General Medical Council

Nuclear Medicine

Specialty Specific Guidance (SSG)

This guidance is to help doctors who are applying for entry onto the Specialist Register via the Portfolio pathway in Nuclear Medicine. You will also need to read the curricula for the specialty .

This document was last updated on 30/11/2023

Contents

Introduction

This document is designed to provide helpful information and guidance to enable you to make an application for specialist registration in Nuclear Medicine. This is not a standalone document and should be read in conjunction with the curricula – please see the Nuclear Medicine curriculum on the Joint Royal Colleges of Physicians Training Board (JRCPTB) website for more details. You can contact us and ask for advice before you apply.

It is worth noting that it is sometimes more difficult to make a successful application if you have not worked in the NHS and that applicants with a license to practise in the UK will have already provided some of the evidence below in order to achieve this. Key features of training and practice in the NHS are unlikely to be covered in the same way outside it and the types of evidence may differ. This might include, for example, multidisciplinary team meetings, appraisal, multisource feedback and patient feedback, safety and quality activity especially in clinical audit and quality improvement projects and other areas. You must look at the curriculum and this guidance carefully to make sure that you can demonstrate the knowledge, skills and evidence for entry to the Specialist Register for Nuclear Medicine using an assessment framework of the high level learning outcomes in the curriculum rather than assessing your progress through a programme.

You evidence should focus on summative assessments rather than formative one. If you are or have recently been practising in an environment that is not comparable to practice in the NHS you might find it useful to consolidate your experience elsewhere before applying.

Applicants need to demonstrate that they have achieved the learning outcomes required for all stages of the curriculum.

Curriculum Framework

The curriculum is structured into high-level learning outcomes, known as Capabilities in Practice (CiPs). The CiPs are split into generic, clinical and specialty specific capabilities, as outlined below. To meet the standard you will need to provide evidence that you're working at the level of being entrusted to perform safely and independently for each CiP (described in the curriculum as Level 4 – entrusted to act unsupervised).

Level descriptors for clinical CiPs

Level	Descriptor
Level 1	**Entrusted to observe only:** No provision of clinical care

Level 2	**Entrusted to act with direct supervision**: May provide clinical care, but the supervising physician is physically within the hospital or other site of patient care and is immediately available if required to provide direct bedside supervision
Level 3	**Entrusted to act with indirect supervision**: May provide clinical care when the supervising physician is not physically present within the hospital or other site of patient care, but is available by means of telephone and/or electronic media to provide advice, and can attend at the bedside if required to provide direct supervision
Level 4	**Entrusted to act unsupervised**

The first six CiPs are generic and shared across all physician specialties, covering the universal requirements of Good Medical Practice and the Generic Professional Capabilities (GPC) framework.

The five Nuclear Medicine specialty CiPs describe the clinical tasks or activities which are essential to the practice of Nuclear Medicine. The six Clinical Radiology specialty CiPs describe the learning outcomes for the Clinical Radiology components of Nuclear Medicine. The CiPs have been mapped to the GPC domains to reflect the professional generic capabilities required to undertake the clinical tasks.

The range of experience needed to achieve the CiPs is outlined in the curriculum – this covers different settings, contexts, clinical problems, conditions and stages of a person's life and illness.

Generic CiPs
1. Able to function successfully within NHS organisational and management systems
2. Able to deal with ethical and legal issues related to clinical practice
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement
4. Is focussed on patient safety and delivers effective quality improvement in patient care
5. Carries out research and manages data appropriately
6. Acts as a clinical teacher and clinical supervisor

Nuclear Medicine Specialty CiPs
1. Advising and authorising appropriate Nuclear Medicine diagnostic and therapeutic interventions for individual patient
2. Ability to direct optimisation of imaging and non-imaging diagnostic Nuclear Medicine investigations in terms of patient preparation, data and image acquisition, post processing and display
3. Providing timely, accurate and clinically pertinent reports on all Nuclear Medicine diagnostic studies
4. Providing a safe and comprehensive radionuclide therapy service
5. Leading all the clinical aspects of the Nuclear Medicine department in terms of compliance with regulations
Clinical Radiology Specialty CiPs
1. Appropriately select and tailor imaging to patient context and the clinical question(s)
2. Provide timely, accurate and clinically useful reports on imaging studies
3. Appropriately manage imaging examination lists/procedures according to clinical need and professional expertise
4. Evaluate image quality and utilise the knowledge of imaging sciences to optimise image quality
5. Safely manage the imaging and image-guided intervention needed to support emergency care
6. Effectively contribute a clinical/imaging opinion to a multidisciplinary team (MDT) meeting

Currency of evidence

Evidence which demonstrates that you have met a curriculum outcome can be drawn from any point in your career. However, there should be corresponding evidence of recent (within the last five years of clinical practice (WTE) to confirm the maintenance of the skill or competency.

Evidence of your recent practice will be given more weight to reflect current capabilities and we suggest that approximately 50% of your evidence for a curriculum outcome is drawn from within the last five years of clinical practice (WTE).

