



THERAPEUTIC RADIOGRAPHER (DEGREE)

Reference Number: ST0620

Details of standard

This apprenticeship standard is currently in development and its contents are subject to change

Occupation summary

This occupation is found in the health and care sector and includes the NHS and private healthcare providers. The broad purpose of the occupation is to provide excellent care to patients diagnosed with cancer by delivering high quality and accurate radiotherapy, taking into consideration patients' emotional, psychological, and physical needs through the stages of their cancer treatment when at times they may be extremely vulnerable. You will be responsible for the patient from the time of referral for radiotherapy by a cancer specialist and will undertake pre-treatment preparation of radiotherapy patients, such as scanning and planning the patients' radiotherapy. Therapeutic radiographers provide the highest standard of technical practice and patient care in order to treat and support adults, teenagers and children receiving radiotherapy (predominately for cancer) using a variety of forms such as:

- external beam radiotherapy, a method for delivering a beam or several beams of high energy X-rays to a patient's cancer;
- brachytherapy, a form of radiotherapy where a sealed radiation source (eg in a needle or tube) is placed inside or next to the patient's cancer;
- stereotactic radiotherapy/radiosurgery which delivers multiple beams of focused radiation
- proton therapy, a type of particle therapy that uses a beam of protons to deliver a radiation dose to a patient's cancer;
- superficial skin radiotherapy, which uses X-rays or electrons to deliver a radiation dose to a patient's cancer. In their daily work, an employee in this occupation interacts with cancer patients, who may or may not be cured, their carer(s), members of the public and a range of healthcare professionals eg physicists, dosimetrists, doctors, nurses and dieticians, in a variety of settings such as hospitals and hospices. An employee in this occupation will be responsible for planning, checking and using imaging to deliver accurate radiotherapy in a compassionate and caring manner. As an autonomous practitioner, they will have responsibility for the patient from the time of referral for radiotherapy by a cancer specialist, through to aftercare and on-going support after radiotherapy. They will be accountable professionally and legally for their actions and those they are supervising.

Typical job titles

Typical job titles include Therapeutic Radiographer.

Entry requirements

Entry requirements will be stipulated by Higher Education Institutions

Occupation duties

Duty	Criteria for measuring performance	KSBs
<p>Duty 1 Practise autonomously, safely, and effectively within the Health and Care Professions Council (HCPC) regulated standards of proficiency for therapeutic radiography practice and take professional accountability for and understand the limitations of own practice.</p>	Practise safely and effectively within HCPC standards.	K1 K2 K3 K4 K19 S1 S2 S3 S4
	Adhere to all professional, legal, ethical and regulatory requirements and standards relating to radiotherapy.	B1 B2 B4 B5 B6
	Adhere to local departmental policies and clinical protocols.	
<p>Duty 2 Practise in a non-discriminatory way acting in the best interest of patients at all times and act as an advocate for patients, their families and carer(s), working with a range of other healthcare professionals within the radiotherapy setting.</p>	Correct and appropriate information given to patients in all settings.	K5 K6 K8 K22 S5 S6 S7 S8 S9 S38
	Patient concerns, complaints, issues, or need for further support are responded to appropriately, or referred to appropriately qualified staff.	B1 B2 B4 B6 B7
<p>Duty 3 Reflect on own radiotherapy practice and learning, actively engage in clinical supervision, and identify areas for personal and professional development to maintain fitness to practise. Meet the requirements for HCPC registration and the Society and College of Radiographers (SCoR) Code of Professional Conduct.</p>	Engagement and reflection on practice, undertakes further training and development to improve practice for self and others.	K3 K9 K10 K22 S1 S10 B1 B4 B5 B7
<p>Duty 4 Undertake pre-treatment preparation of the patient, including acquiring appropriate images and conducting image assessment and review to enable planning of the patient's radiotherapy. Justify and record decisions whilst taking into account patient choice, cancer pathology and available treatment options.</p>	Correct identification and confirm appropriate pre-treatment consent of the patient.	K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21
	Acquire the appropriate images and plan treatment accurately in a timely manner and in accordance with local clinical protocols.	S17 S18 S21 S22 S27 S29 S36 S37 S38 B1 B2 B3 B4 B5 B6 B7
<p>Duty 5 Deliver accurate, safe and effective radiotherapy including image assessment and review.</p>	Correct patient identified, and appropriate pre-treatment valid patient consent obtained.	K11 K12 K13 K14 K15 K16

