must be able to:

- P1 the policies and guidance that clarify your scope of practice, accountabilities and the working relationship between yourself and others
- P2 work within your level of competence, responsibility and accountability
- P3 confirm sources of radiation and likely type of exposure for all individuals within the controlled radiation environments
- P4 confirm that all required procedures and associated safety measures are current and compliant with relevant legislation
- P5 ensure measurement devices are operating at the required performance level to give an accurate and traceable measure of radiation
- P6 apply appropriate health and safety measures and standard precautions for infection prevention and control during the measurement process
- P7 use relevant methodologies to measure radiation sources applied to recipients suitable to the source, type of exposure, dose and level of risk
- P8 where appropriate to work practice, ensure radiation activity is below safety guidance limits before recipients of radiation are discharged or released from controlled areas
- P9 check individuals and/or relevant others understand the possible side effects from radiation exposure
- P10 undertake appropriate measurements within the controlled environments and surrounding environment to ensure radiation exposure safety limits are not exceeded
- P11 determine and assess the appropriateness of the projected radiation exposure over a suitable period of time for an individual and/or the controlled area and surrounding environment
- P12 record the results of measurements accurately and in correct format, referencing the measurements to accepted published values to indicate the controlled area is operating within accepted parameters in line with current legislation and organisational requirements
- P13 report actual and potential risks from radiation, in context, to other healthcare professionals and where appropriate seek assistance and advice
- P14 maintain full, accurate and legible records of information and store in correct location in line with current legislation, guidelines, local policies and protocols

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## Knowledge and understanding

You need to know and understand:

- K1 your own level of competence, authority and specialist knowledge base
- K2 the range of stakeholders involved and their information needs related to measuring the range of radiation within controlled designated radiation workplace areas and where, when and how to seek advice and support
- K3 the requirements for classification of workers and the acceptable exposure dose limits in line with current legislation and organisational requirements
- K4 how to communicate and provide advice, guidance and information effectively in the appropriate medium to meet individuals needs and preferences for the measurement of radiation exposure
- K5 the range, type and dose of radiation used within diagnostic or therapeutic activities within the work area
- K6 the range of acceptable exposure limits to recipients and the occupational exposure limits for staff within your work practice in line with current legislation and organisational requirements
- K7 the appropriate methodologies for the estimation of dose and exposure over time for both staff and recipients
- K8 the implications of incorrect or incomplete measurements of radiation exposure dose and times and the consequences of this for the recipient and/or staff
- K9 where appropriate to work practice, how to calculate an individual's dose requirement to balance minimising risks of exposure against planned intervention objectives and the required procedures of the dosimetry calibration
- K10 where appropriate to work practice, the importance of ensuring the recipients and their relevant others understand the effects of radiation exposure
- K11 the importance and requirements for personal safety measurements applicable to the work practice activities
- K12 the range, type and operation of suitable measurement devices available and their limitations for personal occupational monitoring and monitoring recipients following radiation exposure
- K13 how to ensure key stakeholders understand how to check their personal monitoring devices and the significance and implications of reaching maximum exposure measurements within unexpected timeframes
- K14 the factors and circumstances of the working environment that contribute to radiation exposure and the importance of environmental monitoring
- K15 how to undertake environmental monitoring of controlled work areas and the surrounding area, the acceptable limits and the implications and consequences of adverse results and who to inform
- K16 the current legislation, national guidelines, organisational policies and protocols, clinical and information governance related to radiation that

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affect your work practice

K17 the policies and guidance that clarify your scope of practice, accountabilities and the working relationship between yourself and others

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### **Additional Information**

### **External Links**

This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):

Dimension: Core 3 Health, safety and security

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