Structured reports

You should nominate a minimum of four referees for the GMC to obtain structured reports from. They should include:

- Current Head of Nuclear Medicine department or other senior colleague with knowledge of the breadth of your Nuclear Medicine clinical activity, including both diagnostic and therapeutic activity.
- Current Head of Clinical Radiology department of other senior colleague with knowledge of the breadth of your Clinical Radiology clinical activity, if Nuclear Medicine and Clinical Radiology departments are separate in your institution.
- One other report from another colleague working with you at consultant level in your Nuclear Medicine or Clinical Radiology department
- Head of department or head of training to provide evidence of previous general clinical training, experience and qualifications comparable with the outcomes of the two years of Internal Medicine stage 1 training with MRCP (UK) (or the surgical/paediatric alternatives)

Submitting your evidence

Do not submit original documents. You must provide your evidence electronically – it's important that you follow the structure in our user guide when doing so.

You will need to make sure your evidence meets our requirements, this includes:

- Anonymising (redacting) identifiable information
- Verifying your evidence to confirm its authenticity
- Authenticating overseas qualifications
- Translating any documents not in English

It is important that you read and follow our guidance. If your evidence does not meet these requirements, it may not be included in your application.

Please keep in mind when gathering your evidence:

- Triangulated evidence (evidence comprised of three different sources) will make a stronger application
- Evidence of your recent practice (≤within the last 5 years of clinical practise (WTE)) will be given more weight to reflect current capabilities; where some evidence is historical (> than last 5 years of clinical practise (WTE)), the assessors will want to see evidence that the applicant has maintained capabilities in that particular area and the applicant is working at the level of a senior independent clinician.
- Your evidence must be legible

How much evidence to submit

As a general guide, most applications are expected to include around 100 electronically uploaded documents. You must ensure that you follow our guidance on how to present and group your evidence in the online application.

The total number of documents and assessments presented is less important than the quality of the documents, and the breadth of cases covered. This allows the evaluators to form reliable judgements of performance and capabilities.

This guidance on documents to supply is not exhaustive and you may have alternative evidence. You do not necessarily have to supply every type of evidence listed, but you must submit sufficient evidence to address each of the required learning outcomes and the associated capabilities.

Your evidence **must** cover the knowledge, skills and experience to demonstrate the required CiPs in all areas of the curriculum. You should focus on providing **good quality** evidence, rather than quantity.

You should bear in mind the following points:

- Evidence should show that you are able to assess and offer a first opinion in any setting and for any age
- Don't duplicate evidence that is relevant to more than one CiP – you should include one copy and then list it under each relevant CiP (cross referencing)
- Evidence should only be cross referenced where it adds significant support to a CiP
- Evidence should be provided from a variety of clinical settings.

You must ensure you follow our guidance on how to present and group your evidence in the online application

Organising your evidence

Your evidence will need to be organised to reflect the structure of the online application. You should submit your evidence electronically under the correct section of your online application.

You should also submit the evidence requested about your training, qualifications and employment history and your CV in the format set out in the GMC's CV guidance. You will also be asked to nominate referees to provide structured reports.

Your evidence must be mapped to the high level learning outcomes by providing primary evidence for knowledge, skills and experience. If evidence is missing from any of the CiPs, your application may be unsuccessful.

You will not be able to compensate for shortfalls in your evidence of training and experience in a particular area, by providing extra evidence in other areas.

If you have a piece of evidence that is relevant to more than one area, do not include multiple copies in your evidence. Instead, include one copy and list it in your application under each relevant area, stating that the evidence is located elsewhere, and you would like to cross-reference it.

Where we ask in our guidance, please group your evidence together to keep the number of individual electronic uploads manageable. This will need to be done prior to uploading on the GMC application. There are many software solutions widely available that can be used for converting documents/excel sheets/PowerPoint presentations and images to PDFs and combining PDF documents.

Tips for a successful application

In our experience, applications fail because they provide inadequate or poor evidence of current capability covering the knowledge, skills and experience required for practising as an eligible specialist in the United Kingdom. Below are some tips for you to consider when making an application:

- Before submitting an application, you should review the current curriculum in conjunction with this document. A strong application will provide evidence that you hold the knowledge, skills and experience which demonstrate the outcomes set out in the curriculum
- Therefore a strong application will provide evidence that you hold the knowledge, skills, qualifications and experience which demonstrate both the outcomes that set out in the Nuclear Medicine and Clinical Radiology curricula but also the prerequisite knowledge, skills, qualifications and experience to be trained in the UK ie equivalent of two years of Internal Medicine stage 1 training with MRCP(UK) (or the surgical/paediatric training route equivalent).
- You will need to demonstrate you have the Nuclear Medicine capabilities as set out in this document and the curriculum. The knowledge based assessment required is the Diploma in Nuclear Medicine, therefore you must demonstrate you hold this or provide evidence to demonstrate equivalence.
- You will need to demonstrate you have the Clinical Radiology capabilities as set out in this document and the curriculum. The knowledge based assessment required is the FRCR, therefore you must demonstrate you hold this or provide evidence to demonstrate equivalence.
- Provide evidence of your **current capability** against the relevant high level learning outcomes of the Nuclear Medicine and Clinical Radiology curricula. This includes the maintenance of CiPs and key skills all evidence should be clearly linked to the CiPs
- Present your evidence in a clear, logical manner. You should refer to our user guide for advice on how to group, title and upload your evidence
- Ensure your referees can provide detailed support for your key skills across all (or most) areas of the curriculum and understand the requirements for specialist registration in Nuclear Medicine the UK

- Provide evidence of managing a broad range of patients, as seen daily by Nuclear Medicine doctors in the UK
- Provide evidence of your clinical capability across the range of experience, ages and settings
- Ensure your evidence demonstrates you are entrusted to act at an independent level across all of the specialty CiPs
- Your CV is a helpful tool to your evaluators as this will give them an understanding and context of how you've acquired your knowledge, skills and experience.

