

Standards of proficiency

Radiographers



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foreword

“...to become the best organised, best managed and strongest health professional regulatory body in the United Kingdom, the Council must work together with its stakeholders.



I am delighted to present the Health Professions Council's Standards of Proficiency to you. The standards in this document are a vital tool for the Council as it seeks to protect the public by ensuring that its registrants are safe and effective in their practice.

I have often said that to become the best organised, best managed and strongest health professional regulatory body in the United Kingdom, the Council must work together with its stakeholders. This document is an example of why this approach is so important: several rounds of consultation with experts from across the health professions went into the detailed and lengthy process of development of these standards. The consultation produced extremely valuable feedback that has undoubtedly improved the standards greatly. Of course, the standards remain the responsibility of the Health Professions Council, and if you have any questions, concerns or comments about what you read here, you should contact the Council.

As with other documents that the Council has produced, the standards are written in clear, modern English, so that registrants and prospective registrants can easily find out what is expected of them.



Professor Norma Brook
President, The Health Professions Council

introduction

This document sets out the **standards of proficiency** for safe and effective practice that we expect registrants to meet. We also expect registrants to keep to our **standards of conduct, performance and ethics**, which are published in a separate document.

The standards of proficiency in this document include both generic elements, which all our registrants must meet, and profession-specific elements, which are relevant to registrants belonging to one of the 12 professions we currently regulate. There is no other difference between the generic and profession-specific elements of the standards, and we will treat any breach of the standards seriously. The generic standards are written in black, and the profession-specific standards are written in blue italics, to help you distinguish between them. The summary standards are all generic and are therefore all written in black.

The generic standards explain the key obligations that we expect of you. Occasionally, we have pointed out specific elements of those key obligations. We have **not** attempted to create exhaustive lists of all the areas that each generic standard covers; we have simply highlighted specific elements where we think this will help you to understand what we require of you.

For instance, we have highlighted the fact that the key obligation of maintaining your fitness to practise also includes a specific obligation about taking care of yourself.

If you are a student, you may only have practised under supervision and not independently. Nonetheless, you must be confident that you will be able to meet these standards when you begin to practise without supervision. Sometimes the standards relate to ongoing practice and normally your clinical placements will have given you the opportunity to demonstrate that you are capable of meeting these.

A note about our expectations of you

The standards of proficiency play a central role in how you can gain admission to, and remain on, the Register and thereby gain the right to use the protected title(s) of your profession. Therefore we expect you to be able to meet these standards.

We do recognise, though, that your practice will develop over time and that the practice of experienced registrants frequently becomes more focused and specialised than that of newly registered colleagues, because it relates to a particular client group, practice environment, employment sector or occupational role. Your particular scope of practice may mean that you are unable to demonstrate that you continue to meet each of the standards that apply for your profession. For instance, if you work with adults alone, then any standards that relate to how you must work with children will not apply to your day-to-day work. So long as you stay within your scope of practice and make reasonable efforts to stay up to date with the whole of these standards, this will not be problematic. However, if you want to move outside your scope of practice, you must be certain that you are capable of working safely and effectively, including undertaking any necessary training and experience. We can and will investigate if we have good reasons for believing that you might not meet the standards.

These standards may change in the future (but not for the next two years)

We keep these standards under continual review, and we will update them to take into account changes in practice in the professions we regulate. So the version that you have now may not be the same as future versions that you may see. We will highlight all the changes we make to the standards, so you will be able to see what has changed. However, we will try not to make any changes to the standards during the transitional period during which grandparenting can take place. The transitional period lasts for two years from the date that the register opens. We will always publicise any changes to the standards that we make by, for instance, publishing notices on our website and informing professional bodies.

summary of standards

Expectations of a health professional

1a: Professional autonomy and accountability

Registrants must:

- 1a.1 be able to practise within the legal and ethical boundaries of their profession
- 1a.2 be able to practise in a non-discriminatory manner
- 1a.3 be able to maintain confidentiality and obtain informed consent
- 1a.4 be able to exercise a professional duty of care
- 1a.5 know the limits of their practice and when to seek advice
- 1a.6 recognise the need for effective self-management of workload and be able to practise accordingly
- 1a.7 understand the obligation to maintain fitness to practise
- 1a.8 understand the need for career-long self-directed learning

1b: Professional relationships

Registrants must:

- 1b.1 know the professional and personal scope of their practice and be able to make referrals
- 1b.2 be able to work, where appropriate, in partnership with other professionals, support staff, patients, clients and users, and their relatives and carers
- 1b.3 be able to contribute effectively to work undertaken as part of a multi-disciplinary team
- 1b.4 be able to demonstrate effective and appropriate skills in communicating information, advice, instruction and professional opinion to colleagues, patients, clients, users, their relatives and carers
- 1b.5 understand the need for effective communication throughout the care of the patient, client or user