	Correct room setup and selection and use of patient immobilisation equipment.	K17 K18 K19 K20 K21
	Deliver treatment accurately in a timely manner and in accordance with local clinical protocols	S12 S13 S14 S15 S16 S17 S18 S19 S20 S22 S27 S28 S29 S36 S37 S38
		B1 B2 B3 B4 B5 B6 B7
Duty 6 Engage with service improvement activities to support treatment of cancer patients, their families and carer(s).	Follow departmental audit procedures and treatment of patients in clinical trials.	K2 K20 K21 S14 S38
	Keep accurate records of audits and service improvement activities using appropriate clinical systems and ICT platforms.	B1 B4 B6
Duty 7 Work as part of a team that includes the cancer patient, their family, carer(s) and other healthcare professionals, to build excellent interpersonal relationships that facilitate discussion, learning, and development to provide the best patient care. Facilitate learning through delivering activities and education for patients, students, colleagues and the wider public.	Identify appropriate interactions with other healthcare professionals to manage patients' treatment.	K10 K22 K23 S8 S11 S23 S32
	Correct and appropriate information given to patients in all settings.	B1 B2 B3 B4 B7
Duty 8 Comply with legislative, national and local radiotherapy policies and accurately record patient information relating to radiotherapy.	Adhering to professional legislation.	K1 K2 K7 K15 K24 K25 K31
	Adhering to national and local policies and clinical protocols.	S24 S25 S26 B1 B3 B4 B7
Duty 9 Frequently manually move partially dressed patients to correctly align the patient for accurate radiotherapy. Safely and accurately manipulate radiotherapy equipment with a high degree of precision.	Speed, accuracy and spatial awareness when manipulating equipment.	K1 K5 K26 S8 S9 S27 S28 S29
	Safe moving and handling of patients, and adherence to local health and safety policies.	B1 B2 B5 B6
	Safe operation of radiotherapy equipment	
Duty 10 Communicate and discuss complex and sensitive information with radiotherapy patients, their families and carer(s), in an	Correct and appropriate information given to patients in all settings.	K6 K18 K27 S8 S32

empathetic, reassuring and professional manner.	Patient concerns, complaints, issues, or need for further support, referred to appropriately qualified staff.	B1 B2 B3 B4 B6 B7
	Patient needs are satisfied	
Duty 11 In discussion with the patient, their family and carer(s), recognise and act appropriately upon the emotional, psychological and physical needs of patients, who may have life limiting conditions, before, during and after radiotherapy.	Correct and appropriate information given to patients in all settings.	K18 K27 K28 K29
	Patient concerns, complaints, issues, or need for further support, referred to appropriately qualified staff	S30 S31 S32 S33 S34 S38
	Appropriate support and/or medication received by the patient	B1 B2 B3 B4 B7
Duty 12 Confirm valid patient consent for radiotherapy procedures using national, local policies and protocols.	Adhering to national and local policies and clinical protocols.	K1 K8 K13 K18 K30
	Confirm valid patient consent.	S7 S8 S35 S36
		B1 B2 B4 B6
Duty 13 Maintain data protection and patient confidentiality, whilst effectively using relevant radiotherapy care provider clinical systems and information and communication technology (ICT) platforms.	Accuracy and completeness of record keeping.	K2 K3 K8 K11 K13 K19 K25 K31
	Record of attendance of relevant training.	S3 S9 S12 S13 S24 S37 S38
	Adherence to data protection or other relevant legislation and operation manuals.	B1

KSBs

Knowledge

K1: The HCPC Standards of Proficiency for a therapeutic radiographer, the Society and College of Radiographers (SCoR) Code of Professional Conduct and legislation that informs ethical frameworks and guidance.

K2: Legislative and clinical governance frameworks in which radiotherapy is delivered and the political, social, and economic factors impacting on health and social care and radiotherapy service delivery.

K3: Limits of own scope of practice, knowledge and skills.

K4: The appropriate radiation protection for self, patients, staff, students and learners, and public, including personal protective equipment.

K5: How to respect and uphold the rights, dignity, values and autonomy of radiotherapy patients their families and carer(s).

K6: Communication strategies in a clinical setting in order to care for radiotherapy patients.