How your evidence can be used to demonstrate key capabilities in different CiPs

You will notice that some of the suggested evidence is listed more than once. This is because these documents are relevant to more than one CiP. For example, MSF can be used to demonstrate competence in most CiPs – therefore, you can use the same MSF to demonstrate the required capability across several CiPs

If you have a document that is relevant to more than one CiP, don't include multiple copies of it. Instead, provide one copy and list it in your application under each relevant CiP, stating that the document is located elsewhere, and you'd like to cross reference it.

Below is a list of evidence that are relevant to most CiPs – it is by no means exhaustive, and you are encouraged to submit a variety of evidence but you should aim to demonstrate knowledge, skills and experience with evidence that is comparable to the examples below.

A description of the assessments below, together with template forms, can be found on the JRCPTB website

Evidence / requirement	About	Indicative minimum numbers
Supervised Learning Events (SLEs)		
Case-based discussion and/ or mini-clinical evaluation exercise (mini-CEX)	These should have been undertaken with a consultant. CbDs and Mini-CEXs should cover different aspects of Nuclear Medicine and Clinical Radiology. Try to have something covering most areas of the curricula. If you do not have these, you can aim to demonstrate the same level of capability by providing a detailed, thorough and succinct cross -referencing mapping exercise, demonstrating how each and every capability in the curriculum has been assessed by consultants during your training and subsequent experience. The evaluators will then determine whether what has been provided is comprehensive enough to demonstrate the required level of clinical	10 SLEs, comprised of a mix of CbDs and Mini-CEXs to level 4 entrustment

	capability. This will be assessed on a case-by-case basis and the onus is on the applicant to produce the portfolio of alternative evidence.	
Mini-IPEX	These should have been undertaken with a consultant. Mini IPEX should cover different aspects of Nuclear Medicine and Clinical Radiology. Try to have something covering most areas of the curriculum. Up to 3 can refer to radiology rather than nuclear medicine image interpretation. If you do not have these, you can aim to demonstrate the same level of capability by providing a detailed, thorough and succinct cross -referencing mapping exercise, demonstrating how each and every capability in the curriculum has been assessed by consultants during your training and subsequent experience. The evaluators will then determine whether what has been provided is comprehensive enough to demonstrate the required level of clinical capability. This will be assessed on a case-by-case basis and the onus is on the applicant to produce the portfolio of alternative evidence.	10 mini-IPEX
Workplace Based Assessments (WPBAs)		
Direct Observation of Procedural Skills (DOPS)	Evidence of practice of procedures acquired in the last 5 years clinical practise (WTE). Applicant should provide 10 examples including both therapy and diagnostic studies: ▪ radiopharmaceutical draw up ▪ radiopharmaceutical dose calibration ▪ radiopharmaceutical dose administration ▪ interventions such as cardiac stressing, image post processing and quantification. Additional evidence of other procedure relevant to Nuclear Medicine may be provided to demonstrate the achievement of independent safe practice. If you do not have these, you can aim to demonstrate the same level of capability by providing a detailed, thorough and succinct cross -referencing mapping exercise, demonstrating how each and every capability in the curriculum has been assessed by consultants during your training and subsequent experience. The evaluators will then determine whether what has been provided is comprehensive enough to demonstrate the required level of clinical capability. This will be assessed on a case-by-case basis and the onus is on the applicant to produce the portfolio of alternative evidence.	

Quality Improvement Project Assessment Tool (QIPAT)	Can be used to demonstrate active involvement in service audit or development projects.	1 completed in last 5 years of most recent practise (WTE)
Patient Survey (PS)	Formal patient feedback is strong evidence as it's an anonymous feedback exercise. It should include approximately 15 patients. The JRCPTB has a template available on their website. A reflective entry reflecting on the survey must be made. If it is not possible to provide a formal patient survey an applicant could provide alternative evidence. However, this must provide equivalent details and breadth of information. Alternative evidence could include: ▪ Thank you letters/cards from patients ▪ Statements from referees ▪ Testimonial letters from colleagues ▪ Feedback from patients/colleagues	1 completed in last 12 months of most recent practise (WTE)
Teaching observation (TO)	At least one should be completed by a consultant in the specialty.	1 completed in last 12 months clinical practise (WTE) or the structured report could include commentary on teaching observation/teaching experience
Multi Source Feedback (MSF)	MSF is a strong piece of evidence as it is an anonymous feedback exercise. Minimum of one in the 12 months clinical practise (WTE) before the application has been submitted – any available from the last 5 years clinical practise (WTE) should also be submitted. MSF should include approximately 12 colleagues, including medical and non-medical sources.	1 completed in last 12 months clinical practise (WTE)

Other evidence		
To be included in the portfolio of evidence	▪ **Appraisal** is good evidence of engaging with systems, processes and mandatory requirements and demonstrates performance (clinical and non-clinical) ▪ **Supervisor report** reports from trainers and supervisors are important evidence to affirm and support capabilities and performance in both clinical and non-clinical activities. JRCPTB provides a Multiple Consultant Report (MCR) template for the purpose of these reports of which there should be 4 in the last 12 months. ▪ **Logbooks** covering the last 5 years of clinical practise (WTE) and demonstrating the number and breadth of diagnostic and therapeutic cases you have been involved in covering both Nuclear Medicine and Clinical Radiology cases ▪ **Logbook evidence of seeing Nuclear Medicine therapy patients** over the last five years covering a range of settings, referral contexts, conditions, stages of illness, ages ▪ **Academic activities** ▪ **Management activities** ▪ **Structured reports** ▪ **Reflective** diaries/ evidence of self-reflection	4 MCRs completed in the last 12 months clinical practise (WTE)
Continuing Professional Development (CPD)	CPD represents the acquisition and maintenance of knowledge, skills and key skills for Nuclear Medicine and Clinical Radiology. Courses which would provide evidence towards a specific CiP have been listed in the suggested evidence. An up to date advanced life support qualification is considered mandatory evidence for Nuclear Medicine Physicians, other wise a record of regular relevant CPD is required.	

