
Standards of proficiency

Radiographers

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Foreword

We are pleased to present the Health and Care Professions Council's standards of proficiency for radiographers.

We first published standards of proficiency for radiographers when our Register opened in July 2003. We published revised standards in 2007. We review the standards regularly to look at how they are working and to check whether they continue to reflect current practice in the professions we regulate.

These new revised standards are a result of our most recent review of the standards of proficiency. As a result of the first stage of the review, and the results of a public consultation, we have revised our generic standards which apply to all the professions we regulate. The revised standards are now based around 15 generic statements. This new structure means that we can retain the standards which are shared across all the professions we regulate, whilst allowing us more flexibility in describing the detailed standards which are specific to individual professions.

The profession-specific standards for radiographers included in this document were developed with the input of the relevant professional body and the views of all stakeholders during a further public consultation. The review process and consultation produced valuable feedback and we are grateful to all those who gave their time to help us in shaping the new standards.

We have made a small number of changes to the standards overall, mainly to reflect developments in education and practice, to clarify our intentions and to correct any errors or omissions. We have also made some minor changes to the introduction, in particular, to explain the language we use in the standards.

We are confident that the standards are fit for purpose and reflect safe and effective professional practice in radiography.

These standards are effective from Tuesday 28 May 2013.

Introduction

This document sets out the standards of proficiency. These standards set out safe and effective practice in the professions we regulate. They are the threshold standards we consider necessary to protect members of the public. They set out what a student must know, understand and be able to do by the time they have completed their training, so that they are able to apply to register with us. Once on our Register you must meet those standards of proficiency which relate to the areas in which you work.

We also expect you to keep to our standards of conduct, performance and ethics and standards for continuing professional development. We publish these in separate documents, which you can find on our website.

The standards of proficiency in this document include both generic elements, which apply to all our registrants, and profession-specific elements which are relevant to registrants belonging to one of the professions we currently regulate. The generic standards are written in **bold**, and the profession-specific standards are written in plain text. [Standards specific to diagnostic or therapeutic radiographers are written in blue text.](#)

We have numbered the standards so that you can refer to them more easily. The standards are not hierarchical and are all equally important for practice.

A note about our expectations of you

You must meet all the standards of proficiency to register with us and meet the standards relevant to your scope of practice to stay registered with us.

It is important that you read and understand this document. If your practice is called into question we will consider these standards (and our standards of conduct, performance and ethics) in deciding what action, if any, we need to take.

The standards set out in this document complement information and guidance issued by other organisations, such as your professional body or your employer. We recognise the valuable role played by professional bodies in providing guidance and advice about good practice which can help you to meet the standards in this document.

Your scope of practice

Your scope of practice is the area or areas of your profession in which you have the knowledge, skills and experience to practise lawfully, safely and effectively, in a way that meets our standards and does not pose any danger to the public or to yourself.

We recognise that a registrant's scope of practice will change over time and that the practice of experienced registrants often becomes more focused and specialised than that of newly registered colleagues. This might be because of specialisation in a certain area or with a particular client group, or a movement into roles in management, education or research. Every time you renew your registration, you will be asked to sign a declaration that you continue to meet the standards of proficiency that apply to your scope of practice.

Your particular scope of practice may mean that you are unable to continue to demonstrate that you meet all of the standards that apply for the whole of your profession.

As long as you make sure that you are practising safely and effectively within your given scope of practice and do not practise in the areas where you are not proficient to do so, this will not be a problem. If you want to move outside of your scope of practice, you should be certain that you are capable of working lawfully, safely and effectively. This means that you need to exercise personal judgement by undertaking any necessary training and experience, before moving into a new area of practice.

Meeting the standards

It is important that you meet our standards and are able to practise lawfully, safely and effectively. However, we do not dictate how you should meet our standards. There is normally more than one way in which each standard can be met and the way in which you meet our standards might change over time because of improvements in technology or changes in your practice.

We often receive questions from registrants who are concerned that something they have been asked to do, a policy, or the way in which they work might mean they cannot meet our standards. They are often worried that this might have an effect on their registration.

As an autonomous professional, you need to make informed, reasoned decisions about your practice to ensure that you meet the standards that apply to you. This includes seeking advice and support from education providers, employers, colleagues, professional bodies, unions and others to ensure that the wellbeing of service users is safeguarded at all times. So long as you do this and can justify your decisions if asked to, it is very unlikely that you will not meet our standards.