K7: How to identify risks to patients, staff, students and learners, and public safety, and uphold data security. Report any issues that may impact on your own capacity and capability to practise as a therapeutic radiographer.

K8: Employer's processes and procedures relating to consent, confidentiality, safeguarding and use of information and the impact of culture, equality and diversity in practice.

K9: How to keep own knowledge and skills up to date through Continuing Professional Development (CPD).

K10: How to support students and other professionals who are actively learning radiotherapy practices.

K11: How to read, interpret and accurately follow the treatment plan and associated imaging protocol.

K12: The structure and function of the human body in health and disease including, anatomy and physiology, cancer pathologies and mechanism of disease.

K13: The radiobiological principles on which the practice of radiotherapy is based.

K14: The epidemiology, aetiology, risk factors and mechanisms of spread of cancer, and the signs, symptoms and investigations that instigate a referral to a cancer specialist.

K15: Local and national clinical protocols and patient care protocols, including basic life support techniques, how to deal safely with clinical emergencies, medications and self-management strategies.

K16: The impact of other cancer treatments such as, surgery and chemotherapy on the planning and delivery of radiotherapy. The impact of other factors including the radiation dose, the timing and type of radiotherapy, and post treatment complications of radiotherapy to the patient.

K17: Radiotherapy physics, radiation beam interaction and image production, including the methods for drug administration. The principles of quality control and quality assurance related to the accurate delivery and verification of high dose radiation for the treatment of cancer.

K18: Radiotherapy side effects relating to the area being treated and offers patients appropriate advice and guidance to manage these side effects, referring to other professionals where necessary, following evidence-based advice where appropriate.

K19: The importance of high quality checking processes in ensuring the highest standards of patient care and safety are maintained, and the radiation risks associated with ineffective or repetitive checking processes.

K20: How to systematically evaluate patients' treatment and ensure findings are used to improve patients' experience and clinical outcomes.

K21: The need for radiotherapy clinical trials and research to support the on-going development of the evidence-base for radiotherapy and the role of the therapeutic radiographer.

K22: How to build and sustain professional relationships both independently and collaboratively and understand the roles of wider team members such as physicists, doctors, specialist nurses,

dietitians, etc. who work with radiotherapy patients.

K23: Conflict resolution strategies and when to apply them.

K24: The need for prompt reporting of radiation incidents, national incident reporting systems and requirements, and what constitutes a reportable incident.

K25: The requirement to maintain patient confidentiality, keep accurate patient records and manage all other information in accordance with applicable legislation, protocols and guidelines.

K26: The importance of maintaining own safety and that of colleagues and patients when moving and handling patients repeatedly throughout the working day.

K27: The limitations of own communication skills when communicating with patients, their families or advocates who may be dealing with life-limiting or life altering diagnoses. Recognise when to seek further support and advice.

K28: The holistic needs of the patient whilst undergoing their radiotherapy, including how to identify patients who may require additional psycho social support e.g. needle phobic or claustrophobic patients and how to refer them and process access to appropriate professional and support services.

K29: A therapeutic radiographer's responsibility within the interprofessional cancer support service.

K30: The procedure for obtaining valid consent, the implications of not obtaining consent, suspension of treatment on the basis of changed circumstances, the patient withholding consent, and the SCoR consent guidance documentation.

K31: Cyber security guidelines and local policies and procedures.

Skills

S1 Interpret, apply and reflect on professional codes of practice and legislation in order to deliver radiotherapy and care, and take responsibility for own actions.

S2 Manage risk and report and escalate concerns about safety, implement lessons learned, and be open when things go wrong within own scope of practice.

S3 Keep accurate records of own work.

S4 Promote and protect the interests of patients, staff, and public in a radiation environment and comply with local personal dose monitoring procedures.

S5 Recognise and respond appropriately to situations where it is necessary to share information to safeguard radiotherapy patients or the wider public, in line with ethical frameworks and seek advice where unsure.

S6 Promote health and wellbeing, advising on reducing the risk of side effects of radiotherapy.

S7 Recognise patient advocacy responsibilities, act as a patient advocate when appropriate and provide patients or their advocates with the information necessary to enable them to make informed decisions.

S8 Demonstrate effective and appropriate communication skills to build rapport with patients and colleagues.

S9 Work within the limits of own knowledge and skills, and delegate appropriately.