	Examples of evidence could include a personal, reflective diary of learning achievements, in addition to detailed evidence of courses attended.	

Evidence of training, qualifications, and employment

You can see below the evidence you must submit in these general areas. It is useful to submit evidence of your training as background evidence – this allows the evaluators to see your whole career pathway.

Evidence of training and qualifications	
Primary medical qualification (PMQ)	**If you hold full registration with us, you do not need to submit your PMQ** as we saw it when we assessed your application for registration. If you do not hold registration, you will need to have your PMQ independently verified before we can grant you full registration with a licence to practise. You can find out more about primary source verification on our website. You only need to get your PMQ verified by our provider. The rest of your evidence should be verified in line with our guidance.
Specialist medical qualification(s)	Please provide an **authenticated copy** of any overseas specialist medical qualifications you hold. You do not need to authenticate qualifications awarded in the UK. You should provide: a) Evidence of completion of full **MRCP(UK)** or comparable qualification. Alternative tests of knowledge are acceptable for applicants demonstrating altenrative core capabilities in paediatrics or surgery – MRCPCH or MRCS. b) Evidence of Fellowship of the Royal College of Radiologists (FRCR) or comparable qualification c) A Diploma in Nuclear Medicine (currently the Diploma awarded by Brighton and Sussex Medical School, UK) or comparable qualifications.

	If you do not hold the above or a comparable qualification, you can aim to demonstrate the same level of knowledge by providing: A detailed, thorough and succinct cross-referencing mapping exercise, demonstrating how each and every competency in the qualification has been covered in your own qualifications. The evaluators will then determine whether what has been provided is comprehensive enough to demonstrate the same level of knowledge. it will be assessed on a case by case basis and will involve the applicant to produce a portfolio of evidence. There are no qualifications from outside Europe that enable automatic entry to the Specialist Register in any specialty. An evaluation is made based on an applicant's whole career and therefore two applicants with the same qualifications but different training and/or experience may not receive the same decision. If your specialist medical qualification is from outside the UK, please ensure that you provide the following evidence **in addition** to your qualification: ○ Training curriculum or examination syllabus ○ Formal period assessments completed during training (these may be from any point in your career)
Recent specialist training	If you have worked in posts approved for a specialist training programme for a relevant qualification outside the UK in the past five years, please provide an **authenticated copy** of the curriculum or syllabus that was in place when you undertook your training. If a formal curriculum or syllabus (including assessment methods) is not available please provide a letter from the awarding body outlining the content of the training programme or examination. Should you wish to provide further evidence obtained within your UK specialty training, this evidence should have been reviewed and signed off through an ARCP from completed years in training. You must provide evidence of formal periodic assessment during your training. This evidence must have been completed at the time the training was undertaken (if it is completed retrospectively less weight will be given to the information provided). If you do not supply formal assessment documents, the curriculum must demonstrate how you were assessed. A detailed letter of verification from an educational supervisor would satisfy this requirement.

	If areas for development were highlighted, please provide evidence to demonstrate that you have subsequently addressed them.

Evidence of employment in posts and duties (including training posts)	
CV	You must provide an up to date copy of your CV, which includes all the details listed in the guidance on our website.
Employment letters	The information in these letters **must** match your CV. They should confirm the following: • dates you were in post • post title, grade, training • type of employment: permanent, fixed term, or part time (including percentage of whole time equivalent) Usually this will be set out in the letters offering you the post and renewing your contracts. **We do not need to see contracts and terms and conditions of employment**.
Job descriptions	These **must** match the information in your CV. They will usually confirm the following: • your position within the structure of your department • your post title • your clinical and non-clinical commitment • your involvement in teaching or training.
Rotas	You must provide samples of your rotas drawn from (not covering) the last three years of clinical practise (WTE). These should demonstrate your weekly clinical and non-clinical activities. For example, if you worked a 1:8 rota, you should submit eight consecutive weeks' rota to represent that placement.
Departmental/Unit annual caseload statistics	You should provide departmental and unit caseload statistics, activity data, range and scope of work undertaken in a placement from the last three years clinical practise (WTE).
Appraisal	Those working in an NHS or managed environment should submit evidence of annual appraisals or performance reviews. A revalidation or appraisal portfolio would be appropriate (if it is completed retrospectively less weight will be given to the information provided).

	For non-training posts you should provide evidence of ongoing evaluation of your performance. This may take the format of formal appraisals by the department head or line manager (clinical director, medical director, professor). For those applicants working in independent practice it is recommended that at least one employer. Appraisal is undertaken and summary documentation of this submitted with the application. Where an applicant is not based in the UK alternative forms of appraisal are strongly advised. Alternative evidence may include letters (written at the time) commenting on your performance. In addition, where no formal appraisal or assessment forms are available you must provide information on the method of career review or progression.