Language

We recognise that our registrants work in a range of different settings, which include direct practice, management, education, research and roles in industry. We also recognise that the use of terminology can be an emotive issue.

Our registrants work with very different people and use different terms to describe the groups that use, or are affected by, their services. Some of our registrants work with patients, others with clients and others with service users. The terms that you use will depend on how and where you work. We have used terms in these standards which we believe best reflect the groups that you work with.

In the standards of proficiency, we use phrases such as 'understand', 'know', and 'be able to'. This is so the standards remain applicable to current registrants in maintaining their fitness to practise, as well as prospective registrants who have not yet started practising and are applying for registration for the first time.

These standards may change in the future

We have produced these standards after speaking to our stakeholders and holding a formal public consultation.

We will continue to listen to our stakeholders and will keep our standards under continual review. Therefore, we may make further changes in the future to take into account changes in practice.

We will always publicise any changes to the standards that we make by, for instance, publishing notices on our website and informing professional bodies.

Standards of proficiency

Registrant radiographers must:

1 be able to practise safely and effectively within their scope of practice

- 1.1 know the limits of their practice and when to seek advice or refer to another professional
- 1.2 be able to manage their own workload and resources effectively and be able to practise accordingly

2 be able to practise within the legal and ethical boundaries of their profession

- 2.1 understand the need to act in the best interests of service users at all times
- 2.2 understand what is required of them by the Health and Care Professions Council
- 2.3 understand the need to respect and uphold the rights, dignity, values, and autonomy of service users including their role in the diagnostic and therapeutic process and in maintaining health and wellbeing
- 2.4 recognise that relationships with service users should be based on mutual respect and trust, and be able to maintain high standards of care even in situations of personal incompatibility
- 2.5 know about current legislation applicable to the work of their profession
- 2.6 be able to practise in accordance with current legislation governing the use of ionising and non-ionising radiation for medical and other purposes
- 2.7 understand the importance of and be able to obtain informed consent
- 2.8 be able to exercise a professional duty of care
- 2.9 understand the legislative, policy, ethical and research frameworks that underpin, inform and influence the practice of radiography

3 be able to maintain fitness to practise

- 3.1 understand the need to maintain high standards of personal and professional conduct
- 3.2 understand the importance of maintaining their own health
- 3.3 understand both the need to keep skills and knowledge up to date and the importance of life-long learning

4 be able to practise as an autonomous professional, exercising their own professional judgement

- 4.1 be able to assess a professional situation, determine the nature and severity of the problem and call upon the required knowledge and experience to deal with the problem
- 4.2 be able to make reasoned decisions to initiate, continue, modify or cease radiotherapy treatment or diagnostic imaging examinations and record the decisions and reasoning appropriately
- 4.3 be able to initiate resolution of problems and be able to exercise personal initiative
- 4.4 recognise that they are personally responsible for and must be able to justify their decisions
- 4.5 be able to make and receive appropriate referrals
- 4.6 understand the importance of participation in training, supervision and mentoring

5 be aware of the impact of culture, equality, and diversity on practice

- 5.1 understand the requirement to adapt practice to meet the needs of different groups and individuals
- 5.2 understand the emotions, behaviours and psychosocial needs of people undergoing radiotherapy or diagnostic imaging, as well as that of their families and carers
- 5.3 be able to provide appropriate information and support for service users throughout their radiotherapy treatment and care or diagnostic imaging examinations

6 be able to practise in a non-discriminatory manner

7 understand the importance of and be able to maintain confidentiality

- 7.1 be aware of the limits of the concept of confidentiality
- 7.2 understand the principles of information governance and be aware of the safe and effective use of health and social care information
- 7.3 be able to recognise and respond appropriately to situations where it is necessary to share information to safeguard service users or the wider public