- S10** Demonstrate up to date CPD and lifelong learning related to contemporary radiotherapy practice.
- S11** Support others and facilitate learning, including assessment and providing feedback to learners.
- S12** Apply critical thinking.
- S13** Assess and interpret treatment planning data to inform decision making.
- S14** Take part in clinical audit, contribute to service improvement initiatives, use evidence-based research and clinical trial outcomes to inform own clinical practice.
- S15** Deliver with a high level of skill and accuracy, radiotherapy using external beam radiation.
- S16** Make reasoned decisions to continue or cease radiotherapy, and to escalate where necessary.
- S17** Assess patients' clinical condition prior to the procedure, and where necessary, use basic life support techniques and deal safely with clinical emergencies. Use effective communication with the patient to determine their suitability for the procedure, paying attention to patients' needs throughout.
- S18** Accurately calculate and check patient radiotherapy prescriptions and associated data.
- S19** Concentrate at a consistently high level in order to deliver safe and accurate radiotherapy.
- S20** Assess, and adapt patient setups, using images and scans acquired following local protocols.
- S21** Justify decisions in the planning of radiotherapy and be able to recognise clinically acceptable radiotherapy plans.
- S22** Correctly identify and prepare the patient appropriately for the specific procedure and select the correct equipment and a reproducible patient position for the course of treatment, including production of patient accessories.
- S23** Apply conflict resolution strategies appropriately.
- S24** Report risks and incidents, keep accurate, comprehensive and comprehensible records and other information in accordance with applicable legislation, protocols and guidelines.
- S25** Reflect on and learn from clinical incidents and complaints, and share learning with peers.
- S26** Signpost patients and their families to the patient complaint process, supporting them and colleagues during incidents and the reporting process.
- S27** Use spatial awareness and psychomotor skills to finely manipulate the radiotherapy equipment as well as finely manipulating the patient's body to align anatomy with the radiation beam.
- S28** Adhere to any treatment setup tolerances as defined within local radiotherapy protocols.
- S29** Use dexterity and highly developed coordination and sensory skills to safely manoeuvre patients and equipment, taking into account any postural constraints due to limitations in equipment design.
- S30** Recognise verbal and non-verbal clues that indicate the patient may require emotional and psychological support.

S31 Recognise that not all services are appropriate to all patients in all situations and demonstrate an ability to evaluate patients' understanding.

S32 Reflect on and recognise own emotions and feelings and seek clinical supervision to ensure support, whilst dealing with possibly distressing and difficult circumstances associated with patients undergoing their treatment.

S33 Recognise the differing support needs of cancer patients who may not be cured.

S34 Prioritise patients' needs and recognise when own knowledge and skills are no longer sufficient, referring on to the wider radiotherapy support network as appropriate.

S35 Recognise verbal and non-verbal clues that indicate the patient may not have understood the consent process, be unwilling to give their consent, or not be able to consent for themselves, referring on as appropriate.

S36 Recognise when treatment needs to be suspended.

S37 Use radiotherapy information technology and computer equipment.

S38 Apply data protection and patient confidentiality in daily clinical practice and complete relevant, concise, factual, treatment documentation.

Behaviour

B1: Act with honesty, integrity, openness, and respect at all times.

B2: Act with empathy and compassion by being considerate of others' feelings, especially when making decisions.

B3: Remain calm and resilient when dealing with distressing and emotionally challenging situations, and be able to manage own emotional responses.

B4: Behave respectfully and be non-judgemental by engaging with people in non-discriminatory ways.

B5: Be willing to share knowledge, be self-motivated, proactive, adaptable and reliable in order to deliver the best possible patient care.

B6: Be decisive and act with confidence when interacting with patients, staff and the public.

B7: Practise self-awareness by understanding own emotions, limitations, strengths, weaknesses, and recognising the impact of personal interactions on others.

Qualifications

English and Maths qualifications

Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Other qualifications

Mandatory qualification 1: BSc (Hons) Therapeutic Radiography or (where the apprentice already holds a level 6 honours degree) a pre-registration MSc in Therapeutic Radiography.

Level of qualification: 6 (integrated degree)

Professional recognition

Society and College of Radiographers / Level 6 and Level 7

Additional details

Occupational Level: 6

Duration (months): 36

Review

This standard will be reviewed after three years.

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Version log

VERSION	DATE UPDATED	CHANGE	PREVIOUS VERSION
1	07/12/2018	Standard first published	Not available