Generic CiPs

The suggested documentation is given below each CiP and the overall numbers expected are given in the section above. Each piece of evidence can support more than one CiP and you should cross reference

CiP 1: Able to function successfully within NHS organisational and management systems

Key skills:

- Aware of, and adheres to, the GMC professional requirements
- Aware of public health issues including population health, social determinants of health and global health perspectives
- Demonstrates effective clinical leadership
- Demonstrates promotion of an open and transparent culture
- Keeps up to date through learning and teaching
- Demonstrates engagement in career planning
- Demonstrates capabilities in dealing with complexity and uncertainty
- Aware of the role and processes for commissioning
- Aware of the need to use resources wisely

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR)
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Evidence of taking an active role in governance structures, including service development. This may, for example, include the minutes of meetings for governance and unit management in which the applicant has been involved, MDT meetings, and any documented service development initiatives such as QIPAT.
▪ Evidence of employment within the NHS even at an observer role can be helpful here.
▪ Evidence of attendance at and involvement in management meetings at departmental, hospital, or regional level (mostly helpful if these are within the UK NHS)
▪ Evidence of attendance at an NHS / health service management course

▪ CPD evidence including courses in management and business

CiP 2: Able to deal with ethical and legal issues related to clinical practice

Key skills:

- Aware of national legislation and legal responsibilities, including safeguarding vulnerable groups
- Behaves in accordance with ethical and legal requirements
- Demonstrates ability to offer apology or explanation when appropriate
- Demonstrate ability to lead the clinical team in ensuring that ethical and legal factors are considered openly and consistently

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Evidence of ability to assess the mental capacity of patients to make healthcare decisions. Evidence could include: • Reflections on cases where you had to assess a patient's mental capacity • Suitably anonymised written written or email correspondence discussing difficult cases with referring teams. In this we are looking particularly at letters or emails that deal with ethical and legal issues • SLEs
▪ Evidence of involvement in making 'best interests' decisions, such as: ○ Notes ○ Letters ○ Meeting minutes

- Awareness of relevant legislation, including mental capacity legislation by completion of an online training course, for example:
  - eLfH Mental Capacity Act: **https://www.e-lfh.org.uk/programmes/mental-capacity-act/**
  - CPD Online Mental Capacity Act: **https://cpdonline.co.uk/course/mental-capacity-act/**
  - SCIE Mental Capacity Act: **https://www.scie.org.uk/e-learning/mca**

CiP 3: Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement

Key skills:

- Communicates clearly with patients and carers in a variety of settings
- Communicates effectively with clinical and other professional colleagues
- Identifies and manages barriers to communication (e.g. cognitive impairment, speech and hearing problems, capacity issues)
- Demonstrates effective consultation skills including effective verbal and non-verbal interpersonal skills
- Shares decision making by informing the patient, prioritising the patient's goals and wishes, and respecting the patient's beliefs, concerns and expectations
- Shares decision making with children and young people
- Applies management and team working skills appropriately, including influencing, negotiating, re-assessing priorities and effectively managing complex, dynamic situations

Suggested documentation:

- Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
- Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
- Evidence of your ability to analyse a patient's communication difficulties:
  - Reflective diaries
- Feedback from patients, such as a patient survey
- Reflective practice entries about patients or families who posed difficulties

▪ Assessment of observed clinical skills, attitudes and behaviours, such as a Mini-CEX
▪ CPD evidence including courses in simulation (including clinical scenarios and human factors) and communication

CiP 4: Is focused on patient safety and delivers effective quality improvement in patient care

Key skills:

- Makes patient safety a priority in clinical practice
- Raises and escalates concerns where there is an issue with patient safety or quality of care
- Demonstrates commitment to learning from patient safety investigations and complaints
- Shares good practice appropriately
- Contributes to and delivers quality improvement
- Understands basic Human Factors principles and practice at individual, team, organisational and system levels
- Understands the importance of non-technical skills and crisis resource management
- Recognises and works within limit of personal competence
- Avoids organising unnecessary investigations or prescribing poorly evidenced treatments

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Reflective practice entries about patients or families who posed difficulties
▪ Evidence that you have arranged and attended meetings about a patient with Social Services or other non-health organisations. For example: ○ Meeting minutes, demonstrating your attendance and participation ○ Invites sent from you demonstrating arranging meetings
▪ Assessment of observed clinical skills, attitudes and behaviours, such as a Mini-CEX
▪ Documented evidence of development of procedures to improve inter-service and inter-agency communication, you will need to demonstrate your involvement in the new procedure and its effectiveness

▪ Evidence of specific quality improvement activity, such as evidence of specific quality improvement activity, such as a QIPAT
▪ Copies of letters you have written to NHS and non-NHS services involved with patients
▪ CPD evidence including courses in simulation (including clinical scenarios and human factors)

CiP 5: Carries out research and manages data appropriately

Key skills:

- Manages clinical information / data appropriately
- Understands principles of research and academic writing
- Demonstrates ability to carry out critical appraisal of the literature
- Understands the role of evidence in clinical practice and demonstrates shared decision making with patients
- Understands public health epidemiology and global health patterns
- Demonstrates appropriate knowledge of research methods, including qualitative and quantitative approaches in scientific enquiry
- Demonstrates appropriate knowledge of research principles and concepts and the translation of research into practice
- Follows guidelines on ethical conduct in research and consent for research
- Recognises potential of applied informatics, genomics, stratified risk and personalised medicine and seeks advice for patient benefit when appropriate