8 be able to communicate effectively

- 8.1 be able to demonstrate effective and appropriate verbal and non-verbal skills in communicating information, advice, instruction and professional opinion to service users, colleagues and others
- 8.2 be able to communicate in English to the standard equivalent to level 7 of the International English Language Testing System, with no element below 6.5¹
- 8.3 understand how communication skills affect assessment and engagement of service users and how the means of communication should be modified to address and take account of factors such as age, capacity, learning ability and physical ability
- 8.4 be aware of the characteristics and consequences of verbal and non-verbal communication and how this can be affected by factors such as age, culture, ethnicity, gender, socio-economic status and spiritual or religious beliefs
- 8.5 understand the need to provide service users or people acting on their behalf with the information necessary to enable them to make informed decisions

¹ The International English Language Testing System (IELTS) tests competence in the English language. Applicants who have qualified outside of the UK, whose first language is not English and who are not nationals of a country within the European Economic Area (EEA) or Switzerland, must provide evidence that they have reached the necessary standard. Please visit our website for more information.

- 8.6 understand the need to assist the communication needs of service users such as through the use of an appropriate interpreter, wherever possible
- 8.7 recognise the need to use interpersonal skills to encourage the active participation of service users
- 8.8 be able to advise other healthcare professionals about the relevance and application of radiotherapy or imaging modalities to the service user's needs
- 8.9 be able to formulate and provide information to service users about the treatment or imaging process and procedures, with regular reappraisal of their information needs, as appropriate

9 be able to work appropriately with others

- 9.1 be able to work, where appropriate, in partnership with service users, other professionals, support staff and others
- 9.2 understand the need to build and sustain professional relationships as both an independent professional and collaboratively as a member of a team
- 9.3 understand the need to engage service users and carers in planning and evaluating their diagnostic imaging and interventional procedures or their radiotherapy pre-treatment planning, treatment and follow-up
- 9.4 be aware of the need to empower service users to participate in the decision-making processes related to their radiotherapy or diagnostic imaging examination
- 9.5 be able to contribute effectively to work undertaken as part of a multi-disciplinary team
- 9.6 be able to understand, interpret and act upon information from other healthcare professionals, in order to maximise health gain whilst minimising radiation dose to the service user

10 be able to maintain records appropriately

- 10.1 be able to keep accurate, comprehensive and comprehensible records in accordance with applicable legislation, protocols and guidelines
- 10.2 recognise the need to manage records and all other information in accordance with applicable legislation, protocols and guidelines

11 be able to reflect on and review practice

- 11.1 understand the value of reflection on practice and the need to record the outcome of such reflection
- 11.2 recognise the value of multidisciplinary team reviews and other methods of review

12 be able to assure the quality of their practice

- 12.1 be able to engage in evidence-based practice, evaluate practice systematically, and participate in clinical and other audit procedures
- 12.2 be able to gather feedback and information that helps to evaluate the response of service users to their care
- 12.3 understand the principles of quality control and quality assurance as they apply to the practice of diagnostic or therapeutic radiography
- 12.4 be aware of the role of audit and review in quality management, including quality control, quality assurance and the use of appropriate outcome measures
- 12.5 be able to maintain an effective audit trail and work towards continual improvement
- 12.6 be aware of, and be able to participate in, quality assurance programmes, where appropriate
- 12.7 recognise the need to monitor and evaluate the quality of practice and the value of contributing to the generation of data for quality assurance and improvement programmes

13 understand the key concepts of the knowledge base relevant to their profession

- 13.1 understand the philosophy underpinning the development of the profession of radiography
- 13.2 understand the concept of leadership and its application to practice
- 13.3 understand the role of the radiographer in the promotion of health and health education in relation to healthy living and health screening for disease detection
- 13.4 recognise the role of other professions and services in health and social care
- 13.5 understand the structure and function of the human body, together with knowledge of health, disease, disorder and dysfunction relevant to their profession
- 13.6 understand the radiobiological principles on which the practice of radiography is based
- 13.7 understand the risk-benefit philosophy and principles involved in the practice of diagnostic or therapeutic radiography
- 13.8 be aware of the principles and applications of scientific enquiry, including the evaluation of treatment efficacy and the research process
- 13.9 understand and be able to apply the physical principles of ionising radiation production, interaction with matter, beam modification and radiation protection for diagnostic imaging or radiotherapy treatment
- 13.10 know the physical and scientific principles on which image formation using ionising and non-ionising radiation is based
- 13.11 understand radiation dosimetry and the principles of dose calculation
- 13.12 understand the theoretical basis underpinning patient assessment prior to and during radiotherapy or diagnostic imaging examinations