The skills required for the application of practice

2a: Identification and assessment of health and social care needs

Registrants must:

- 2a.1 be able to gather appropriate information
- 2a.2 be able to use appropriate assessment techniques
- 2a.3 be able to undertake or arrange clinical investigations as appropriate
- 2a.4 be able to analyse and evaluate the information collected

2b: Formulation and delivery of plans and strategies for meeting health and social care needs

Registrants must:

- 2b.1 be able to use research, reasoning and problem solving skills (and, in the case of clinical scientists, conduct fundamental research)
- 2b.2 be able to draw on appropriate knowledge and skills in order to make professional judgements
- 2b.3 be able to formulate specific and appropriate management plans including the setting of timescales
- 2b.4 be able to conduct appropriate diagnostic or monitoring procedures, treatment, therapy or other actions safely and skilfully
- 2b.5 be able to maintain records appropriately

2c: Critical evaluation of the impact of, or response to, the registrant's actions

Registrants must:

- 2c.1 be able to monitor and review the ongoing effectiveness of planned activity and modify it accordingly
- 2c.2 be able to audit, reflect on and review practice

Knowledge, understanding and skills

3a:

Registrants must:

- 3a.1 know the key concepts of the biological, physical, social, psychological and clinical sciences which are relevant to their profession-specific practice
- 3a.2 know how professional principles are expressed and translated into action through a number of different approaches to practice, and how to select or modify approaches to meet the needs of an individual
- 3a.3 understand the need to establish and maintain a safe practice environment

radiographers

Expectations of a health professional

1a: Professional autonomy and accountability

Registrant radiographers must:

- 1a.1 **be able to practise within the legal and ethical boundaries of their profession**
 - understand what is required of them by the Health Professions Council
 - understand the need to respect, and so far as possible uphold, the rights, dignity and autonomy of every patient including their role in the diagnostic and therapeutic process
 - *be able to practise in accordance with current legislation governing the use of ionising radiation for medical and other purposes*
- 1a.2 **be able to practise in a non-discriminatory manner**
- 1a.3 **be able to maintain confidentiality and obtain informed consent**
- 1a.4 **be able to exercise a professional duty of care**
- 1a.5 **know the limits of their practice and when to seek advice**
 - be able to assess a situation, determine the nature and severity of the problem and call upon the required knowledge and experience to deal with the problem
 - be able to initiate resolution of problems and be able to exercise personal initiative
- 1a.6 **recognise the need for effective self-management of workload and be able to practise accordingly**
- 1a.7 **understand the obligation to maintain fitness to practise**
 - understand the importance of maintaining health and care for themselves
- 1a.8 **understand the need for career-long self-directed learning**

1b: Professional relationships

Registrant radiographers must:

- 1b.1 know the professional and personal scope of their practice and be able to make referrals
- 1b.2 be able to work, where appropriate, with other professionals, support staff, patients, clients and users, and their relatives and carers
- understand the need to build and sustain professional relationships as both an independent practitioner and collaboratively as a member of a team
 - understand the need to engage patients, clients, users and carers in planning and evaluating diagnostics, treatments and interventions to meet their needs and goals
 - *be able to interpret and act upon information from other health care professionals, in order to maximise health gain whilst minimising radiation dose to the patient*
 - *be aware of the general working of health care services*
- 1b.3 be able to contribute effectively to work undertaken as part of a multi-disciplinary team
- 1b.4 be able to demonstrate effective and appropriate skills in communicating information, advice, instruction and professional opinion to colleagues, patients, clients, users, their relatives and carers
- be able to communicate in English to the standard equivalent to level 7 of the International English Language Testing System, with no element below 6.5
 - understand how communications skills affect the assessment of patients, clients and users, and how the means of communication should be modified to address potential barriers such as age, physical and learning disability
 - be aware of the characteristics and consequences of non-verbal communication and how this can be affected by culture, age, ethnicity, gender, religious beliefs and socio-economic status
 - understand the need to provide patients, clients and users (or people acting on their behalf) with the information necessary to enable them to make informed decisions
 - understand the need to use an appropriate interpreter to assist patients whose first language is not English, wherever possible
 - recognise that relationships with patients, clients and users should be based on mutual respect and trust, and be able to maintain high standards of care even in situations of personal incompatibility
 - *be able to advise other health care professionals about the relevance and application of radiotherapy or imaging modalities to the patient's needs*

Therapeutic radiographers only

- *understand the behaviour of people undergoing radiotherapy within the oncology setting, as well as that of their families and carers*

Diagnostic radiographers only

- *understand the psychology of illness, anxiety and uncertainty and the likely behaviour of patients undergoing diagnostic radiographic procedures, as well as that of their families and carers*