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Evidence of completion of Good Clinical Practice (GCP) training: ○ **www.nihr.ac.uk/health-and-care-professionals/learning-and-support/good-clinical-practice**

▪ Documented evidence of research activity. This may include evidence of: ○ Helping in a project ○ Reviewing research papers / grants ○ Writing and co-authoring research papers ○ Contributing to research projects
▪ Presentations – either lectures (podium presentations) or poster presentations
▪ Documented evidence of development of procedures to improve quality of care beyond personal practice, e.g. QIPAT or evidence of performing an audit
▪ Publications
▪ CPD evidence including courses in research methodology

CiP 6: Acts as a clinical teacher and clinical supervisor

Key skills:

- Delivers effective teaching and training to medical students, junior doctors and other healthcare professionals
- Delivers effective feedback with action plan
- Able to supervise less experienced trainees in their clinical assessment and management of patients
- Able to supervise less experienced trainees in carrying out appropriate practical procedures
- Able to act as a clinical supervisor to doctors in earlier stages of training

Suggested documentation:

▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports

▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Completion of relevant Medical Education training course(s)
▪ Teaching Observation (TO) or other observational assessment of teaching
▪ Evidence of organising educational events / programs, with feedback.
▪ CPD evidence including courses in education and teaching

Specialty Specific CiPs

Applicants must demonstrate that they are currently practising at the level of 'entrusted to act independently' in all specialty CiPs. Further detail regarding the descriptors for the key skills in each specialty specific CiP can be found in the curriculum.

Specialty CiP 1: Advising and authorising appropriate Nuclear Medicine diagnostic and therapeutic interventions for individual patients

Key skills:

- Have a comprehensive understanding of Nuclear Medicine investigations and interventions pertinent to pathologies
- Collaborate effectively with referrers to determine the most appropriate imaging pathway or therapeutic intervention for each patient
- Exercise evidence-based practice by utilising current peer-reviewed literature to inform selection for all patient groups
- Weigh up the relative clinical and radiation risk/benefit when advising on imaging or therapeutic intervention
- Tailor Nuclear Medicine scan protocols appropriately as per Ionising Radiation (Medical Exposure) Regulations, IR(ME)R
- Prescribe diagnostic and therapeutic radiopharmaceutical doses accurately and appropriately according to accepted local Diagnostic Reference Levels (DRLs) based on Administration of Radioactive Substances Advisory Committee (ARSAC) limits
- Safeguard patients, including vulnerable groups such as paediatric patients and patients with dementia, acting in accordance with

according to the clinical information provided by referrers and all available imaging
- Be able to advise referrers and patients regarding radiation exposure tailored to individual clinical contexts to facilitate informed decision making

current safety guidelines and legislation with respect to ionising radiation protection

Suggested documentation:

▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
▪ Minimum of 1 of each of the below supervised learning events (SLEs): ○ Mini CEX ○ Mini IPEX ○ CbD
▪ Diploma in Nuclear Medicine or comparable evidence of knowledge
▪ FRCR or comparable evidence of knowledge
▪ MRCP or comparable evidence of knowledge

Specialty CiP 2: Ability to direct optimisation of diagnostic Nuclear Medicine image quality in terms of patient preparation, image acquisition, post processing and display

Key skills:

- Have understanding of Nuclear Medicine investigations and how these may be optimised
- Have understanding of importance of patient preparation and pharmaceutical interventions
- Recognise image artefacts from various sources and the importance of regular gamma camera quality control (QC) and quality assurance (QA)
- Work closely with physicists and Nuclear Medicine technologists to optimise image quality
- Able to process and enhance image quality with various software and analysing data, including quantification
- Recognise the importance of national and international guidelines and their appropriate implementation at a local level

Suggested documentation:

▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
▪ There may be indirect evidence of this from logbooks; often logbooks give records of numbers of scans reported but there may be indirect evidence her of involvement in scan vetting and the supervision of NM scans.
▪ Minimum of 1 of each of the below supervised learning events (SLEs): ○ Mini CEX ○ Mini IPEX ○ CbD
▪ Evidence of procedural skills – eg DOPS
▪ Diploma in Nuclear Medicine or comparable evidence of knowledge
▪ FRCR or comparable evidence of knowledge
▪ Quality improvement activity, such as a QIPAT

Specialty CiP 3: Providing timely, accurate and clinically pertinent reports on all Nuclear Medicine diagnostic studies

Key skills:

- Demonstrate sound knowledge of the normal physiological distribution of commonly used radiopharmaceuticals, normal variants and artefacts and relevant anatomy as demonstrated on diagnostic Nuclear Medicine imaging studies
- Formulate a clinically relevant written report targeted to the referrer, providing where appropriate relevant differential diagnoses and using clinical judgement to provide recommendations for further imaging investigations, follow-up and/or management
- Communicate imaging findings to the referrers (and to patients if appropriate) in a timely manner including significant, unsuspected or critically urgent findings
- Demonstrate insight into personal level of expertise and appropriately refer or seek a second opinion if required
- Recognise and appropriately respond to imaging findings that may raise safeguarding concerns
- Demonstrate insight into diagnostic certainty and communicate this in written and/or verbal reports
- Combine knowledge of physiology/function and anatomy with pathology, adopting a safe and systematic approach to interpretation of diagnostic imaging

Suggested documentation:

▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports (this is probably most important; ideally we would like opinions from UK NM physicians and other health care professionals about your competence in NM reporting, although recommendations and letters from colleagues and supervisors from overseas will be considered)
▪ Minimum of 1 of each of the below supervised learning events (SLEs): ○ Mini CEX ○ Mini IPEX ○ CbD
▪ Diploma in Nuclear Medicine or comparable evidence of knowledge
▪ FRCR or comparable evidence of knowledge

▪ Logbook
▪ 15 suitably anonymised reports on complex cases – these should include a number of findings and discussion. You may wish to support this evidence with a logbook.