- 13.13 understand the capability, applications and range of technological equipment used in diagnostic imaging or radiotherapy
- 13.14 be able to distinguish between normal and abnormal appearances evident on images
- 13.15 know the concepts and principles involved in the practice of diagnostic imaging or radiotherapy and how these inform and direct clinical judgement and decision making
- 13.16 know the pharmacology of drugs used in diagnostic imaging or during radiotherapy treatments
- 13.17 understand the methods of administration of drugs
- 13.18 be able to remove and re-apply dressings and supports appropriately and in a safe, effective and considerate manner
- 13.19 understand the quality assurance processes in place within diagnostic imaging or radiotherapy
- 13.20 be aware of the current developments and trends in the science and practice of radiography

Diagnostic radiographers only

- 13.21 understand the structure and function of the human body in health, disease and trauma, as well as common pathologies and mechanisms of disease and trauma, including the:
 - musculoskeletal system
 - soft tissue organs
 - regional and cross-sectional anatomy of the head, neck, thorax, pelvis and abdomen
 - the cardiovascular, respiratory, genito-urinary, gastro-intestinal and neuro-endocrine systems
- 13.22 understand the signs and symptoms of disease and trauma that result in referral for diagnostic imaging procedures

Therapeutic radiographers only

- 13.23 understand the structure and function of the human body in health and disease, including:
- regional and cross-sectional anatomy of the head, neck, thorax, pelvis and abdomen
 - common pathologies and mechanisms of disease with a concentration on cancer, histology, haematology and the lymphatic and immune systems
- 13.24 understand:
- oncology, the pathophysiology of solid and systemic malignancies
 - epidemiology
 - aetiology
 - the management and effect of cancer
- 13.25 know the physiological signs and symptoms, clinical investigations and diagnostic procedures that result in referral for radiotherapy
- 13.26 know the biochemical science of radiation pathophysiology
- 13.27 understand the influence of adjuvant treatment including surgery and chemotherapy on radiotherapy dose prescription, timing of radiotherapy and post radiotherapy complications
- 14 be able to draw on appropriate knowledge and skills to inform practice**
- 14.1 be able to conduct appropriate diagnostic or monitoring procedures, treatment, therapy or other actions safely and accurately
- 14.2 be able to formulate specific and appropriate management plans including the setting of timescales
- 14.3 be able to assess, monitor and care for the service user before, during and after diagnostic imaging procedures or radiotherapy treatments
- 14.4 be able to use independent methods to establish and confirm service user identity prior to undertaking diagnostic imaging procedures or delivering radiotherapy treatments

- 14.5 be able to undertake or arrange investigations as appropriate
- 14.6 be able to undertake and record a thorough, sensitive and detailed clinical assessment, selecting and using appropriate techniques and equipment
- 14.7 be able to gather appropriate information
- 14.8 be able to use physical, graphical, verbal and electronic methods to collect and analyse information from a range of sources including service user's clinical history, diagnostic images and reports, pathological tests and results, dose recording and treatment verification systems
- 14.9 be able to interrogate and process data and information gathered accurately in order to conduct the imaging procedure or radiotherapy most appropriate to the service user's needs
- 14.10 be able to appraise image information for clinical manifestations and technical accuracy, and take further action as required
- 14.11 be able to manage complex and unpredictable situations including the ability to adapt planned diagnostic imaging examinations, interventions or treatments
- 14.12 be able to demonstrate a logical and systematic approach to problem solving
- 14.13 be able to change their practice as needed to take account of new developments, technologies and changing contexts
- 14.14 be able to use research, reasoning and problem solving skills to determine appropriate actions
- 14.15 be aware of a range of research methodologies
- 14.16 recognise the value of research to the critical evaluation of practice
- 14.17 be able to evaluate research and other evidence to inform their own practice
- 14.18 be able to operate radiotherapy or diagnostic imaging equipment safely and accurately