- 1b.5 understand the need for effective communication throughout the care of the patient, client or user
- recognise the need to use interpersonal skills to encourage the active participation of patients, clients and users
 - *be aware of the need to empower patients to participate in the decision-making processes related to their radiotherapy or diagnostic imaging examination*

The skills required for the application of practice

2a: Identification and assessment of health and social care needs

Registrant radiographers must:

- 2a.1 be able to gather appropriate information
- *be able to use physical, graphical, verbal and electronic methods to collect information from a range of sources including patient history, radiographic images and biochemical reports*
- 2a.2 be able to use appropriate assessment techniques
- be able to undertake and record a thorough, sensitive and detailed assessment, using appropriate techniques and equipment
 - *be able to assess, monitor and care for the patient before, during and after irradiation*
- 2a.3 be able to undertake or arrange clinical investigations as appropriate
- 2a.4 be able to analyse and evaluate the information collected
- *be able to interrogate and process data and information gathered accurately in order to conduct the imaging procedure or radiotherapy most appropriate to the patient's needs*

2b: Formulation and delivery of plans and strategies for meeting health and social care needs

Registrant radiographers must:

- 2b.1 be able to use research, reasoning and problem solving skills to determine appropriate actions
- recognise the value of research to the systematic evaluation of practice
 - be able to conduct evidence-based practice, evaluate practice systematically, and participate in audit procedures
 - be aware of methods commonly used in health care research
 - be able to demonstrate a logical and systematic approach to problem solving
 - be able to evaluate research and other evidence to inform their own practice
 - *understand the problems encountered at the patient-radiation technology interface and be able to find appropriate solutions to such problems*
 - *be able to select and explain the rationale for examination and treatment techniques and immobilisation procedures appropriate to the patient's physical and disease management requirements*

- 2b.2 be able to draw on appropriate knowledge and skills in order to make professional judgements
- be able to change their practice as needed to take account of new developments
 - demonstrate a level of skill in the use of information technology appropriate to their profession
 - *be able to apply the risk-benefit philosophy to radiation exposure to protect both individual patients and the population gene pool*
 - *be able to calculate radiation doses and exposures*
- 2b.3 be able to formulate specific and appropriate management plans including the setting of timescales
- understand the requirement to adapt practice to meet the needs of different client groups distinguished by, for example, physical, psychological, environmental, cultural or socio-economic factors
- 2b.4 be able to conduct appropriate diagnostic or monitoring procedures, treatment, therapy or other actions safely and skilfully
- understand the need to maintain the safety of both patients, clients and users, and those involved in their care
 - *ensure patients, clients and users are positioned (and if necessary immobilised) for safe and effective interventions*
 - *be able to manage complex and unpredictable situations including the ability to adapt planned diagnostic imaging examinations, interventions or treatments and to manage adverse and critical care incidents, to prioritise workload and use of resources*
 - *be able to use independent methods to establish and confirm patient identity prior to treatment or imaging*
 - *recognise the need for spatial awareness, visual precision and manual dexterity in the precise and safe manipulation of treatment units or imaging equipment and related accessory equipment*
 - *be able to operate radiotherapy or diagnostic imaging equipment safely and accurately*
 - *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*

Diagnostic radiographers only

- *be able to perform the full range of plain film and standard contrast agent examinations, including those undertaken on patients suffering from acute trauma, and where the patient's medical, physical or mental health needs require examinations to be carried out in non-standard imaging environments*
- *be able to manage and assist with fluoroscopic and complex contrast agent procedures*
- *be able to assist with computed tomographic examinations of the chest and abdomen in acute trauma cases, and contribute effectively to other computed tomographic studies*
- *be able to manipulate exposure and image recording parameters to optimal effect*
- *be able to use to best effect the processing and related technology supporting film-based and computer-based imaging systems*

Therapeutic radiographers only

- *be able to scrutinise and interpret the radiation prescription in such a way that radiotherapy is delivered accurately and reproducibly*
- *be able to undertake complex radiation dose delivery calculations involving a range of radiation types and energies*
- *be able to generate a treatment plan and verify treatment parameters ensuring optimal radiotherapy prescription delivery*
- *be able to perform the full range of radiotherapy processes and techniques accurately and safely*
- *be able to localise the target volume precisely in relation to external surface markings and anatomical reference markings*

2b.5 be able to maintain records appropriately

- be able to keep accurate, legible records and recognise the need to handle these records and all other clinical information in accordance with applicable legislation, protocols and guidelines
- understand the need to use only accepted terminology (which includes abbreviations) in making clinical records
- *be able to apply the correct systems for identifying patients' records, images, treatment plans and other documents associated with radiotherapy or diagnostic imaging examinations*
- *recognise the risks and possible serious consequences of errors in record keeping*

2c: Critical evaluation of the impact of, or response to, the registrant's actions

Registrant radiographers must:

- 2c.1 **be able to monitor and review the ongoing effectiveness of planned activity and modify it accordingly**
- be able to gather information, including qualitative and quantitative data, that helps to evaluate the responses of patients, clients and users to their care
 - be able to evaluate management plans against treatment milestones using recognised health outcome measures and revise the plans as necessary in conjunction with the patient, client or user
 - 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
 - be able to make reasoned decisions to initiate, continue, modify or cease treatment or the use of techniques or procedures, and record the decisions and reasoning appropriately
 - understand that outcomes may not always conform to expectations but may still meet the needs of patients, clients or users
- 2c.2 **be able to audit, reflect on and review practice**
- understand the principles of quality control and quality assurance
 - be aware of the role of audit and review in quality management, including quality control, quality assurance and the use of appropriate outcome measures
 - be able to maintain an effective audit trail and work towards continual improvement
 - participate in quality assurance programmes, where appropriate
 - understand the value of reflection on clinical practice and the need to record the outcome of such reflection
 - recognise the value of case conferences and other methods of review

Knowledge, understanding and skills

3a:

Registrant radiographers must:

- 3a.1 know the key concepts of the biological, physical, social, psychological and clinical sciences which are relevant to their profession-specific practice
- understand the structure and function of the human body, relevant to their practice, together with a knowledge of health, disease, disorder and dysfunction
 - be aware of the principles and applications of scientific enquiry, including the evaluation of treatment efficacy and the research process
 - recognise the role of other professions in health and social care
 - understand the theoretical basis of, and the variety of approaches to, assessment and intervention
 - *know the physical principles of radiation generation, interaction, modification and protection underpinning the use of radiation for diagnosis or treatment*
 - *understand the risk benefit philosophy and principles involved in the practice of diagnostic or therapeutic radiography*
 - *understand the radiobiological principles on which the practice of radiography is based*
 - *understand concurrent and common pathologies and mechanisms of disease*
 - *understand the capability, applications and range of technological equipment used in diagnostic imaging or radiotherapy*
 - *understand radiation dosimetry and the principles of dose calculation*
 - *know the pharmacology of drugs used in diagnostic imaging, or oncology as it relates to radiotherapy practice*
 - *understand the methods of administration of drugs*
 - *understand the philosophy underpinning the development of the profession of radiography*
 - *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*
 - *be aware of the current developments and trends in the science and practice of radiography*
 - *understand the quality assurance processes in place within diagnostic imaging or radiotherapy*
 - *understand the legislative, policy, ethical and research frameworks that underpin, inform and influence practice*

- *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*
- *be able to formulate and provide information to patients and their carers about the treatment or imaging process and procedures, with regular reappraisal of their information needs, as appropriate*
- *be able to remove and re-apply dressings and supports appropriately and in a safe, effective and considerate manner*
- *distinguish between normal and abnormal appearances evident on images*

Therapeutic radiographers only

- *know the biochemical science of radiation pathophysiology*
- *know the structure and function of the human body in health and disease, especially regional and cross sectional anatomy of the head and trunk, histology, haematology, and the lymphatic and immune systems*
- *know the diagnostic procedures, investigations and physiological symptoms which result in patients being referred for radiotherapy*
- *understand oncology, the pathophysiology of solid and systemic malignancies, epidemiology, aetiology and the management and impact of cancer*

Diagnostic radiographers only

- *know the signs and symptoms of disease and trauma that result in patients being referred for diagnostic imaging procedures*
- *know the structure and function of the human body in health, disease and trauma, especially the musculo-skeletal system, the soft tissue organs, regional and cross-sectional anatomy of the head and trunk, and the cardiovascular, respiratory, genito-urinary, gastro-intestinal and neuro-endocrine systems*
- *know the physical and scientific principles on which image formation using ionising radiation is based*

- 3a.2 know how professional principles are expressed and translated into action through a number of different assessment, treatment and management approaches and how to select or modify approaches to meet the needs of an individual

- 3a.3 understand the need for, and be able to establish and maintain, a safe practice environment
- 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
 - be able to work safely, including being able to select appropriate hazard control and risk management, reduction or elimination techniques in a safe manner in accordance with health and safety legislation
 - be able to select appropriate personal protective equipment and use it correctly
 - be able to establish safe environments for clinical practice, which minimise risks to patients, clients and users, those treating them, and others, including the use of hazard control and particularly infection control
 - *understand the need to ensure the physical and radiation safety of all individuals in the immediate work environment at all times*
 - *be aware of immunisation requirements and the role of occupational health*
 - *know the correct principles and applications of disinfectants, methods for sterilisation and decontamination and dealing with waste and spillages correctly*
 - *know and be able to apply appropriate moving and handling techniques*
 - *be able to use basic life support techniques and be able to deal safely with clinical emergencies*