Specialty CiP 4: Providing a safe and comprehensive radionuclide therapy service

Key skills:

- Demonstrate sound knowledge of tracer distribution, in normal and pathological conditions, of commonly used therapeutic radio-pharmaceuticals
- Good understanding and use of diagnostic and therapeutic agents for tailoring a personalised management and therapy pathway for the individual patient (theragnostics) using evidence based practice
- Demonstrate the ability to appropriately select patients for therapy working closely with local or regional multidisciplinary teams (MDTs)
- Have strong physicianly skills in history taking and clinical examination in patients undergoing consideration for therapy for holistic care
- Able to explain the radiopharmaceutical therapy and obtain informed consent for treatment
- Sound knowledge of radiation effects and hazards, and effective communication with physics and radiation safety experts to provide a safe environment for the patient and staff
- A sound knowledge of appropriate patient preparation, prescription, dispensing, handling and administration of therapeutic radiopharmaceuticals appropriately tailored to the patient condition and requirements
- Have a sound knowledge of the efficacy and side-effects of therapy and their management
- Working knowledge of the radiation protection measures and procedures for safe administration and treatment, to minimise radiation to the public & staff, including contamination management
- Arrange for appropriately timed follow-up and further management to monitor therapy effects

Suggested documentation:

▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports

▪ Minimum of 1 of each of the below supervised learning events (SLEs): ○ Mini CEX ○ Mini IPEX ○ CbD
▪ Feedback from patients, such as patient surveys
▪ Diploma in Nuclear Medicine or comparable evidence of knowledge
▪ MRCP(UK) or comparable evidence of knowledge
▪ Evidence of procedural skills – eg DOPS
▪ Logbook

Specialty CiP 5: Leading all the clinical aspects of the Nuclear Medicine department in terms of compliance with regulations

Key skills:

- Understand and apply the roles of Administration of Radioactive Substances Advisory Committee (ARSAC), the Environment Agency (EA), the Health and Safety Executive (HSE) and Medicine and Healthcare products Regulatory Agency (MRHA), and their legislative framework governing clinical study, research, production, transport, storage and disposal of radioactive substances
- Understand and apply the legislative regulations of Ionising Radiation (Medical Exposure) regulations - IR(ME)R. Understand the responsibilities of the practitioner, operator and referrer which deals with justification and optimisation of each exposure
- Work closely with Radiation Protection Advisor (RPA), Radiation Protection Supervisors (RPS) and Employers (University, NHS and Private)
- Ensuring compliance with Good Clinical Practice (GCP) for all research studies
- Understanding legal framework for dealing with the young, the old, the vulnerable and their/ guardians/ parents/carers
- Recognise the importance of monitoring performance through audits, quality improvement projects; learning from mistakes through discrepancy, morbidity and mortality meetings and adopting a no blame culture in order to ensure high standards of care and optimise patient safety

Suggested documentation:

▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Reports from consultants who have worked with you, such as the Multiple Consultant Report (MCR), end of placement and appraisal reports
▪ Minimum of 1 of each of the below supervised learning events (SLEs): o CbD
▪ Diploma in Nuclear Medicine or comparable evidence of knowledge
▪ Quality improvement activity, such as a QIPAT

Clinical Radiology CiPs

Since 2014 it has not been possible to enter the specialist register for Nuclear Medicine without also satisfying the requirements for Clinical Radiology. Applicants should also refer to the Clinical Radiology curriculum and ensure evidence is provided for the Clinical Radiology CiPs as outlined below.

Clinical Radiology CiP 1: Appropriately select and tailor imaging to patient context and the clinical question(s)

Key skills:

- Collaborate effectively with referrers to determine the most appropriate imaging pathway for a given presentation
- Exercise evidence-based practice by utilising current peer-reviewed literature to inform imaging selection for all patient groups
- Protocol CT and MRI scans appropriately
- Safeguard patients, including vulnerable groups, and act in accordance with current safety guidelines and legislation in respect of ionising radiation and other imaging techniques/equipment
- Be able to advise referrers and patients regarding radiation exposure tailored to individual clinical contexts to facilitate informed decision making

Suggested documentation:

▪ Radiology reports - you must submit sufficient examples of personally generated, dated and anonymised radiology reports, covering the appropriate range of techniques
▪ Clinical correspondence (including evidence of justification or protocolling imaging examinations) - you should submit a range of letters and emails to and from referring clinicians; you can also include patient consent forms and other correspondence you consider relevant
▪ Courses and CPD
▪ Workload statistics
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Patient feedback

Clinical Radiology CiP 2: Provide timely, accurate and clinically useful reports on imaging studies

Key skills:

- Possess a sound understanding of radiological anatomy, normal variants and artefacts as demonstrated on all of the common imaging modalities.
- Combining a sound knowledge of radiological anatomy, physiology and pathology, adopt a safe, systematic approach to interpretation of imaging
- Formulate a clinically useful written report targeted appropriately to the referrer, providing where appropriate a refined differential diagnosis, and demonstrate clinical judgement by providing recommendations for further investigation and/or management
- Communicate pertinent imaging findings to referrers, and where appropriate to patients, in a time-appropriate manner, including significant, unexpected or incidental findings

Suggested documentation:

▪ Radiology reports - you must submit sufficient examples of personally generated, dated and anonymised radiology reports, covering the appropriate range of techniques
▪ Reflective diaries - Your evidence should demonstrate reflective activity as a regular feature of your practice, not all completed on one day. You can find a generic reflective template in the CPD section of the RCR website **https://www.rcr.ac.uk/clinical-oncology/cpd/reflecting-your-cpd**
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Patient feedback

Clinical Radiology CiP 3: Appropriately manage imaging examination lists/procedures according to clinical need and professional expertise

Key skills:

- Explain imaging examinations, risks and findings facilitating informed patient choice
- Obtain informed consent for relevant imaging examinations and/or procedures from all patients including vulnerable groups, showing sensitivity to issues of equality and diversity
- Understand and safely prescribe medication relevant to imaging and procedures
- Manage adverse reactions (including anaphylaxis) to administered contrast and drugs
- Maintain an up to date knowledge of cardiopulmonary resuscitation (CPR) techniques
- Implement current health and safety and infection control techniques in the context of imaging examinations/procedures
- Demonstrate insight into level of personal expertise and appropriately refer/seek second opinion

Suggested documentation:

▪ Radiology reports, including those relating to relevant procedures - you must submit sufficient examples of personally generated, dated and anonymised radiology reports, covering the appropriate range of techniques
▪ Clinical correspondence - you should submit a range of letters and emails to and from referring clinicians; you can also include patient consent forms and other correspondence you consider relevant
▪ Courses and CPD, such as safety-related training known in the UK as mandatory training
▪ Patient consent forms
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ Patient feedback
▪ Safety and quality activity

Clinical Radiology CiP 4: Evaluate image quality and utilise the knowledge of imaging sciences to optimise image quality

Key skills:

- Evaluate image quality and feed back to the imaging team appropriately to facilitate maintenance of equipment and/or improve practice
- Appropriately refer to image quality within written reports when there is impact on diagnostic certainty

Suggested documentation:

▪ Radiology reports - you must submit sufficient examples of personally generated, dated and anonymised radiology reports, covering the appropriate range of techniques
▪ Clinical correspondence (including those relevant to technical recalls, improving image quality, incident reports etc.) - you should submit a range of letters and emails to and from referring clinicians; you can also include patient consent forms and other correspondence you consider relevant
▪ Reflective diaries - your evidence should demonstrate reflective activity as a regular feature of your practice, not all completed on one day. You can find a generic reflective template in the CPD section of the RCR website **https://www.rcr.ac.uk/clinical-oncology/cpd/reflecting-your-cpd**
▪ Evidence of relevant meeting attendance (clinical governance activity)
▪ Courses and CPD (such as training in radiation protection, IRMER modules etc.)

Clinical Radiology CiP 5: Safely manage the imaging and image-guided intervention needed to support emergency care

Key skills:

- Produce reports in a timely manner according to clinical need in the context of emergency care
- Maintain knowledge and skills required to perform, interpret and report imaging in an emergency setting
- Maintain an up to date knowledge of appropriate equipment for image guided biopsies and drains
- Perform or arrange (as appropriate) any clinically urgent image-guided interventional procedures

Suggested documentation:

▪ Radiology reports in the emergency/on-call setting and review of emergency reports - you must submit sufficient examples of personally generated, dated and anonymised radiology reports, covering the appropriate range of techniques
▪ Clinical correspondence (for example, arranging an interventional radiology procedure in practice, communicating critical or emergent findings) - you should submit a range of letters and emails to and from referring clinicians; you can also include patient consent forms and other correspondence you consider relevant
▪ Courses and CPD
▪ On-call rotas/weekly activity rotas
▪ WPBAs
▪ Participation in morbidity and mortality meetings

Clinical Radiology CiP 6: Effectively contribute a clinical/imaging opinion to a multidisciplinary team (MDT) meeting

Key skills:

- Able to review imaging studies to provide an answer to a clinical question posed by the MDT
- Integrate clinical, pathological and radiological information to refine a differential diagnosis
- Contribute to/lead the decision making of the MDT by clearly articulating a clinical opinion
- Maintain knowledge of local and national guidelines alongside current peer-reviewed literature to ensure recommendations are evidence-based, clinically relevant and safe

Suggested documentation:

▪ Radiology reports - you must submit sufficient examples of personally generated, dated and anonymised radiology reports, covering the appropriate range of techniques
▪ Multidisciplinary team (MDT) activity - you should submit minutes and records of your participation in MDT meetings covering a period of at least six months with patient histories and any notes. Include your reflective activity on MDTs especially on your personal contribution. Evidence of you leading the MDT is also useful.
▪ Feedback from a variety of clinical and non-clinical colleagues who have worked with you, such as the Multisource Feedback (MSF)
▪ WPBAs and/or trainer's reports describing clinical capabilities in multidisciplinary cases