- 14.19 be able to demonstrate spatial awareness, visual precision and manual dexterity in the precise and safe manipulation of treatment units or imaging equipment and related accessory equipment
- 14.20 be able to check that equipment is functioning accurately and within the specifications, and to take appropriate action in the case of faulty functioning and operation
- 14.21 be able to use information and communication technologies appropriate to their practice
- 14.22 be able to apply the risk-benefit philosophy to radiation exposure to protect both individual service users and the population gene pool
- 14.23 be able to select and explain the rationale for examination and treatment techniques and immobilisation procedures appropriate to the service user's physical and disease management requirements
- 14.24 be able to position and immobilise service users correctly for safe and accurate diagnostic imaging examinations or radiotherapy treatments

Diagnostic radiographers only

- 14.25 be able to plan appropriate diagnostic imaging examinations
- 14.26 be able to calculate radiation doses and exposures and record and understand the significance of radiation dose
- 14.27 be able to perform the full range of standard imaging techniques and contrast agent examinations, including those undertaken on service users suffering from acute trauma, and where the service user's medical, physical or mental health needs require examinations to be carried out in non-standard imaging environments
- 14.28 be able to manipulate exposure and image recording parameters to optimal effect
- 14.29 be able to use to best effect the processing and related technology supporting imaging systems

- 14.30 be able to manage and assist with fluoroscopic diagnostic and interventional procedures, including those that are complex and involve the use of contrast agents
- 14.31 be able to perform a standard head computed tomographic (CT) examination, assist with CT examinations of the spine, chest and abdomen in acute trauma, and to contribute effectively to other CT studies
- 14.32 be able to assist with standard magnetic resonance imaging procedures
- 14.33 be able to assist with ultrasound imaging procedures
- 14.34 be able to assist with imaging procedures involving the use of radionuclides
- 14.35 be able to distinguish disease and trauma processes as they manifest on diagnostic images

Therapeutic radiographers only

- 14.36 be able to plan appropriate radiotherapy procedures
- 14.37 be able to generate a treatment plan and verify treatment parameters ensuring optimal radiotherapy prescription delivery
- 14.38 be able to use to best effect the image processing and related technology, including computer-based imaging systems for radiotherapy purposes
- 14.39 be able to perform the full range of radiotherapy processes and techniques accurately and safely
- 14.40 be able to calculate radiation doses and exposures
- 14.41 be able to scrutinise and interpret the radiation prescription in such a way that radiotherapy is delivered accurately and reproducibly
- 14.42 be able to manage and assist with fluoroscopic procedures, including those requiring the use of contrast agents
- 14.43 be able to assist in performing standard computed tomographic (CT) planning procedures

- 14.44 be able to assist in the construction of appropriate immobilisation devices, individualised to the specific needs of each patient and the treatment regime prescribed
- 14.45 be able to undertake complex radiation dose delivery calculations involving a range of radiation types and energies
- 14.46 be able to localise the target volume precisely in relation to external surface and anatomical reference markings using a range of techniques including computed tomography and magnetic resonance imaging
- 14.47 be able to manipulate exposure and image recording parameters to optimal effect and interpret and evaluate images obtained during radiotherapy planning and treatment
- 14.48 be able to interpret and evaluate images obtained during radiotherapy planning and treatment
- 14.49 be able to identify organs at risk on images to provide information for radiotherapy treatment planning
- 14.50 be able to recognise changing signs, symptoms and progression of disease, and make appropriate decisions not to treat or to review further before proceeding with treatment

15 understand the need to establish and maintain a safe practice environment

- 15.1 understand the need to maintain the safety of both service users and those involved in their care
- 15.2 be aware of applicable health and safety legislation, and any relevant safety policies and procedures in force at the workplace, such as incident reporting and be able to act in accordance with these
- 15.3 understand the need to ensure the physical and radiation safety of all individuals in the immediate work environment at all times
- 15.4 be able to establish safe environments for practice, which minimise risks to service users, those treating them and others, including the use of hazard control and particularly infection control

- 15.5 be able to work safely, including being able to select appropriate hazard control and risk management, reduction or elimination techniques in a safe manner and in accordance with health and safety legislation
- 15.6 be able to select appropriate personal protective equipment and use it correctly
- 15.7 be able to use basic life support techniques and be able to deal safely with clinical emergencies
- 15.8 know and be able to apply appropriate moving and handling techniques
- 15.9 know the correct principles and applications of disinfectants, methods for sterilisation and decontamination, and for dealing with waste and spillages correctly
- 15.10 be aware of immunisation requirements and the role of occupational health

Notes

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